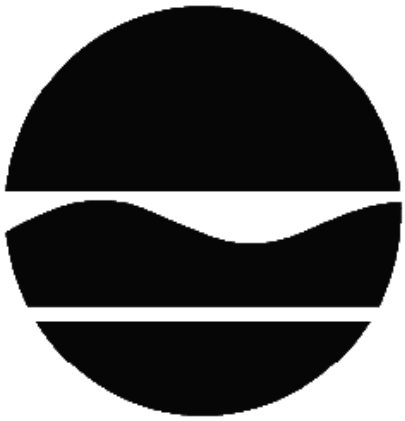
RECORD OF DECISION

Al Tech Specialty Steel Corporation
Operable Unit Number 01: Lucas Avenue Plant Remedial Program
State Superfund Project
Dunkirk, Chautauqua County
Site No. 907022
November 2012



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - RECORD OF DECISION

Al Tech Specialty Steel Corporation
Operable Unit Number: 01
State Superfund Project
Dunkirk, Chautauqua County
Site No. 907022
November 2012

Statement of Purpose and Basis

This document presents the remedy for Operable Unit Number: 01: Lucas Avenue Plant Remedial Program of the Al Tech Specialty Steel Corporation site, a Class 2 inactive hazardous waste disposal site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375, and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for Operable Unit Number: 01 of the Al Tech Specialty Steel Corporation site and the public's input to the proposed remedy presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Description of Selected Remedy

The elements of the selected remedy are as follows:

The elements of the proposed remedy are as follows:

1. Remedial Design. A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;

- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Removal of USTs and Transformers. All underground storage tanks (USTs) and electrical transformers will be removed and properly disposed. Nine USTs are located in two separate rooms beneath the floor in the northeast section of the building. There is residual oil and sludge in the tanks and the rooms are partially flooded with groundwater. The rooms will be dewatered and the tanks removed and impact to the environment will be determined. If necessary any impacted soils will be excavated and treated or disposed.

The western portion of the Site contains numerous abandoned vats and tanks once used in the pickle process. The baths contain residuals, including chromium, from these processes. All tanks will be cleaned and removed from the site and properly disposed or recycled as appropriate.

Three, intact, transformers, each containing as much as 290 gallons of oil are located in an electrical equipment room in the south central part of the building. The transformers are marked as containing PCBs will be removed and properly disposed. No residual PCBs were noted around the base of the transformers, however, due to subsequent trespassers illegally removing electrical wire and components, this area will be re-assessed after the transformers are removed.

3. Demolition. The current condition of the Lucas Avenue Plant prevents safe remediation within and around the building. In addition, brick containing cyanide and copper residuals are present in the west and east pickle bath areas respectively. Demolition of the building is necessary to remove and properly dispose of this material. The remaining building will be demolished leaving floor slabs in place. Building materials will be reclaimed and recycled where possible.

4. Excavation. The 2007 IRM removed a large quantity of contaminated soil, however, the IRM did not address all areas at the site and contaminated soils remain. Approximately 4,186 cubic yards of additional contaminated soil will be removed. The excavations include:

a) Excavation and off-site disposal of characteristic hazardous waste metals including cadmium, chromium and lead. A portion of the soils in the western portion of the Site contain metals that when sampled for Toxic Leachate Characteristic Leaching Procedure (TCLP) characterizes those soils as hazardous waste. Approximately 3,038 cubic yards of soils may be determined to be considered hazardous waste. All soils and material determined to be hazardous waste will be removed from the Site

b) An additional approximately 660 cubic yards of soil containing elevated levels of metals and/or SVOCs will be excavated and properly disposed.

c) Excavation and off-site disposal of approximately 488 cubic yards of VOC contaminated soils. The remedial goal for the VOC impacted soils is the Commercial values defined in 6NYCRR Part375-6.8.

5. In-Situ Soil Treatment. Before backfilling the excavation containing VOCs the bottom of the excavation will be treated by applying a product(s) intended to hasten reductive de-chlorination of remaining VOCs in soil and groundwater,

6. Site Cover. A site cover will be required to allow for commercial use of the site [as a component of the site development.] The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

7. Institutional Control. Imposition of an institutional control in the form of an environmental easement for the controlled property that:

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allows the use and development of the controlled property for commercial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and,
- requires compliance with the Department approved Site Management Plan.

8. Site Management Plan. A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective;
   - Institutional Controls: The Environmental Easement discussed above details institutional controls necessary at the site that restricts use of the site, restricts groundwater use, ensures that the owner of the site incorporates a Department approved Site Management Plan, and ensures periodic certification that the property is only used for activities allowed by the restrictions,
   - Engineering Controls: A soil cover will be required to be maintained where building structures and pavement is not being maintained.

b. an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination; and,

c. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring of groundwater to assess the performance and effectiveness of the remedy;

- a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan.
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and,
- steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy for this site is protective of human health.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

11/28/2012

Date

Robert W. Schick, P.E., Director
Division of Environmental Remediation

RECORD OF DECISION

Al Tech Specialty Steel Corporation
Dunkirk, Chautauqua County
Site No. 907022
October 2012

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of hazardous wastes at this site, as more fully described in this document, has contaminated various environmental media. The remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This Record of Decision (ROD) identifies the selected remedy, summarizes the other alternatives considered, and discusses the reasons for selecting the remedy.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repositories:

Dunkirk Free Library
Attn: Ms. Janice Dekoff
536 Central Avenue
Dunkirk, NY 14048
Phone: (716)366-2511

New York State Department of Conservation

Attn: Maurice Moore
270 Michigan Avenue
Buffalo, NY 14203-2915
Phone: (716) 851-7220

A public meeting was also conducted. At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) were presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period was held, during which verbal or written comments were accepted on the proposed remedy.

Comments on the remedy received during the comment period are summarized and addressed in the responsiveness summary section of the ROD.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location:
The former AlTech Specialty Steel Corp. (AlTech) is an approximately 90 acre industrial site in the City of Dunkirk, Chautauqua County. Located north of Willowbrook Avenue, south of Lucas Avenue, east of Brigham Road the site is surrounded by mixed residential/commercial parcels including, single family residential, a lumber supply center, a municipal garage and the Dunkirk High School athletic fields.

Site Features:
The main facilities contain a mixture of active and inactive buildings and open land. The active facilities are partially fenced and consist mainly of the Brigham Road Plant and the Bar Finish and Storage Facility. There are inactive buildings, such as, the Howard Avenue Plant which are used for various purposes. An approximately 1.65 acre man-made cooling pond known as Willowbrook Pond is located in the southwest corner of the main facilities. A tributary to Crooked Brook flows southeast to northwest toward Lake Erie through the southwest corner of the site. Open land on and around the main facilities includes maintained lawn areas and unmaintained former fill and disposal areas that have vegetated with native opportunistic grass, brush and tree species.

North of the main facilities is the former Lucas Avenue Plant (LAP.) The LAP is a one-story, approximately 178,000-square-foot former manufacturing facility located on the south side of the

west end of Lucas Avenue. Situated on a rectangular parcel of land 2025' by 200' the LAP was formerly a part of the larger adjoining Al Tech site. The original LAP facility was constructed in 1909, with additions constructed in 1920, 1936, 1940, and 1968. The site is bordered by a rail line to the south, Brigham Road to the west, a City of Dunkirk Department of Public Works (DPW) building to the east and Lucas Avenue to the north. A residential neighborhood and public school are located on the north side of Lucas Avenue.

Zoning/Uses(s):
Current zoning is industrial. Since 2002, Dunkirk Acquisition, LLC d.b.a. Dunkirk Specialty Steel, has operated a large portion of the site as a steel and stainless steel processing facility.

Historic Use(s):
Industrial use of the site has included the manufacture of iron and steel dating back to 1908. Foundry operations gave way to forging and finishing of stainless steel rod and wire from supplied billets. Past operations at the facility leading to site contamination have included; pickling operations using molten sodium or barium salts, trichloroethylene pickle baths, metal plating operations, solid waste disposal, spillages and discharges into the cooling pond.

Experiencing financial difficulties through the late 1990's AlTech Specialty Steel ceased operations in 2001. An asset holding corporation, named RealCo emerged from these difficulties to address environmental issues at the idled facility, including, but not limited to the Lucas Avenue Plant and Willowbrook Pond. In 2002 Dunkirk Acquisition, LLC d.b.a. Dunkirk Specialty Steel acquired out of bankruptcy, the assets of the AlTech Site except for the Lucas Avenue Plant, the Brigham Road Pickle Room and the Willowbrook Pond.

The AlTech site is divided into three operable units (see Figure 2.)
An operable unit (OU) represents a portion of a site remedy that for technical or administrative reasons can be addressed separately to eliminate or mitigate a release, threat of release or exposure pathway resulting from site contamination.

OU-1 Lucas Avenue Plant - OU-1 includes the building and the property owned by RealCo identified as SBL 96.01-3-1 situated north of the railway parallel to Lucas Avenue.

OU-2 Willowbrook Pond - This includes that area identified by SBL 96.10-1-1 owned by RealCo; the property known as the Brigham Road Plant, identified by SBL 96.06-3-79, owned by Dunkirk Acquisition LLC; and the off-site extent of the impacted Tributary of Crooked Brook to the west of the site, identified by various SBLs and owners.

OU-3 The AlTech Plant - This includes all the property in the main facility area identified by SBL 96.06-3-78 and SBL 96.06-3-77 both owned by Dunkirk Acquisition LLC.

Geology-Hydrology
The site is located on broad glacio-lacustrine sedimentary deposits. Soils are tight silty, clayey soils consisting of urban fill over silt loams of the Niagara Silt loam complex. Groundwater is about ten feet below the ground surface and is limited due to the tight nature of the bedrock and soils, however localized ponding can occur. Any groundwater present flows generally to the

north toward Lake Erie but is strongly influenced by topographic features and man-made pathways. Bedrock is the Upper Devonian Shales of the Canadaway Group.

Operable Unit (OU) Number 01 is the subject of this document.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the RI to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

RealCo Inc.

The former AlTech facility in Dunkirk is subject to a 1995 Department Order whereby AlTech was legally obligated to establish an Environmental Remediation Trust Fund to finance environmental remedial at the Dunkirk Site. A subsequent 1999 Order recognized RealCo, as a corporation and noted that RealCo would take title to certain real and personal property owned by the AlTech Specialty Steel Corporation and ordered that RealCo undertake environmental remediation required at the Dunkirk and a sister facility in Watervliet NY

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- air
- groundwater
- surface water
- soil
- sediment
- soil vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified for this Operable Unit at this site is/are:

Petroleum Products
trichloroethene (TCE)
chromium
lead
arsenic
cyanides (soluble cyanide salts)
pcb-aroclor 1260

As illustrated in Exhibit A, the contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil
- soil vapor intrusion

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Record of Decision.

The following IRM(s) has/have been completed at this site based on conditions observed during the RI.

Lucas Ave IRM - West End Demolition/Soil Removal

A 2007 IRM removed 4,689 cubic yards of contaminated soils containing lead, arsenic and hexavalent chromium. Soil excavation required partial demolition of the existing building

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 01.

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.
Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 01.

Site-wide investigations from 1992 to 2008 studied solid waste management units and areas of concern. The studies investigated all media including; surface soil, subsurface soil, groundwater, sediments, ambient air and soil vapor/sub-slab vapor. Also included were studies focusing on sediments and ecological impacts to the tributary of Crooked Brook.

In 1998 the Department listed the site as a Class 2 site in the Registry of Inactive Hazardous Waste Disposal Sites in New York State. A Class 2 site is a site where hazardous waste presents a significant threat to the public health or the environment and action is required.

Based upon investigations completed to date, the primary contaminants of concern on the site are chromium, lead, chlorinated solvents and polychlorinated biphenyls (PCBs).

OU-1 (Lucas Avenue Plant) - Soils are impacted with metals, SVOCs and Volatile Organic Compounds (VOCs.) Groundwater impacted with metals including chromium and barium has migrated off-site from the western portion of the former facility into the residential area to the north. An Interim Remedial Measure (IRM) removed hexavalent chromium, lead and barium contaminated soils which were contributing to groundwater contamination. Soil remains which require further remediation.

VOCs, including trichloroethylene (2,400 ppm), exist in the soils to the rear of eastern portion of the Lucas Avenue Plant. In this area these VOCs have impacted on-site groundwater (7,300 ppb) under the facility extending to the north. A Soil Vapor intrusion (SVI) study in this eastern area was completed in 2008. Groundwater and soil vapor sampling results indicated impacts at the property line but was not an off-site impact. VOCs, mainly TCE were detected in the sub-slab vapor below the floor and in the indoor air in the pickle room area. Petroleum storage tanks remain in the basement of the Lucas Avenue Facility and there are transformers that contain PCBs within the plant.

The site presents a significant environmental threat due to the ongoing releases of contaminants from source areas such as contaminated soils, sediments, contaminated building structures and impacted groundwater.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

The site is fenced, which restricts public access. However, persons who enter the site could contact contaminants in the soil by walking on the site, digging or otherwise disturbing the soil. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not contaminated by the site. Volatile organic compounds in groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site redevelopment and occupancy.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the

contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: SUMMARY OF THE SELECTED REMEDY

To be selected the remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. The remedy must also attain the remedial action objectives identified for the site, which are presented in Section 6.5. Potential remedial alternatives for the Site were identified, screened and evaluated in the feasibility study (FS) report.

