PROPOSED REMEDIAL ACTION PLAN

Elmont - 546 Hempstead Turnpike-aka-Elmont Welding
Environmental Restoration Project
Elmont, Nassau County
Site No. E130150
January 2014

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

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy proposed by this Proposed Remedial Action Plan (PRAP). The disposal of contaminants at this site, as more fully described in Section 6 of this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum. The proposed remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This PRAP identifies the preferred remedy, summarizes the other alternatives considered, and discusses the reasons for the preferred remedy.

The 1996 Clean Water/ Clean Air Bond Act provides funding to municipalities for the investigation and cleanup of brownfields. Brownfields are abandoned, idled, or under-used properties where redevelopment is complicated by real or perceived environmental contamination. They typically are former industrial or commercial properties where operations may have resulted in environmental contamination. Brownfields often pose not only environmental, but legal and financial burdens on communities. Under the Environmental Restoration Program, the state provides grants to municipalities to reimburse up to 90 percent of eligible costs for site investigation and remediation activities. Once remediated, the property can then be reused.

The Department has issued this document in accordance with the requirements of 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. This document is a summary of the information that can be found in the site-related reports and documents in the document repository identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all PRAPs. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repository:

A public comment period has been set from:

1/29/2014 to 3/17/2014

A public meeting is scheduled for the following date:

2/11/2014 at 7:00 PM

Public meeting location:

Elmont Memorial Library

At the meeting, the findings of the site investigation (SI) and the alternatives analyses will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP.

Written comments may also be sent through 3/17