A summary of the remedial alternatives that were considered for this site is presented in Exhibit B. Cost information is presented in the form of present worth, which represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved. A summary of the Remedial Alternatives Costs is included as Exhibit C.
The basis for the Department's remedy is set forth at Exhibit D.

The estimated present worth cost to implement the remedy is $4,630,000. The cost to construct the remedy is estimated to be $4,250,000 and the estimated average annual cost is $25,000.

The elements of the selected remedy are as follows:

1. Remedial Design. A remedial design program would be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
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- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

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- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and,
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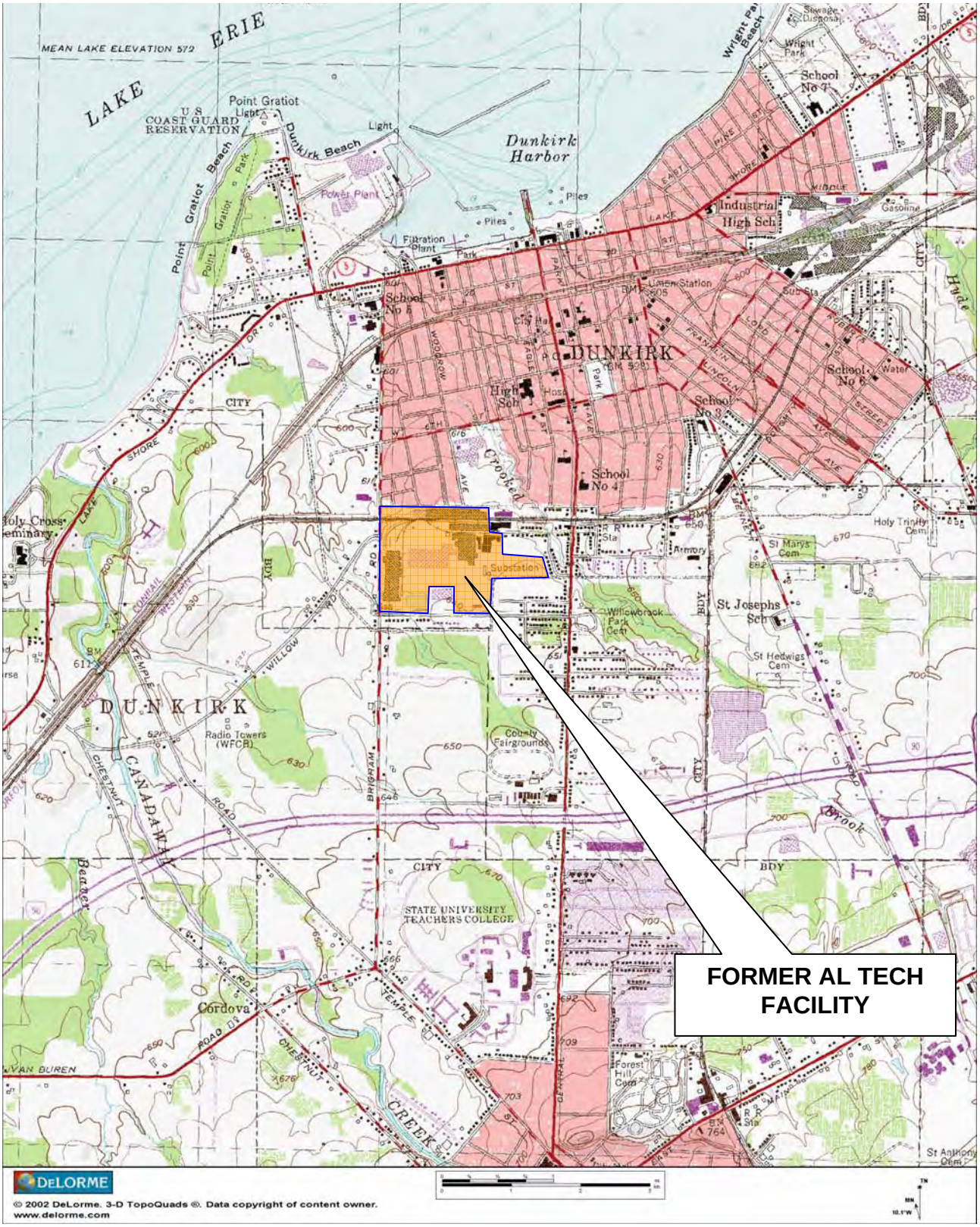
   - provisions for the management and inspection of the identified engineering controls;
   - maintaining site access controls and Department notification; and,
   - steps necessary for the periodic reviews and certification of the institutional and/or engineering controls. .

FIGURE 1



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PROJECT NO.: 0041-012-100

DATE: JANUARY 2008

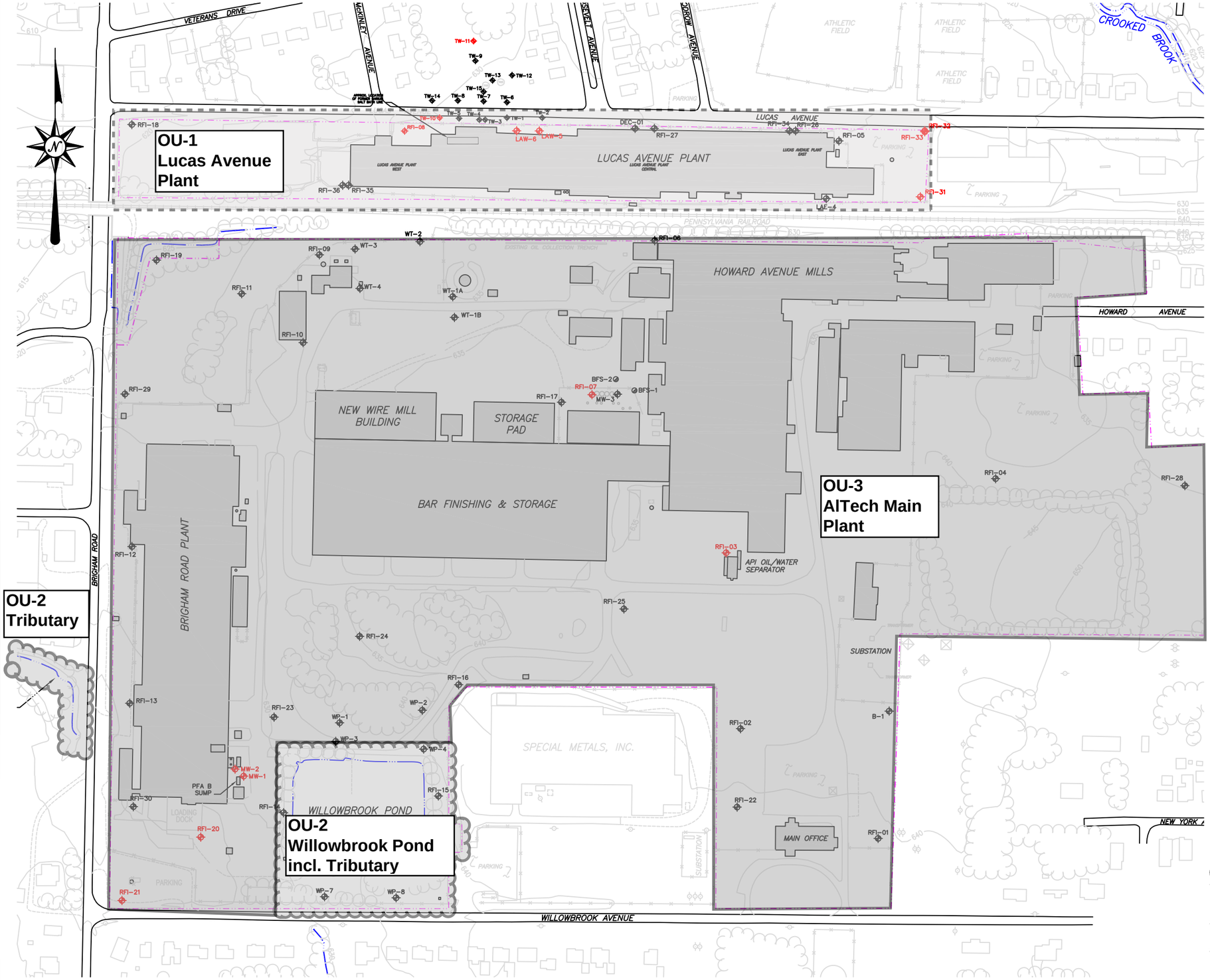
DRAFTED BY: BCH

SITE VICINITY AND LOCATION MAP

PROPOSED REMEDIAL ACTION PLAN

FORMER AL TECH SPECIALTY STEEL CORPORATION FACILITY
DUNKIRK, NEW YORK

PREPARED FOR
REALCO, INC.



Operable Units at AlTech Specialty Steel Site #907022

INVESTIGATION LOCATIONS:

- RFI-11 — MONITORING WELL LOCATION AND DESIGNATION
- TW-1 — TEMPORARY MONITORING WELL LOCATION AND DESIGNATION
- RFI-07 — MONITORING WELL NOT SAMPLED AS WELL NOT LOCATED AND/OR DESTROYED
- BFS-1 — BFS ICM WELLS (RECOVERY & OBSERVATION)

OU-1 Lucas Avenue Plant

OU-2 Willowbrook Pond incl. Tributary

OU-3 AlTech Main Plant

250' 0' 125' 250'

SCALE: 1 INCH = 250 FEET
SCALE IN FEET
(approximate)

REFERENCES:

1. McINTOSH & McINTOSH, P.C. DRAWING TITLED, "TOPOGRAPHICAL MAP OF THE AL TECH SPECIALTY STEEL CORPORATION SITE," DATED APRIL 2, 1996, JOB NO. 6216, FILE: ALTECH.DWG.
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3. ESC. DRAWING TITLED, "SITE LAYOUT, REVISED PHASE II RFI," DATED 05-13-98, DRAWING NO. 193055-D03, FILE: D03.DWG.

DATE: OCTOBER 2011
DRAFTED BY: AJZ

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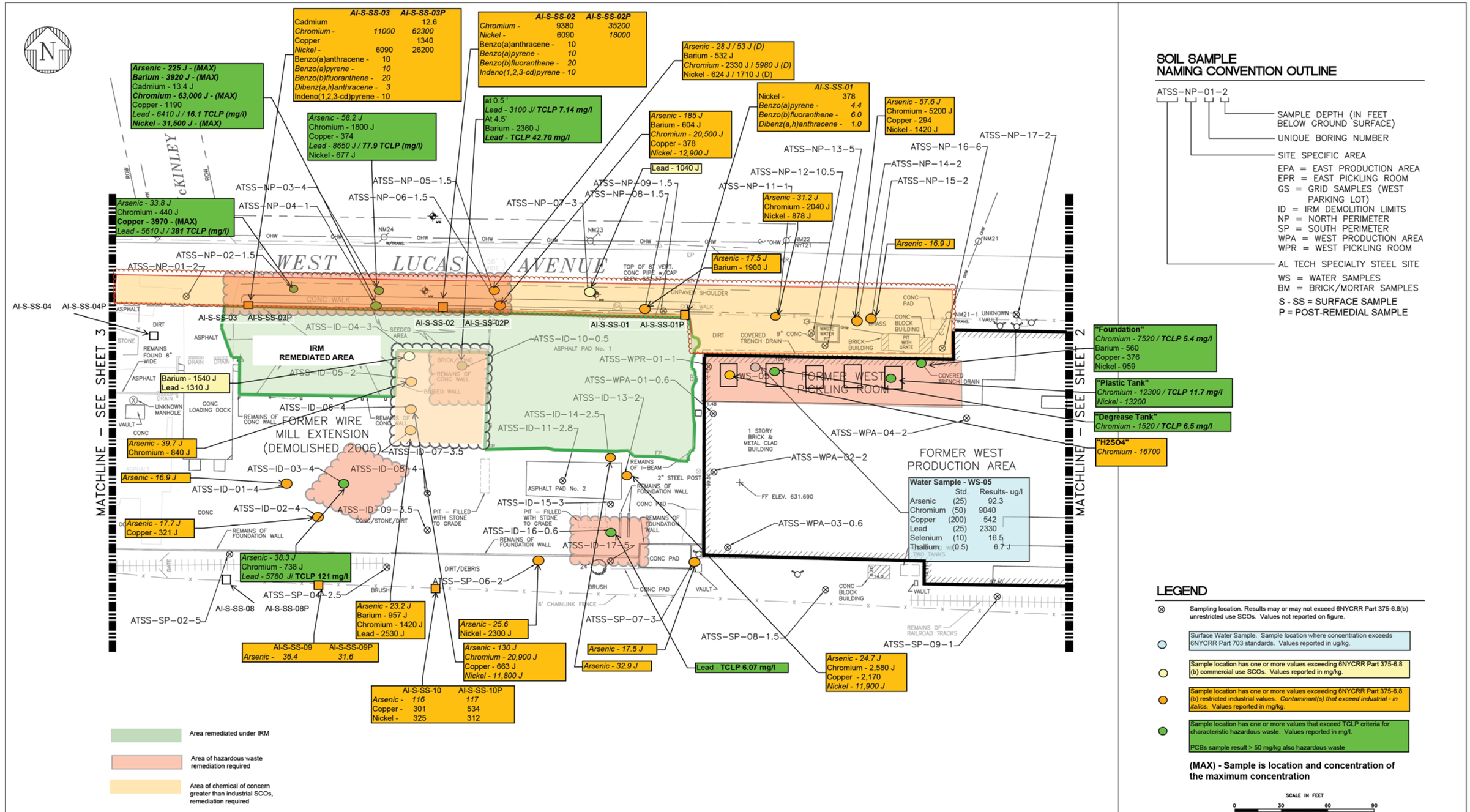
JOB NO.: 0041-013-600

SITE PLAN

FORMER AL TECH SPECIALTY STEEL CORPORATION FACILITY
DUNKIRK, NEW YORK
PREPARED FOR
REALCO, INC.

FIGURE 2



SOIL SAMPLE NAMING CONVENTION OUTLINE

ATSS–NP–01–2

- SAMPLE DEPTH (IN FEET BELOW GROUND SURFACE)
- UNIQUE BORING NUMBER
- SITE SPECIFIC AREA
  - EPA = EAST PRODUCTION AREA
  - EPR = EAST PICKLING ROOM
  - GS = GRID SAMPLES (WEST PARKING LOT)
  - ID = IRM DEMOLITION LIMITS
  - NP = NORTH PERIMETER
  - SP = SOUTH PERIMETER
  - WPA = WEST PRODUCTION AREA
  - WPR = WEST PICKLING ROOM
- AL TECH SPECIALTY STEEL SITE
- WS = WATER SAMPLES
- BM = BRICK/MORTAR SAMPLES

S - SS = SURFACE SAMPLE
P = POST-REMEDIAL SAMPLE

LEGEND

- Sampling location. Results may or may not exceed 6NYCRR Part 375-6.8(b) unrestricted use SCOs. Values not reported on figure.
- Surface Water Sample. Sample location where concentration exceeds 6NYCRR Part 703 standards. Values reported in ug/kg.
- Sample location has one or more values exceeding 6NYCRR Part 375-6.8 (b) commercial use SCOs. Values reported in mg/kg.
- Sample location has one or more values exceeding 6NYCRR Part 375-6.8 (b) restricted industrial values. *Contaminant(s) that exceed industrial - in italics.* Values reported in mg/kg.
- Sample location has one or more values that exceed TCLP criteria for characteristic hazardous waste. Values reported in mg/l.

  PCBs sample result > 50 mg/kg also hazardous waste

(MAX) - Sample is location and concentration of the maximum concentration

SCALE IN FEET
0 30 60 90

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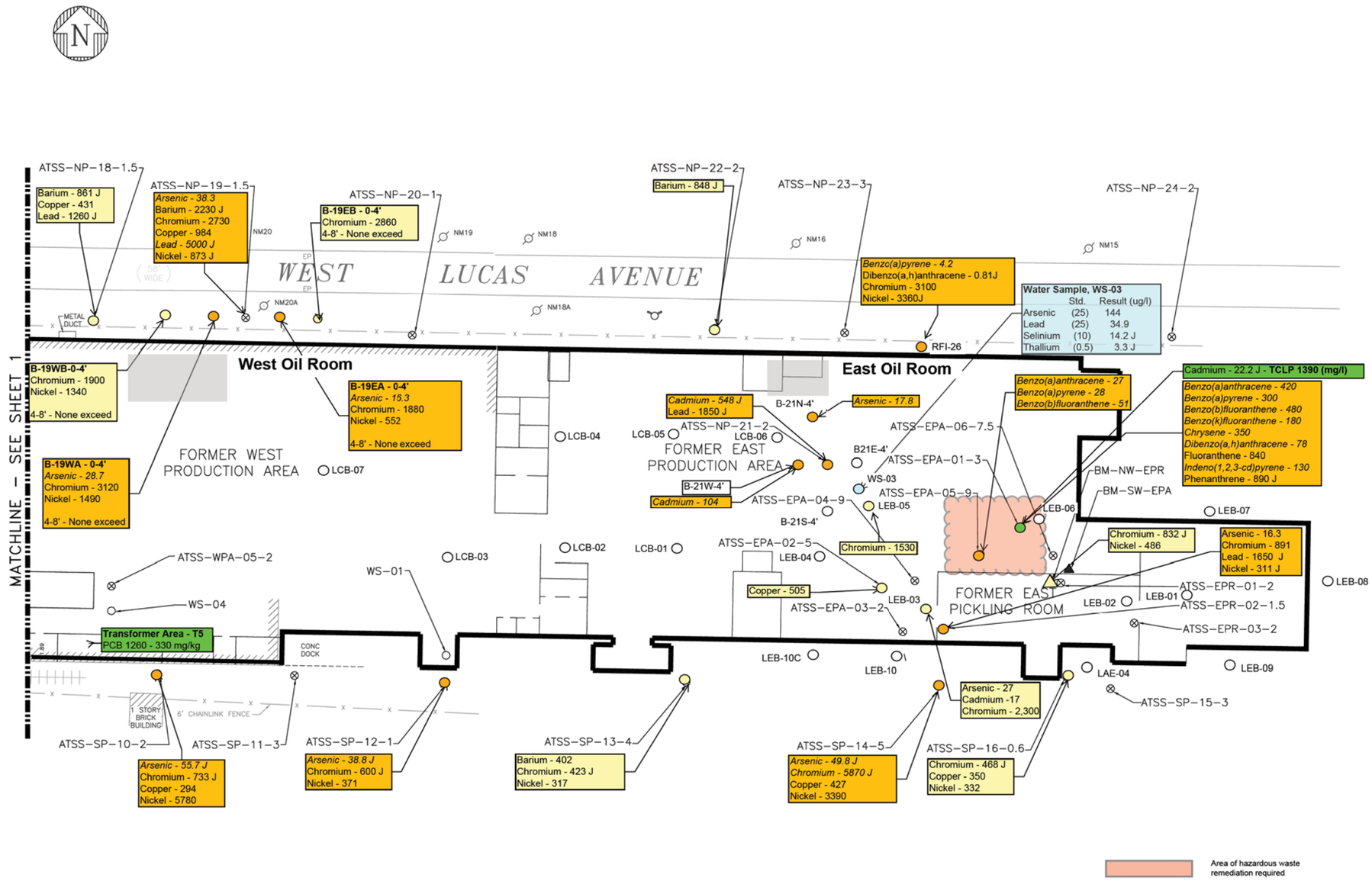
FIGURE **3** **FORMER ALTECH SPECIALTY STEEL SITE SITE METALS CONTAMINATED SOIL**
SHEET 1

F:\Al Tech NV2501\2007 Sample Locations.dwg



SOIL SAMPLE NAMING CONVENTION OUTLINE

ATSS–NP–01–2

- ATSS = AL TECH SPECIALTY STEEL SITE
- NP = SITE SPECIFIC AREA
  - EPA = EAST PRODUCTION AREA
  - EPR = EAST PICKLING ROOM
  - GS = GRID SAMPLES (WEST PARKING LOT)
  - ID = IRM DEMOLITION LIMITS
  - NP = NORTH PERIMETER
  - SP = SOUTH PERIMETER
  - WPA = WEST PRODUCTION AREA
  - WPR = WEST PICKLING ROOM
  - WS = WATER SAMPLES
  - BM = BRICK/MORTAR SAMPLES
- 01 = UNIQUE BORING NUMBER
- 2 = SAMPLE DEPTH (IN FEET BELOW GROUND SURFACE)

LEGEND

- Sampling location. Location not analyzed for metals or SVOCs or results may or may not exceed 6NYCRR Part 375-6.8(b) unrestricted use SCOs. Values not reported on figure.
- Surface Water Sample. Sample location where concentration exceeds 6NYCRR Part 703 standards. Values reported in ug/kg.
- Sample location has one or more values exceeding 6NYCRR Part 375-6.8 (b) commercial use SCOs. Values reported in mg/kg.
- Sample location has one or more values exceeding 6NYCRR Part 375-6.8 (b) restricted industrial values. *Contaminant(s) that exceed industrial - in italics.* Values reported in mg/kg.
- Sample location has one or more values that exceed TCLP criteria for characteristic hazardous waste. Values reported in mg/l.

  PCBs sample result > 50 mg/kg also hazardous waste

(MAX) - Sample is location and concentration of the maximum concentration

SCALE IN FEET
0 30 60 90

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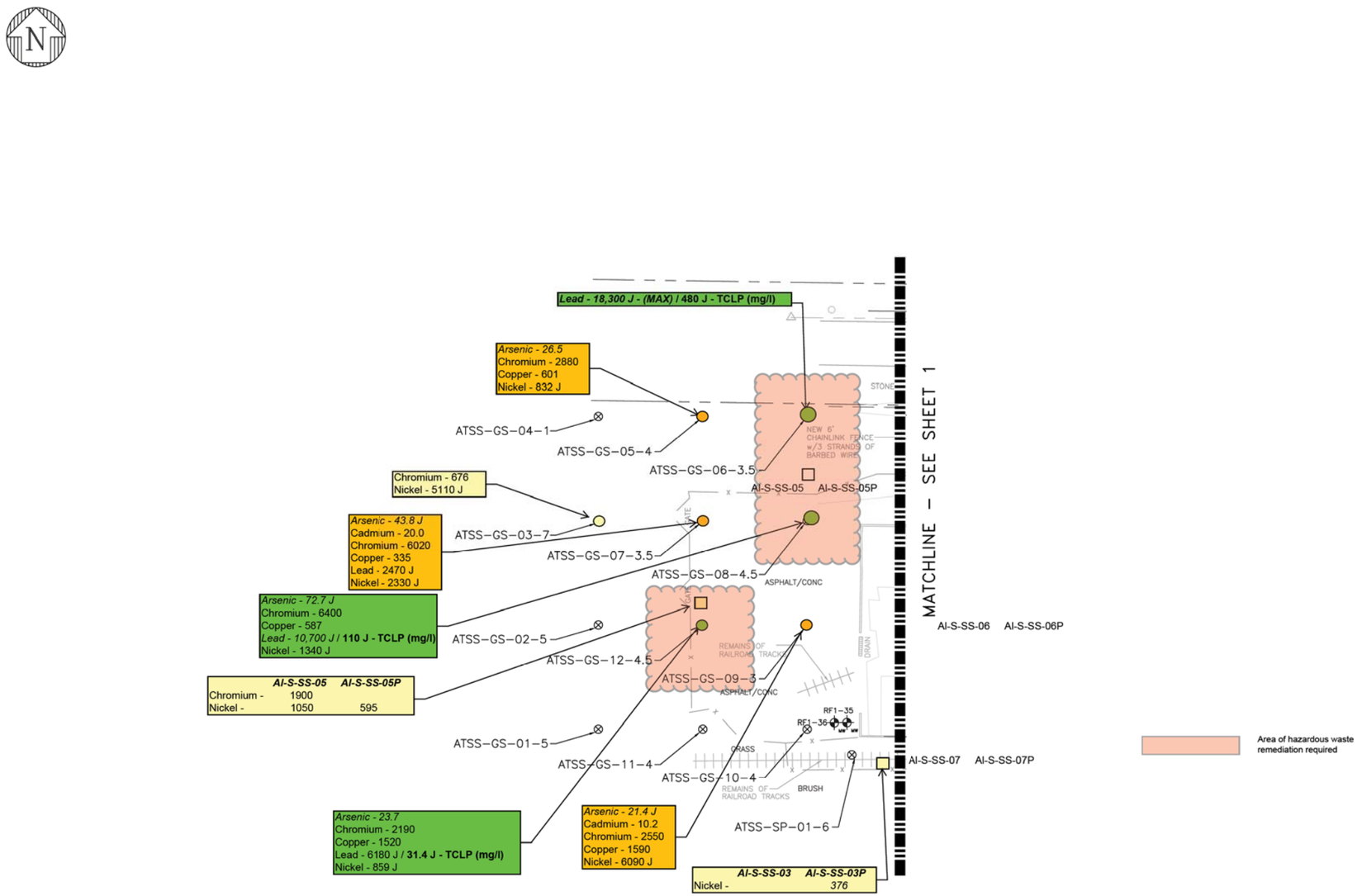
FIGURE 3
SHEET 2

FORMER ALTECH SPECIALTY STEEL SITE METALS CONTAMINATED SOIL

F:\Al Tech NV2501\2007 Sample Locations.dwg



SOIL SAMPLE NAMING CONVENTION OUTLINE

ATSS-NP-01-2

- SAMPLE DEPTH (IN FEET BELOW GROUND SURFACE)
- UNIQUE BORING NUMBER
- SITE SPECIFIC AREA
  - EPA = EAST PRODUCTION AREA
  - EPR = EAST PICKLING ROOM
  - GS = GRID SAMPLES (WEST PARKING LOT)
  - ID = IRM DEMOLITION LIMITS
  - NP = NORTH PERIMETER
  - SP = SOUTH PERIMETER
  - WPA = WEST PRODUCTION AREA
  - WPR = WEST PICKLING ROOM
- AL TECH SPECIALTY STEEL SITE
  - WS = WATER SAMPLES
  - BM = BRICK/MORTAR SAMPLES
  - S - SS = SURFACE SAMPLE
  - P = POST-REMEDIAL SAMPLE

LEGEND

- ⊗ Sampling location. Results may or may not exceed 6NYCRR Part 375-6.8(b) unrestricted use SCOs. Values not reported on figure.
- ○ Sample location has one or more values exceeding 6NYCRR Part 375-6.8 (b) commercial use SCOs. Values reported in mg/kg.
- ● Sample location has one or more values exceeding 6NYCRR Part 375-6.8 (b) restricted industrial values. *Contaminant(s) that exceed industrial - in italics.* Values reported in mg/kg.
- ● Sample location has one or more values that exceed TCLP criteria for characteristic hazardous waste. Values reported in mg/l.
  PCBs sample result > 50 mg/kg also hazardous waste

(MAX) - Sample is location and concentration of the maximum concentration

SCALE IN FEET
0 30 60 90

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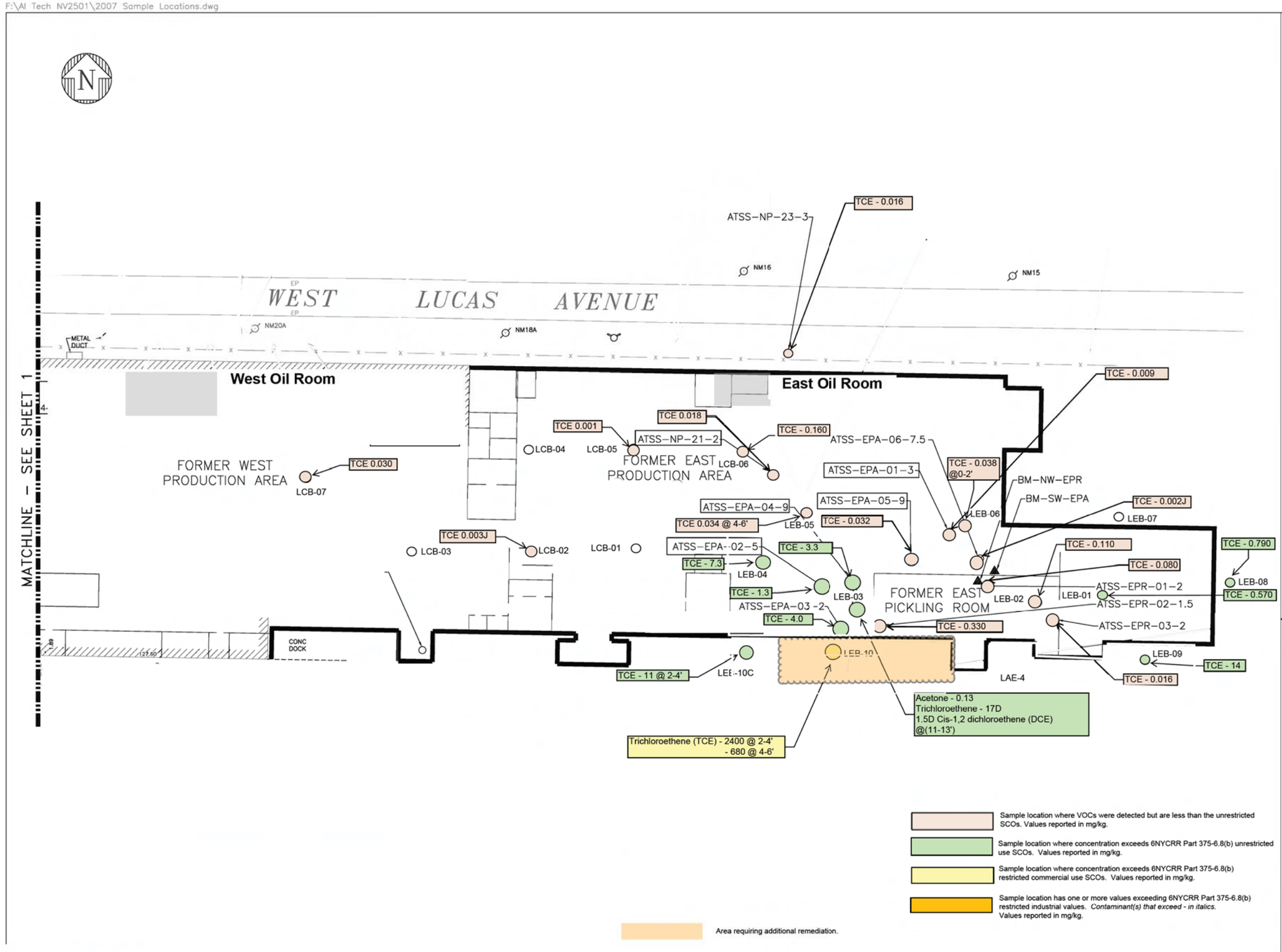
FIGURE # 3
SHEET 3

FORMER ALTECH SPECIALTY STEEL SITE
METALS CONTAMINATED SOIL

F:\Al Tech NV2501\2007 Sample Locations.dwg



SOIL SAMPLE NAMING CONVENTION OUTLINE

ATSS–NP–01–2

- 2 — SAMPLE DEPTH (IN FEET BELOW GROUND SURFACE)
- 01 — UNIQUE BORING NUMBER
- NP — SITE SPECIFIC AREA
  - EPA = EAST PRODUCTION AREA
  - EPR = EAST PICKLING ROOM
  - GS = GRID SAMPLES (WEST PARKING LOT)
  - ID = IRM DEMOLITION LIMITS
  - NP = NORTH PERIMETER
  - SP = SOUTH PERIMETER
  - WPA = WEST PRODUCTION AREA
  - WPR = WEST PICKLING ROOM
- ATSS — AL TECH SPECIALTY STEEL SITE
  - WS = WATER SAMPLES
  - BM = BRICK/MORTAR SAMPLES

LEGEND

- ⊗ PROPOSED BORING LOCATIONS
- ○ WATER SAMPLE LOCATIONS
- ▲ BRICK/MORTAR SAMPLE LOCATIONS

SCALE IN FEET
0 30 60 90

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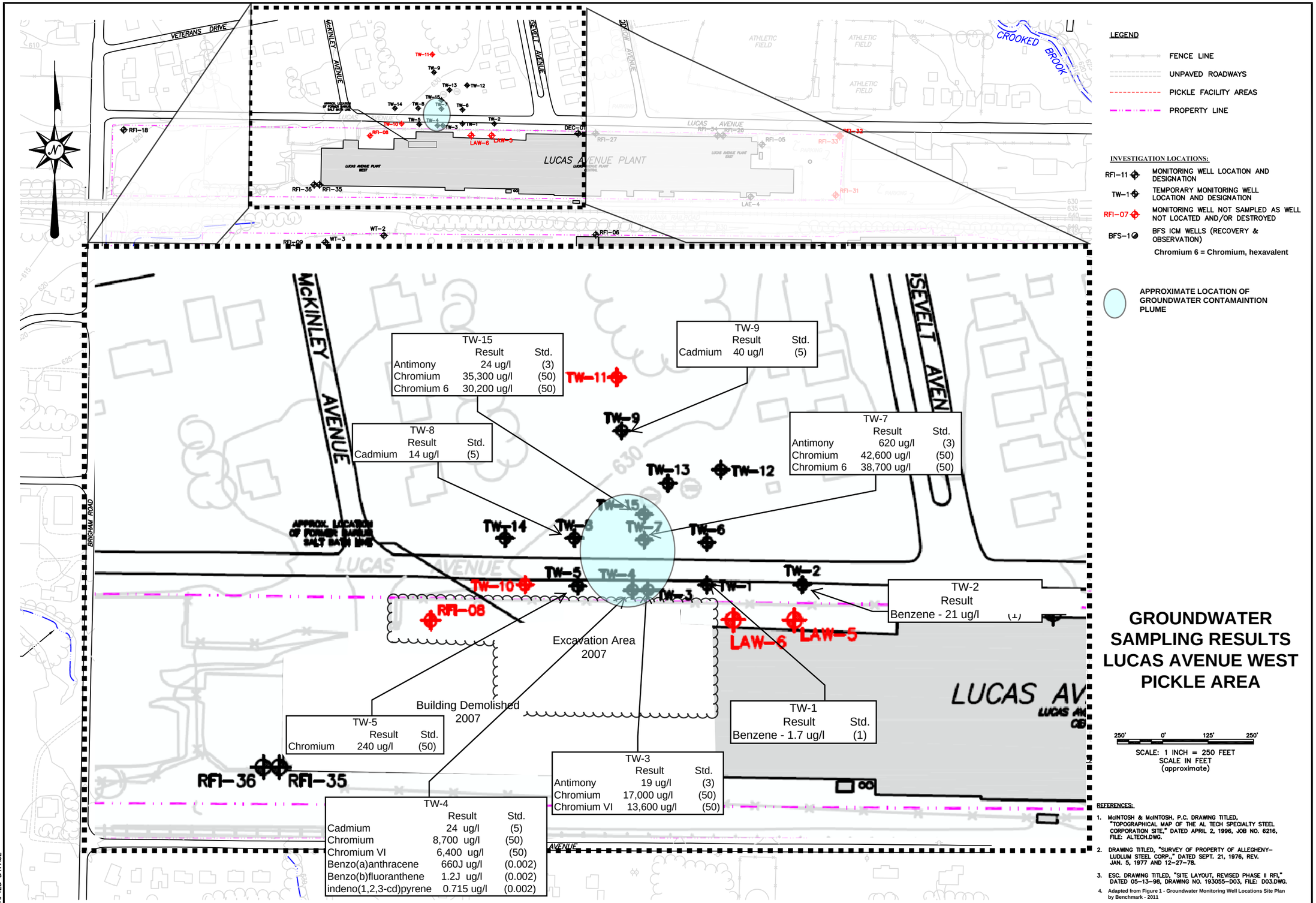
FIGURE 4 **FORMER ALTECH SPECIALTY STEEL SITE VOC CONTAMINATED SOIL**



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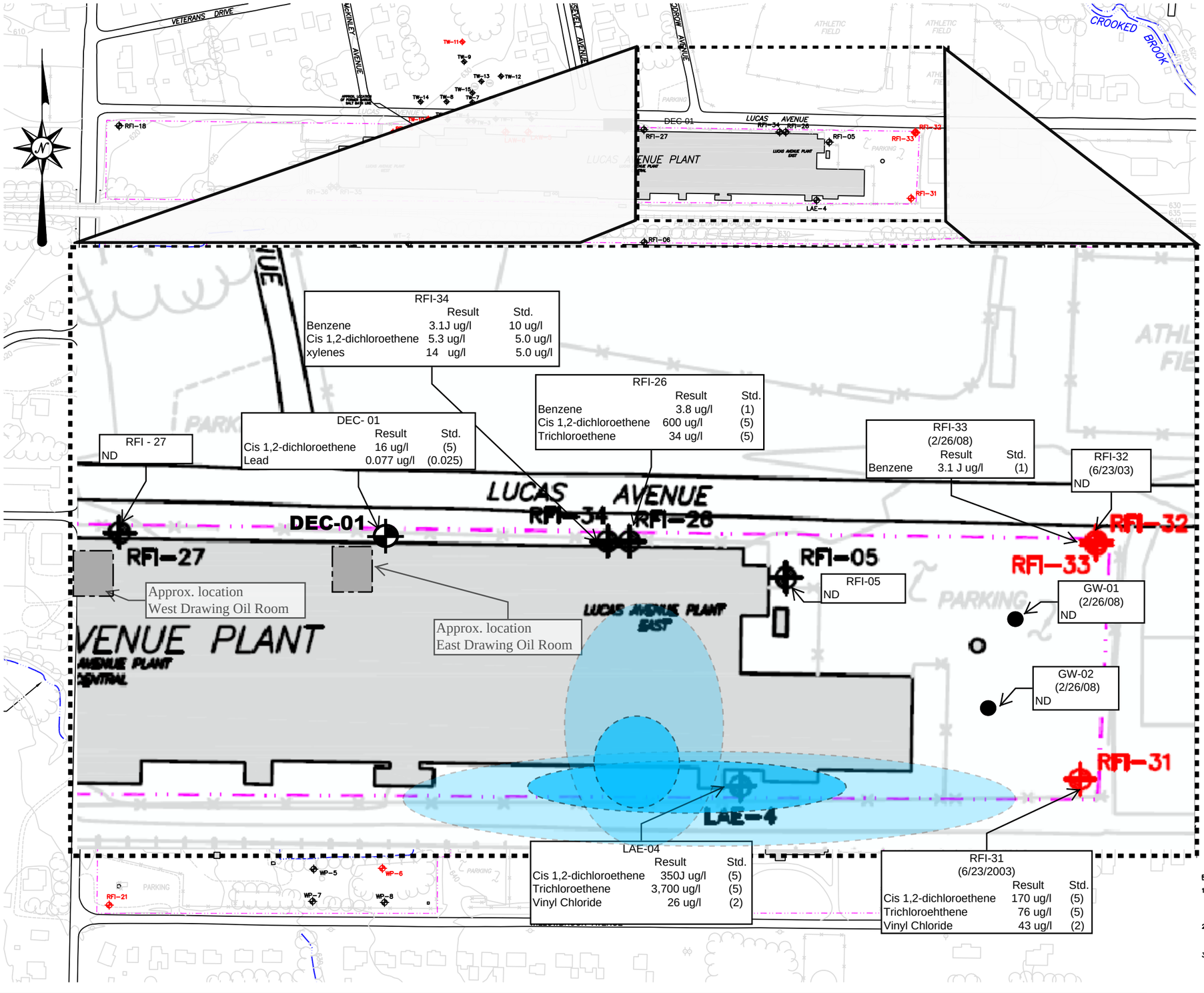
JOB NO.: 0041-013-600

GROUNDWATER MONITORING SUMMARY REPORT (OCTOBER 2011)
FORMER AL TECH SPECIALTY STEEL CORPORATION FACILITY
DUNKIRK, NEW YORK
PREPARED FOR
REALCO, INC.

FIGURE 5



LEGEND

- FENCE LINE
- UNPAVED ROADWAYS
- PICKLE FACILITY AREAS
- PROPERTY LINE

INVESTIGATION LOCATIONS:

- RFI-11 ⊕ MONITORING WELL LOCATION AND DESIGNATION
- RFI-07 ⊕ MONITORING WELL NOT SAMPLED AS WELL NOT LOCATED AND/OR DESTROYED

TCE ~ 1 ppm

TCE > 1000 ppm

GROUNDWATER SAMPLING RESULTS LUCAS AVENUE EAST PICKLE AREA

250' 0' 125' 250'

SCALE: 1 INCH = 250 FEET
SCALE IN FEET
(approximate)

REFERENCES:

1. McINTOSH & McINTOSH, P.C. DRAWING TITLED, "TOPOGRAPHICAL MAP OF THE AL TECH SPECIALTY STEEL CORPORATION SITE," DATED APRIL 2, 1996, JOB NO. 6216, FILE: ALTECH.DWG.
2. DRAWING TITLED, "SURVEY OF PROPERTY OF ALLEGHENY-LUDLUM STEEL CORP.," DATED SEPT. 21, 1976, REV. JAN. 5, 1977 AND 12-27-78.
3. ESC. DRAWING TITLED, "SITE LAYOUT, REVISED PHASE II RFI," DATED 05-13-98, DRAWING NO. 193055-D03, FILE: D03.DWG.

DATE: OCTOBER 2011
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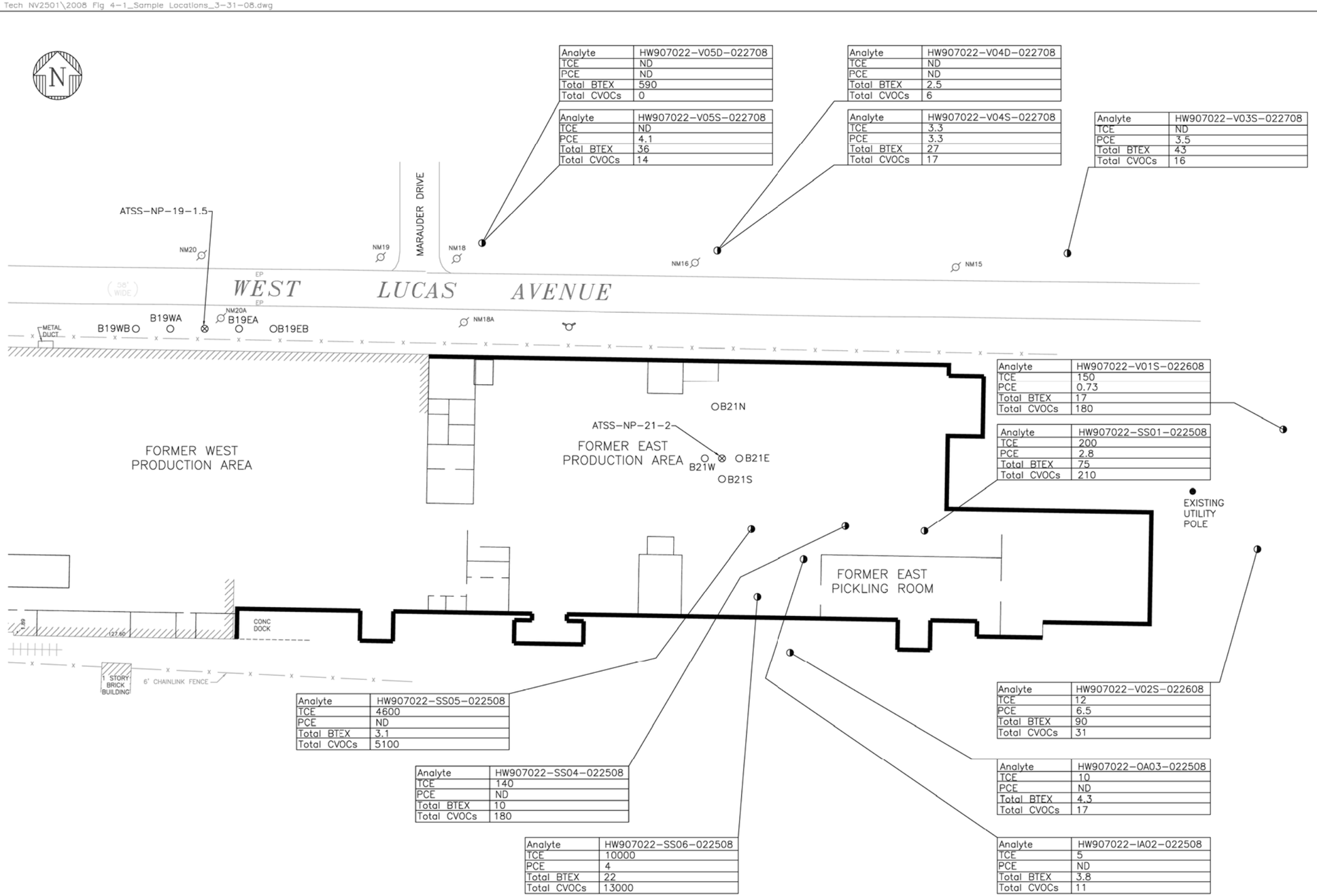
JOB NO.: 0041-013-600

GROUNDWATER MONITORING SUMMARY REPORT (OCTOBER 2011)
FORMER AL TECH SPECIALTY STEEL CORPORATION FACILITY
DUNKIRK, NEW YORK
PREPARED FOR
REALCO, INC.

FIGURE 6

F:\Al Tech NV2501\2008 Fig 4-1_Sample Locations_3-31-08.dwg



Analyte	HW907022-V05D-022708
TCE	ND
PCE	ND
Total BTEX	590
Total CVOCs	0

Analyte	HW907022-V05S-022708
TCE	ND
PCE	4.1
Total BTEX	36
Total CVOCs	14

Analyte	HW907022-V04D-022708
TCE	ND
PCE	ND
Total BTEX	2.5
Total CVOCs	6

Analyte	HW907022-V04S-022708
TCE	3.3
PCE	3.3
Total BTEX	27
Total CVOCs	17

Analyte	HW907022-V03S-022708
TCE	ND
PCE	3.5
Total BTEX	43
Total CVOCs	16

Analyte	HW907022-V01S-022608
TCE	150
PCE	0.73
Total BTEX	17
Total CVOCs	180

Analyte	HW907022-SS01-022508
TCE	200
PCE	2.8
Total BTEX	75
Total CVOCs	210

Analyte	HW907022-SS05-022508
TCE	4600
PCE	ND
Total BTEX	3.1
Total CVOCs	5100

Analyte	HW907022-SS04-022508
TCE	140
PCE	ND
Total BTEX	10
Total CVOCs	180

Analyte	HW907022-SS06-022508
TCE	10000
PCE	4
Total BTEX	22
Total CVOCs	13000

Analyte	HW907022-V02S-022608
TCE	12
PCE	6.5
Total BTEX	90
Total CVOCs	31

Analyte	HW907022-0A03-022508
TCE	10
PCE	ND
Total BTEX	4.3
Total CVOCs	17

Analyte	HW907022-IA02-022508
TCE	5
PCE	ND
Total BTEX	3.8
Total CVOCs	11

2008 SOIL VAPOR SAMPLE NAMING CONVENTION OUTLINE

HW907022-V03S-022708

- HW907022 — NYSDEC SITE NUMBER
- V03S — ID NUMBER
- S — SHALLOW OR DEEP (WHERE APPLICABLE)
- 022708 — SAMPLE DATE

LEGEND

- ⊗ 2007 BORING LOCATIONS (SEE FIGURE A-1C FROM THE 2007 SITE INVESTIGATION REPORT (SEPTEMBER 2007 BY EEEPC) FOR NAMING CONVENTION OUTLINE
- ◑ 2008 SOIL VAPOR SAMPLE LOCATION
- ○ NYSDEC SOIL SAMPLE LOCATION, 2/26/08 AND 2/27/08
- NM15 ☼ EXISTING POWERPOLE LOCATION
- x EXISTING FENCE LOCATION
- ☿ EXISTING HYDRANT LOCATION

ABBREVIATIONS

$\mu g/m^3$ = MICROGRAM PER CUBIC METER

TCE = TRICHLOROETHENE

PCE = TETRACHLOROETHENE

BTEX = BENZENE, TOLUENE, ETHYLBENZENE AND TOTAL ZYLENES

CVOCs = CHLORINATED VOLATILE ORGANIC COMPOUNDS

NOTE:

1. GEOPROBE POINT LOCATIONS ARE APPROXIMATE BASED ON FIELD MEASUREMENTS AND ARE FOR REFERENCE PURPOSES ONLY.
2. ALL CONCENTRATIONS ARE IN $\mu g/m^3$.

SCALE IN FEET

0 30 60 90

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FIGURE # 7 FORMER AL TECH SPECIALTY STEEL SITE
VOC CONCENTRATIONS IN
SOIL VAPOR SAMPLES

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants are arranged into four categories; volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and inorganics (metals and cyanide). For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 6.1.1 are also presented.

Waste/Source Areas

As described in the RI report, waste/source materials were identified at the site and are impacting groundwater, soil and soil vapor.

Wastes are defined in 6 NYCRR Part 375-1.2 (aw) and include solid, industrial and/or hazardous wastes. Source Areas are defined in 6 NYCRR Part 375 (au). Source areas are areas of concern at a site where substantial quantities of contaminants are found which can migrate and release significant levels of contaminants to another environmental medium.

Numerous waste/source areas exist at the Lucas Avenue Plant, including:

- Metals contaminated soils
- Remaining degreaser and pickle tanks
- VOC contaminated soils
- Petroleum USTs
- PCB containing transformers
- Cyanide and copper contaminated brick

Residuals from former, molten barium and chromium salt pickling operations and a former battery room in the western end of the former facility have contaminated soils with metals including, but not limited to, chromium, barium, arsenic and lead (see Figure 3.) Residuals from these soils continue to impact groundwater which has been identified as migrating offsite into a nearby residential area (see Figure 5.)

Several degreaser, acid neutralizing and pickle tanks also remain in the western pickle area (Figure 3) that have residual materials contaminated with lead, barium and chromium and are characteristically hazardous for chromium as high as 11.7 mg/l (TCLP regulatory level of 5.0 mg/l.) Deteriorating conditions at the former facility increasingly allow precipitation to contact this contamination which in turn, continues to contribute to the degradation of groundwater.

Former pickling operations in the eastern end of the former facility (Figure 4) have contaminated soils with VOCs including trichloroethene (TCE) as high as 2,400 mg/kg (unrestricted 0.68 mg/kg.) The TCE in the soils has: impacted groundwater (Figure 6); has contributed to the buildup of soil vapor under the floor of the building; and has been identified in the indoor air of the facility.

Several underground storage tanks (USTs) are located in two separate underground rooms located in the center of the facility (Figure 3) with total capacity of 8000 and 12,000 gallons respectively. Petroleum residuals remain in the tanks, vault floors and walls and standing water is evident in the rooms. The presence of groundwater, type of materials handled, and the presence of contamination suggest the potential to affect adjacent subsurface soils and groundwater. In addition, previous testing indicated that the oil and sludge residuals from the remaining oil tanks contained metals and were characteristically hazardous for barium.

Transformers within an electrical room (Figure 3) contain PCBs including Arochlor 1260 as high as 310 mg/kg (see Table 2.) The results of the transformer oil testing confirmed the transformers are considered by regulation to be PCB contaminated. EPA regulations require that all free flowing liquid from these transformers be emptied and be thermally incinerated.

Walls in the eastern pickle area are constructed of brick (Figure 3.) Some of these bricks have been contaminated with high levels of copper as high as 20,000 mg/kg and cyanide as high as 710 mg/kg. The presence of this contamination is a threat by contact. In addition, as in the western pickle area, continuing deterioration of the building will allow precipitation to enter the facility which will increase the potential for the high levels of copper and cyanide to become mobile in the environment.

Certain waste/source areas identified at the site were addressed by the IRM(s) described in Section 6.2. The remaining waste/source area(s) identified during the RI will be addressed in the remedy selection process.

Groundwater

Monitoring wells were installed to monitor both the overburden and the bedrock groundwater quality surrounding the Lucas Avenue Plant. Groundwater samples have been collected from wells around the Lucas Avenue facility since the beginning of investigations with the most recent sampling in May of 2011. The samples were collected to assess groundwater conditions on and off-site. Results from the sampling (see Table 1) indicate that contamination in shallow groundwater at the site exceeds the SCGs for VOCs and inorganics.

Groundwater near the eastern portion of the Lucas Avenue facility (Figure 6) has VOCs exceeding groundwater quality standards. Groundwater in the Eastern Pickle Area has been compromised by the presence of VOCs, including TCE, similar to the contaminants in the soils. The highest concentrations of these VOCs were found in monitoring well LAE-04 which is near the suspected source area. Evidence of the potential for groundwater contaminant migration has been noted in monitoring wells downgradient of the source in both overburden and shallow bedrock wells. The presence of contaminants in these downgradient wells indicates the VOCs are migrating horizontally. Concentrations in the downgradient overburden are higher than the concentration in the bedrock, indicating there is more lateral migration than vertical migration. TCE has been found at the site boundary however, groundwater sampled off site indicated no impacts.

Concentrations have decreased over time but still remain notably above the groundwater quality standards. Un-remediated source soils and continued degradation of the building allow increased infiltration to mobilize the VOCs that could compromise off-site groundwater quality.

Benzene and xylene were found to exceed the groundwater quality standards in monitoring wells directly downgradient of rooms containing drawing oil tanks. Benzene exceeded the groundwater standards in 5 samples and xylene exceeded in one sample. Benzene and xylene are principal components of petroleum contamination. The drawing oil tank rooms are located in the eastern portion of the building adjacent to Lucas Avenue. The benzene and xylene were detected in monitoring wells adjacent to a roadway, which may indicate the

groundwater quality has been compromised with general runoff from highway sources. The presence of these contaminants, however, could be indicative of residuals from the USTs within the facility, and this cannot be ruled out as a source.

Inorganic compounds including chromium, antimony, cadmium and lead have been detected in shallow groundwater adjacent to and migrating off-site from former pickle operations located in the western portion of the Lucas Avenue facility (see Figure 5). Soil is contaminated by residuals from the former pickle operations that incorporated molten salts as the pickle medium and has contributed to groundwater contamination. Sampling results also note that widespread areas are impacted with iron, manganese, magnesium and sodium. At former steel manufacturing sites these metals are expected and attributed to operations and historic fill.

A large area of chromium and barium contaminated soil within the former pickle area was addressed by an IRM in May 2007 when approximately 4,689 cubic yards of soil was excavated and properly disposed. The excavation was then backfilled with a mixture of soils and peat, intended to passively reduce hexavalent chromium to less toxic trivalent chromium in groundwater. Subsequent groundwater monitoring indicates limited success of the IRM as concentrations directly adjacent to the excavated area have not substantially decreased. Post excavation sampling during the IRM noted contaminated soils. The presence of these remaining soils limits the success of the IRM and continues to represent a source of groundwater contamination.

Table #1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
Benzene	ND - 74	5	5 of 24
Cis-1,2-dichloroethene	ND - 600	5	5 of 24
Trichloroethene (TCE)	ND - 3700	5	3 of 24
Vinyl chloride	ND - 43	5	2 of 24
Xylene	ND - 14	5	1 of 24
SVOCs			
Benzo(a)anthracene	ND - 0.066J	0.002	1 of 22
Benzo(b)fluoranthene	ND - 1.2 J	0.002	1 of 22
Indeno(1,2,3-cd)pyrene	ND - 0.71J	0.002	1 of 22
Inorganics			
Antimony	ND - 620	3	3 of 17
Cadmium	ND - 40	5	3 of 22
Chromium	ND - 42,600	50	8 of 22
Iron	110 - 20,200	300	22 of 25
Lead	ND - 77	25	1 of 22
Magnesium	13,800 - 151,000	35,000	12 of 25
Manganese	13 - 3,700	300	6 of 25
Sodium	12,300 - 805,000	20,000	21 of 23

a - ppb: parts per billion, which is equivalent to micrograms per liter, ug/L, in water.
b- SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

As noted on Figure(s) 5 & 6, the primary groundwater contaminants are VOCs including TCE and benzene, associated with pickle operations and petroleum storage. Inorganics including chromium and cadmium associated with residuals from molten salt pickle operations within the Lucas Avenue plant.

Based on the findings of the RI, the presence of metals and VOCs in soils and petroleum residuals in USTs and in soils at the facility has resulted in the contamination of groundwater. The site contaminants that are considered to be the primary contaminants of concern which will be addressed by the remedy selection process are: TCE, cis-1,2-dichloroethene, vinyl chloride, and inorganics, including chromium, cadmium and lead. Active remediation of groundwater is not anticipated, however, improvement of groundwater quality is expected after removal of source soils and residuals. Continued monitoring of the groundwater is necessary to determine if groundwater quality is indeed improving. An environmental easement prohibiting use of groundwater for potable purposes will be required. If after a period of monitoring, not to exceed five years, groundwater quality has not significantly improved, more active measures to address groundwater contamination will need to be evaluated.

Soil

Samples of soils were collected during various remedial investigations with the latest sampling being conducted after implementation of the IRM to remove highly contaminated soils from the western pickle room. During the site investigations, 99 soil borings and 20 surface locations were sampled. Sampling depths extended from 0 to 13 feet, however, most samples were collected from the surface to depths of up to 6 feet, corresponding to the fill material situated over native lacustrine silts and clay. From these sampling locations, 140 samples were analyzed for VOCs. Metals, including mercury were analyzed from 129 samples while SVOCs and PCBs were analyzed from 81 samples. Cyanide was analyzed for in 91 samples and hexavalent chromium was analyzed for in 24 samples. Fifty-nine samples were analyzed using the Toxicity Characteristic Leaching Procedure (TCLP) a Federal EPA test method used to characterize waste as either hazardous or non-hazardous for the purpose of disposal.

Exceedances of the VOCs are limited to an area in the eastern portion of the Site (see Figure 6) where vapor degreasers were used in the manufacturing process. Five VOCs (maximum concentration), including acetone (0.130 mg/kg), cis-1,2-dichloroethene (130J mg/kg), trans-1,2-dichloroethene (0.230 mg/kg), TCE (2400 mg/kg) and vinyl chloride (0.220 mg/kg) were detected above the NYSDEC Unrestricted Use SCOs in one or more of the 140 soil sample locations. TCE exceeded the SCO of 0.47 mg/kg in 14 of 140 samples. Breakdown products from the natural degradation of TCE such as cis-1,2-dichlorethene, found in 3 of 140 samples and trans-1,2-dichloroethene and vinyl chloride were found in 1 of 140 samples. Acetone was found in five of 140 soil samples collected.

Associated with an area where degreasing operations were conducted, the highest concentration of TCE was found in soils where a storage tank was located. TCE at sampling location LEB-10 was found to exceed SCOs as high as 2400 mg/kg, from (2'– 4') and 680 mg/kg at (4'–6'). Concentrations of TCE quickly decrease both with depth and laterally from this former tank area. Acetone was found to exceed the unrestricted SCOs of 0.05 mg/kg only in five samples. The highest exceedance of these five samples was 0.170 mg/kg and is considered an inconsequential amount. Degradation products of TCE were also found in the soils in the former tank area. Cis-1,2-dichloroethene was found as high as 1.5 mg/kg exceeding the unrestricted SCO of 0.25 mg kg in three samples. Trans-1,2-dichloroethene and vinyl chloride were found in one sample exceeding unrestricted SCOs. When compared to commercial use SCOs only TCE at sample LEB-10 exceeds the SCO

Fifteen SVOC analytes (see Table 2), all polycyclic aromatic hydrocarbons [PAHs], exceeded NYSDEC Unrestricted Use SCOs (in mg/kg). PAHs generally adhere to solid particles and are common constituents of

soils in urban and industrial areas. The primary source of PAHs is from the incomplete combustion of wood (wood-burning stoves and furnaces) and fuel (motor vehicles and other gas-burning engines.) Other sources include smoke (industrial, cigarette, charcoal grills, etc.) and soot, asphalt, oils, and greases.

Out of the fifteen compounds six of 81 samples exceeded the unrestricted SCOs for benzo(a)pyrene. Five of 81 samples exceeded unrestricted SCOs for benzo(b)fluoranthene, Four of 81 samples exceeded for benzo(a)anthracene and three of 81 exceeded for indeno(1,2,3-cd)pyrene. Benzo(k)fluoranthene, chrysene and dibenzo(a,h)anthracene exceeded unrestricted SCOs twice out of 81samples respectively. The remaining SVOCs, acenaphthene, anthracene, benzo(g,h,i)perylene, fluoranthene, naphthalene, phenanthrene and pyrene exceeded the unrestricted SCOs in one of 81 samples.

When compared to the restricted use SCOs for commercial use properties six of 81 samples exceeded for benzo(a)pyrene, five of 81 samples exceeded unrestricted SCOs for benzo(b)fluoranthene, four of 81 samples exceeded for benzo(a)anthracene, three of 81 exceeded for indeno(1,2,3-cd)pyrene, one of 81 samples exceeded for dibenzo(a,h)anthracene, benzo(k)fluoranthene, chrysene, fluoranthene and phenanthrene.

Distributions of the PAHs were mostly in the western end of the Lucas Avenue Plant, samples in this area were mainly surface soil samples in areas where there was a higher activity from shipping and pickling operations. Two areas in the eastern pickle area had significantly higher concentrations corresponding to specific process areas including a machine pit.

Elevated metals were found within the facility and in surrounding areas resulting from manufacturing processes at the Lucas Avenue Plant (see Table 2). A total of 129 samples were analyzed for metals. As expected, widespread areas are impacted with iron, manganese, magnesium and sodium, attributed to operations and historic fill. Of the 129 samples, eleven metals had concentrations exceeding the NYSDEC Part 375 Un-restricted Use SCOs. The greatest number of samples, 105 of 129, exceeded the chromium SCO. Nickel had the second most, with the SCOs being exceeded in 87 of 129 samples. Lead, copper and zinc exceeded SCOs in 69, 67 and 47 of 129 samples, respectively. The aforementioned metals were mostly associated with remaining soils north of the IRM excavation area, isolated areas under remaining slabs and from fill soils in a parking area to the west of the IRM. Arsenic as high as 225 mg/kg was found to exceed the unrestricted SCO of 13 mg/kg in surface soils all around the facility, however, the areas of greatest concentrations were associated with operational areas. Selenium, cadmium and barium were found in 34, 20 and 11 of 129 samples, respectively. These contaminants were not widespread being found mostly near pickle bath areas. Lesser quantities of silver (8 of 129), mercury (4 of 129) were found randomly located. Total cyanide was analyzed for in 91 samples, but none of the results exceeded the Unrestricted Use SCOs for cyanide.

When compared to the restricted use SCOs for commercial use only five metals exceed the SCO. Of the five metals arsenic exceeded the SCO in 35 of the 129 samples, lead exceeded in 9 of 129 samples, chromium exceeded in 8 of 129 samples, nickel exceeded in 5 of 129 samples and cadmium exceeded in 2 of 129 samples

A total of 24 samples were analyzed for hexavalent chromium. Only one sample exceeded the unrestricted SCO for this compound, however, this compound readily transforms from the more toxic hexavalent state to the more stable and less toxic trivalent state when exposed to the atmosphere. Because hexavalent chromium is found in impacted groundwater, chromium, when found in higher concentrations at the site near suspected disposal areas, such as the pickle areas, has the potential to be the hexavalent state.

A total of 59 soil samples were analyzed for Toxic Characteristic Leaching Procedure (TCLP.) The TCLP analysis is designed to simulate the leaching a waste will undergo if disposed of in a sanitary landfill. When toxic wastes are land disposed, contaminated liquid may leach from the waste and pollute ground water. The

TCLP helps identify wastes likely to leach concentrations of contaminants that may be harmful to human health or the environment. Thirteen of 59 samples exceeded the EPA Toxicity Characteristic Constituent Regulatory levels for TCLP analyses for two metals, chromium and cadmium, thus exhibiting toxicity characteristic as hazardous waste. In twelve samples, lead exceeded the TCLP regulatory level of (5.0 mg/l), with a maximum concentration of 480 mg/l. All of these twelve samples were collected from the western end of the Lucas Avenue Plant and in the west parking lot area. Both areas correspond to the location of the former battery storage and pickle area. Only one sample exceeded the EPA TCLP regulatory level of 1.0 mg/l for cadmium. This sample was collected from the eastern production area.

Table #2 - Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Commercial Use SCG[c] (ppm)	Frequency Exceeding Restricted SCG
VOCs					
Acetone	ND – 0.170	0.05	5/140	500	0/140
2-Butanone (MEK)	ND – 0.016	0.12	0/140	500	0/140
Carbon disulfide	ND – 0.027	N/A	N/A	N/A	N/A
Cis-1,2-Dichloroethene	ND – 1.5	0.25	3/140	500	0/140
1,1-dichloroethene	ND – 0.041	0.33	0/140	240	0/140
Ethylbenzene	ND – 0 .006	1	0/140	390	0/140
Methylene chloride	ND – 0.033	0.05	0/140	500	0/140
trans -1,2-Dichloroethene	ND – 0.230	0.19	1/140	500	0/140
Trichloroethene	ND – 2,400	0.47[d]	14/140	200	2/140
Tetrachloroethene	ND – 0.310	1.3	0/140	150	0/140
Toluene	ND – 0.026	0.7	0/140	500	0/140
Vinyl chloride	ND – 0.220	0.02	1/140	13	0/140
Xylenes (mixed)	ND – 0.039	0.26	0/140	500	0/140
SVOCs					
Acenaphthene	ND - 62	20	1/81	500	0/81
Acenaphthylene	ND - 3.9	100	0/81	500	0/81
Anthracene	ND - 130	100	1/81	500	0/81
Benzo(a)anthracene	ND - 420	1	4/81	5.6	4/81
Benzo(g,h,i)perylene	ND - 150	100	1/81	500	0/81
Benzo(a)pyrene	ND - 300	1	6/81	1	6/81
Benzo(b)fluoranthene	ND - 480	1	5/81	5.6	5/81
Benzo(k)fluoranthene	ND - 180	0.8	2/81	56	1/81
Chrysene	ND - 350	1	2/81	56	1/81
Dibenzo(a,h)anthracene	ND - 78	0.33	2/81	0.56	2/81
Fluoranthene	ND - 840	100	1/81	500	1/81
Fluorene	ND - 62	30	1/81	500	0/81
Indeno(1,2,3-cd)pyrene	ND - 130	0.5	3/81	5.6	3/81
Naphthalene	ND - 29	12	1/81	500	0/81
Phenanthrene	ND - 890	100	1/81	500	1/81

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Commercial Use SCG[c] (ppm)	Frequency Exceeding Restricted SCG
Pyrene	ND - 350	100	1/81	500	0/81
Inorganics					
Arsenic	2.7 - 225	13	45/129	16	35/129
Barium	5.6 - 3,920	350	11/129	400	11/129
Cadmium	0.1 - 548	2.5	20/129	9.3	7/129
Chromium	10.9 - 63,000	19	105/129	1,500	21/129
Chromium, hexavalent	ND - 8.72	1.0	1/24	400	0/24
Copper	10.2 - 3,970	50	67/129	270	22/129
Cyanide	0.1 - 21.8	27	0/91	27	0/129
Lead	9.1 - 18,300	63	69/129	1,000	16/129
Nickel	8.3 - 31,500	30	87/129	310	36/129
Mercury	ND - 0.3	0.18	4/129	2.8	0/129
Selenium	0.5 - 13.2	3.9	34/129	1,500	0/129
Silver	0.7 - 11.4	2.0	8/129	1,500	0/129
Zinc	7.5 - 695	109	47/129	10,000	0/129
Pesticides/PCBs					
PCBs	ND - 0.110	0.1	1/104	1	0/110

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.
c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Commercial Use, unless otherwise noted.

The primary soil contaminants are VOCs, SVOCs consisting mainly of (PAHs) and metals (specifically, arsenic, cadmium, chromium and lead) associated with operation of the former steel finishing operations at the Lucas Avenue Plant. As noted on Figures 3 & 4, the primary soil contamination is associated with the former pickling areas. VOC contamination is largely associated with processes in the eastern portion of the plant with the highest contamination in an area of a former storage tank. Metals contamination is mostly in the western portion of the plant in areas where pickle baths contained metals salts. This area was also a battery storage area. Additional contamination was noted in a parking area near the pickle baths where fill was used to level the area.

Decades of operations at the Lucas Avenue plant has resulted in PAH and metals soil contamination above the unrestricted SCGs. PAH and inorganic soil contamination such as iron, manganese, magnesium and sodium, including lower levels of arsenic, is associated with historic activity at the site. Copper and zinc are also noted in numerous samples associated with process areas. Therefore, PAH and metal soil contamination, with the exception of higher levels of arsenic, barium, cadmium, chromium and lead, are not considered a site specific contaminant of concern. Copper and zinc, will be addressed during remediation because of being collocated in areas associated with other contaminants of concern.

Based on the findings of the Remedial Investigation, the presence of VOCs and metals has resulted in the contamination of soil. The site contaminants identified in soil which are considered to be the primary

contaminants of concern, to be addressed by the remedy selection process are, TCE, arsenic, barium, cadmium chromium, and lead.

Soil Vapor

The evaluation of the potential for soil vapor intrusion resulting from the presence of site related soil or groundwater contamination was evaluated by the sampling of soil vapor, sub-slab soil vapor under structures, and indoor air. At this site due to the presence of buildings in the impacted area a full suite of samples were collected to evaluate whether soil vapor intrusion was occurring.

Based on the concentration detected, and in comparison with the NYSDOH Soil Vapor Intrusion Guidance, the primary soil vapor contaminant is trichloroethylene (TCE) which was associated with the degreasing operation at the Lucas Avenue Plant. Soil vapor samples were collected from the sub-slab of the eastern portion of the Lucas Avenue Plant within and around the degreasing operation area. The samples were collected to assess the potential for soil vapor intrusion. A total of four sub-slab samples, one indoor ambient air sample, and one outdoor ambient air sample were collected from the structure. Additional soil vapor samples were collected from adjacent properties. Indoor air and outdoor air samples were also collected at this time.

Total chlorinated VOC concentrations in sub-slab samples were calculated and ranged from180 $\mu g/m^3$ to13,000 $\mu g/m^3$. Of the total TCE was detected in all four of the sub-slab samples at concentrations ranging from140 $\mu g/m^3$ to10,000 $\mu g/m^3$. The maximum concentration detected was collected near the south wall of the building. The ambient indoor and outdoor samples also contained TCE at concentrations of 5$\mu g/m^3$ and 10$\mu g/m^3$, respectively. When compared to the NYSDOH decision matrices in the "Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York dated October 2006" the concentration in the sub-slab coupled with the concentration in the indoor and ambient air mitigation is appropriate to minimize current or potential exposures associated with soil vapor intrusion.

As noted on Figure 7, the primary soil vapor contamination is found under the eastern portion of the Lucas Avenue Plant building in an area known as Pickle Facility "D". Soil vapor testing was completed on adjacent properties that did not find any TCE exceeding the NYS DOH matrices. This information coupled with extent of groundwater contamination was considered and it was determined that; remediation of the source area will reduce VOC impacts lessening the likelihood of further migration; a permanent easement will be necessary, to require the evaluation of soil vapor intrusion and if warranted the installation of a vapor mitigation system before re-use of any on-site buildings or occupying new buildings; and that no further action is needed for off-site residential properties.

Based on the findings of the Remedial Investigation, the presence of VOCs has resulted in the contamination of soil vapor. The site contaminant considered to be the primary contaminants of concern which will drive the remediation of soil vapor to be addressed by the remedy selection process is trichloroethylene.

Exhibit B

Description of Remedial Alternatives

The following alternatives were considered based on the remedial action objectives (see Section 6.5) to address the contaminated media identified at the site as described in Exhibit A.

Alternative 1: No Further Action

The No Further Action Alternative recognizes the remediation of the site completed by the IRM(s) described in Section 6.2. This alternative leaves the site in its present condition and does not provide any additional protection of the environment.

Because no further action is anticipated with this alternative there are no costs assigned.

Alternative 2: Restoration to Pre-Disposal or Unrestricted Conditions

This alternative achieves all of the SCGs discussed in Section 6.1.1 and Exhibit A and soil meets the unrestricted soil cleanup objectives (SCOs) listed in Part 375-6.8 (a). This alternative would include: demolition of the existing structures, removal of all characteristic hazardous waste, excavation of all material exceeding unrestricted SCOs and treatment of metals impacted groundwater in the western portion of the site and VOC impacted groundwater in the eastern portion of the site.

At the Lucas Avenue site, given the historical operations, it is assumed that all of the non-native material used as fill at the site would exceed the unrestricted SCOs. Native soils at the site are lacustrine silts and clays. Previous remedial efforts during the IRM have shown these native soils are relatively impermeable and not largely impacted except in isolated areas. The average depth to bedrock at the site is 10' below the surface. In estimating quantities to be remediated to pre-disposal or unrestricted use, it is assumed that if all material, both non-native fill material and native soils were excavated to bedrock from below the former facility, this quantity would conservatively estimate the entire quantity of non-native fill material from the entire site. It is further assumed that this material would be excavated for off-site disposal.

Groundwater is impacted with metals or VOCs in separate areas of the site. To estimate a cost to remediate the groundwater to return site to pre-disposal conditions it is assumed that three volumes of groundwater from each area would have to be removed and treated after removal of soils exceeding unrestricted SCOs.

Removal of impacted soils to unrestricted SCOs and treatment of three volumes of groundwater after removal of all impacted soils would return the site to pre-release conditions allowing for unrestricted use of the site. The alternative would be fully protective of human health and the environment as all impacts from former operations would be removed. This alternative does not consider potential zoning restrictions on use, nor does it consider pre-existing impediments to use such as location (including proximity to the active rail corridor). This alternative requires no future monitoring or placement of easements or restrictions.

Present Worth: *$17,500,000*
Capital Cost: *$17,500,000*
Annual Cost: *$0*

Alternative 3: Restoration to Commercial Re-Use

This alternative achieves all of the SCGs discussed in Section 6.1.1 and Exhibit A. The Lucas Avenue Plant is an approximately 118,000 square foot building on an approximately 8.25 acre parcel. Facilities of this size needing remediation often have discrete areas of impact, each requiring different remedial techniques. As noted in the environmental assessment, various media have been impacted by past operations. Media impacted at Lucas Avenue include, soil, groundwater, and soil vapor. The selected remedy is a presumptive remedy intending to address impacts to these media. This alternative would include:

1. Building demolition;
2. Excavation and off-site disposal of characteristic hazardous waste metals including cadmium, chromium and lead;
3. Excavation and proper disposal of metals and SVOC contaminated soils containing elevated concentrations, to the extent feasible;
4. Continued monitoring of groundwater off-site to assess impacts of remedial efforts;
5. Excavation and off-site disposal of VOC contaminated soils to the extent feasible;
6. Backfill VOC excavation after treatment of bottom of excavation with a substance intended to hasten reductive de-chlorination of remaining VOCs in soil and groundwater;
7. Backfill excavations with off-site soil satisfying the requirements of 6NYCRR Part 375-6.7(d),
8. Removal of all underground storage tanks (USTs);
9. Removal and proper disposal of all electrical transformers;
10. Site cover consisting either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover. Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use; and
11. Placement of an environmental easement on the property, restricting future use of the property to commercial and industrial use, requiring evaluation of soil vapor intrusion and the installation of a vapor mitigation system if warranted, prohibiting use of groundwater, and requiring future use to adhere to a Site Management Plan (SMP).

Groundwater is impacted with metals and VOCs in separate areas of the site. It is assumed that three volumes of groundwater from each area would have to be removed and treated after removal of soils. Removal of characteristic hazardous wastes and other impacted soils coupled with the removal and treatment of approximately three volumes of groundwater would return the site to conditions allowing for commercial use of the site. Following removal of wastes and soil in metals and SVOC impacted areas groundwater would be evaluated for future treatment after five years following removal of wastes and soil in metals and SVOC impacted areas.

Present Worth:.....*$4,630,000*
Capital Cost:.....*$4,250,000*
Annual Costs:.....*$25,000*

Exhibit C

REMEDIAL ALTERNATIVE COSTS

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
No Action	0	0	0
Restoration to Unrestricted Use	17,500,000	0	17,500,000
Restoration to Commercial Re-Use	4,250,000	25,000	4,630,000

Exhibit D

SUMMARY OF THE SELECTED REMEDY

The Department is proposing Alternative #3, Restoration to Commercial Re-Use as the remedy for this site. Alternative #3 will achieve the remediation goals for the site by; removing all characteristic hazardous waste and removing SVOC, VOC, and metals contaminated soils to the extent feasible; removing all USTs; removing all transformers; addressing impacted groundwater; placing an easement restricting re-use; prohibiting groundwater use; requiring evaluation of soil vapor intrusion and the installation of a sub-slab vapor mitigation system, if warranted; and requiring adherence to requirements of a SMP. The elements of this remedy are described in Section 7. The selected remedy is depicted in Figures 3 & 4.

Basis for Selection

The selected remedy is based on the results of the RI and the evaluation of alternatives. The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375. A detailed discussion of the evaluation criteria and comparative analysis is included in the CMS/FS report.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

The selected remedy (Alternative 3) will satisfy this criterion by removing all hazardous waste and VOC contaminated soils to the extent feasible and properly disposing of them off-site which addresses the source of the groundwater contamination, the most significant threat to public health and the environment. The goal to remove VOCs to the extent feasible rather than protection of groundwater SCOs was chosen because sampling shows that VOCs groundwater contamination has not migrated offsite. In-situ soil treatment will be implemented prior to backfilling with clean, off-site soils; an environmental easement will be placed on the property prohibiting use of groundwater; evaluation of soil vapor migration and if warranted installation of a vapor mitigation system before any new structures are built.

Alternative 3 further satisfies this criterion by requiring a cover system as part of development. The cover will be required in areas not covered by components of development (e.g. buildings or pavement), and will consist of imported soils satisfying the requirements of 6NYCRR Part 375-6.7 (d). Additionally, Alternative 3 satisfies this criterion by removing USTs and all transformers and placing an environmental easement restricting re-use, and requires adherence to a SMP. Alternative 1 (No Action), does not provide any protection to public health and the environment and will not be evaluated further. Alternative 2, removal of all soil contaminated above the “unrestricted” soil cleanup objective, meets this threshold criterion.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

Alternative 3 complies with SCGs to the extent practicable. It addresses source areas of contamination and complies with the restricted use SCOs at the surface through construction of a cover system where a cover in the form buildings or pavement resulting from site development will not be provided. The preferred alternative also provides for the conditions necessary to restore groundwater quality to the extent practicable. Because both Alternatives 2 and 3 satisfy the threshold criteria, the remaining criteria are particularly important in selecting a final remedy for the site.

The next six "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

Long-term effectiveness is accomplished by both Alternatives 2 and 3. Alternative 2 results in removal of all of the chemical contamination at the site and removes the need for property use-restrictions and long-term monitoring. Alternative 3 will result in the removal of all of the hazardous waste along with metals and VOC contaminated soil to the extent feasible, but it will require an environmental easement and long-term monitoring.

4. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

Alternative 2, excavation and off-site disposal, reduces the toxicity, mobility and volume of on-site waste by transferring the material to an approved off-site location. However, depending on the disposal facility, the volume of the material would not be reduced. Alternative 3 does not reduce the volume of the material or remove all the on-site impacted material but removal to the extent feasible does reduce toxicity and mobility. Both alternatives are considered permanent.

5. Short-term Impacts and Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Alternatives 2 and 3 both have short-term impacts which could easily be controlled. Alternative 2 would require more total time to implement because of the greater volume of soil to be excavated. Alternative 2 would cause greater truck traffic on local roads compared to Alternative 3. Alternative 2 also requires complete demolition and removal of all concrete flooring and foundations which contributes to the increased time to implement.

Alternative 3 will decrease the direct and indirect emission of green house gasses because of; the reduced number of truck trips; equipment run time for disposal and backfill; than for Alternative 2 due to the lesser soil removal volume; and the reduced area of slab and foundation to be demolished and removed.

Alternatives 2 and 3 both have short-term and as yet undetermined long term impacts on the environment due to the increase in direct and indirect emissions of green house gasses. These impacts are not easy to control by engineering means or alternative methods and reduction of impacts is predicated on duration of activity. To complete the remedy, Alternative 2 would release about twenty times as much CO_2 into the atmosphere as

Alternative 3 taking into account the fuel burned during the excavation, transport to disposal location, excavation, transport and equipment run time required for backfill and restoration. This increased quantity is because of the increased volume of soil and addition time required to complete the remediation in Alternative 2.Therefore, Alternative 3 would be considered the more "green" remedial choice.

The length of time to reach the remedial goals is similar for both alternatives with an advantage for Alternative 3 due to the decreased time necessary to implement the remedy.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

Alternatives 2 and 3 are readily implementable. Alternative 2 is less feasible due to the increased volume of material to be disposed and the increased volume of backfill material needed. Further technical feasibility issues arise with Alternative 2 due to the proximity of the rail line and Lucas Avenue. Protective engineering controls such as shoring would be needed in order to avoid impacting the structural integrity of these transportation lines due to the requisite depths of excavation.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision.

The costs of the alternatives vary significantly. With its significantly larger volume of soil to be handled, Alternative 2 (excavation and off-site disposal) exhibits a significantly higher present worth cost without a commensurate increase in protectiveness.

8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

The current zoning for this site and the anticipated use of the site is industrial. Both Alternatives 2 and 3 comport with industrial use.

The final criterion, Community Acceptance, is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

9. Community Acceptance. Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the selected remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

Alternative #3 is being selected because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.

Alternative #3 is more cost effective and more readily implementable from a time to completion aspect as well as from a technical feasibility aspect. Alternative #3 achieves remedial action objectives for commercial use. This alternative also has the least impact on the local community because of the reduced time to implement which will result in less heavy truck traffic on local roads. In addition to the reduced impact on the community, Alternative #3 is the preferred alternative due to the decrease in the direct and indirect emission of green house gasses realized by the reduced number of truck trips and decreased equipment run time required for disposal and backfill due to reduced volume to be removed and by not requiring removal and demolition of the entire slab and foundation.

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

AlTech Specialty Steel Corporation Site
Operable Unit No. 1: Lucas Avenue Plant Remedial Program
State Superfund Project
Dunkirk, Chautauqua County, New York
Site No. 907022

The Proposed Remedial Action Plan (PRAP) for the AlTech Specialty Steel Corporation Site, Operable Unit No. 1: Lucas Avenue Remedial Program (AlTech – Lucas Ave) was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on September 18, 2012. The PRAP outlined the remedial measure proposed for the contaminated groundwater, soil and soil vapor at the AlTech - Lucas Ave site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on October 4, 2012 which included a presentation of the remedial investigation feasibility study (RI/FS) for the AlTech – Lucas Ave as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on October 18, 2012.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

COMMENT 1: Why has it taken so many years to get to this point?
RESPONSE 1: The AlTech site is a large, ninety acre site that has several diverse environmental problems. Environmental assessments of the site led to defining three areas of contamination which are referred to as Operable Units. Operable Units represent portions of a site remedy that for technical or administrative reasons can be addressed separately to eliminate or mitigate a release, threat of release or exposure pathway resulting from site contamination. Progress has been made to remove sources of contamination such as; removal of pickling salt baths at the Bar Finish and Storage Mill, removal of the Brigham road pickle baths and demolition of the pickling room. In addition, the demolition of the western end of the Lucas Avenue Plant and removal of significantly contaminated soil was completed in 2007. The remediation of PCBs in Willowbrook Pond is also currently being evaluated.

COMMENT 2: Can the site be considered a brownfield?
RESPONSE 2: Yes, one definition of the word “brownfield” is any real property where the redevelopment or re-use of the property is complicated by the presence or potential presence of contamination.

COMMENT 3: Is the playground across the street (from the site) impacted by the site contamination?
RESPONSE 3: Soil and groundwater samples directly across the street from the site did not indicate any site related impacts*.

(*Soil Investigation Intrusion Evaluation AL Tech Specialty Steel Site, Site No. 9-07-022, City of Dunkirk, Chautauqua County" June 2008, prepared by Ecology and Environment Engineering)

COMMENT 4: Did the School District do an environmental study when they renovated and built the high school?
RESPONSE 4: The Department is not aware of any environmental studies of the property. This question should be directed to the School District.

COMMENT 5: Is there anything we (the public) can do to hurry this project along?
RESPONSE 5: The public can enable the project by staying informed about the progress being made, by continuing to receive fact sheets by signing up for the listserv, and discussing the redevelopment of the property with City officials.

COMMENT 6: The Fire Department would like the building torn down as soon as possible. There have been a number of nuisance fires set within the building over the years.
RESPONSE 6: The Department is aware of these instances and will move forward in a timely manner.

COMMENT 7: What is RealCo? Are they paid for administering the funds?
RESPONSE 7: RealCo, Inc. is a corporation organized and doing business under the laws of Delaware to undertake as its primary activity the environmental remediation required at the AL Tech facilities in Dunkirk and Watervliet. A Department issued Order on Consent (Index No. A9-0393-9907) noted that RealCo would take title to certain real and personal property owned by AL Tech Specialty Steel Corporation and a trust fund was set up from funds paid by responsible parties for the purpose of remediating the Dunkirk and Watervliet facilities. RealCo was entitled to a percent of the Trust Fund for administrative purposes.

COMMENT 8: Is the alternative of meeting residential soil cleanup values ever chosen on Superfund sites?
RESPONSE 8: It is DEC's policy, consistent with applicable statutes and regulations, that all remedies will be protective of public health and the environment. DEC's preference is that remedial programs, including the selection of soil cleanup levels, be designed such that the performance standard results in the implementation of a permanent remedy resulting in no future land use restrictions. However, when developing and evaluating remedies future site use can be considered as it is not always feasible to return a site to a condition where no restrictions are required.

COMMENT 9: What are the potential delays to completing the demolition?
RESPONSE 9: The next step after issuance of the Record of Decision is to complete the engineering design of the remedy and address applicable local demolition requirements. Actual construction of the remedy would follow pending funding.

COMMENT 10: Is the groundwater near the homes getting better or worse?

RESPONSE 10: The groundwater quality near the homes has been consistently above groundwater standards. The interim remedial measure in 2007 was designed to remove a large quantity of contaminated soil that was considered a source for metals, such as chromium, which were impacting groundwater quality. Subsequent sampling has noted a decline in groundwater levels immediately downgradient of the excavation.

COMMENT 11: Residents would like to know when DEC is sampling groundwater at the site.
RESPONSE 11: The Department will continue to notify property owners upon whose property they will be sampling. Subscribing to the Department's listserv at http://www.dec.ny.gov/chemical/61092.html will keep interested parties up to date on Department activities at this site and other sites in Chautauqua County.

APPENDIX B

Administrative Record

Administrative Record

AlTech Specialty Steel Corporation Site
Operable Unit No. 1: Lucas Avenue Plant remedial Program
State Superfund Project
Dunkirk, Chautauqua County, New York
Site No. 907022

Proposed Remedial Action Plan for the AlTech Specialty Steel Corporation site, Operable Unit No. 1: Lucas Avenue Plant Remedial Program, dated September 2012, prepared by the Department.

Order on Consent, Index No. R4-1467-93-02, between the Department and AL Tech Specialty Steel Corporation, executed on August 4, 1995.

Order on Consent, Index No. A9-0393-9907, between the Department and RealCo, executed on September 7, 1997.

1. "Phase 1 RCRA Facilities Investigation Report AL Tech Specialty Steel Corporation Dunkirk, New York Facility" Volume 1 of 6, October 1998, prepared by Environmental Strategies Corporation
2. "Phase 1 RCRA Facilities Investigation Report AL Tech Specialty Steel Corporation Dunkirk, New York Facility" Volume 2 of 6, October 1998, prepared by Environmental Strategies Corporation
3. "Phase 1 RCRA Facilities Investigation Report AL Tech Specialty Steel Corporation Dunkirk, New York Facility" Volume 3 of 6, October 1998, prepared by Environmental Strategies Corporation
4. "Phase 1 RCRA Facilities Investigation Report AL Tech Specialty Steel Corporation Dunkirk, New York Facility" Volume 4 of 6, October 1998, prepared by Environmental Strategies Corporation
5. "Phase 1 RCRA Facilities Investigation Report AL Tech Specialty Steel Corporation Dunkirk, New York Facility" Volume 5 of 6, October 1998, prepared by Environmental Strategies Corporation
6. "Phase 1 RCRA Facilities Investigation Report AL Tech Specialty Steel Corporation Dunkirk, New York Facility" Volume 6 of 6, October 1998, prepared by Environmental Strategies Corporation
7. "Sampling and Analysis Plan, Lucas Avenue Plant Decontamination and Demolition" January 2001, prepared by Benchmark Environmental Engineering & Science
8. "ICM Work Plan for Decontamination and Demolition of Lucas Avenue Plant" April 2001, prepared by Benchmark Environmental Engineering & Science
9. "Investigation Report for LAP West Soil ICM Lucas Avenue Plant Dunkirk, New York" July 2001, prepared by Benchmark Environmental Engineering & Science
10. "Phase II RCRA Facility Investigation and Interim Corrective Measures Report Former AL Tech Specialty Steel Corporation Dunkirk, New York" October 2003, prepared by Benchmark Environmental Engineering & Science
11. "Former AlTech Specialty Steel Corporation Facility Supplemental Phase II RFI Field Activities and Findings" August 2004, prepared by Benchmark Environmental Engineering & Science

12. “Corrective Measures Study/Feasibility Study” September 2006, prepared by Benchmark Environmental Engineering & Science
13. “Interim Remedial Measures for AL Tech Specialty Steel Site, Site No. 9-07-022, City of Dunkirk, Chautauqua County, Volume 1 Summary Report” October 2007, prepared by Ecology and Environment Engineering
14. “Interim Remedial Measures for AL Tech Specialty Steel Site, Site No. 9-07-022, City of Dunkirk, Chautauqua County, Volume II Site Investigation Report” October 2007, prepared by Ecology and Environment Engineering
15. “Interim Remedial Measures for AL Tech Specialty Steel Site, Site No. 9-07-022, City of Dunkirk, Chautauqua County, Volume III Asbestos Survey Report” October 2007, prepared by Ecology and Environment Engineering
16. “Soil Investigation Intrusion Evaluation AL Tech Specialty Steel Site, Site No. 9-07-022, City of Dunkirk, Chautauqua County” June 2008, prepared by Ecology and Environment Engineering
17. RealCo (Former Al-Tech Specialty Steel Corp. Facility) Site Dunkirk, New York Groundwater Monitoring Summary Report” October 2011 prepared by Benchmark Environmental Engineering & Science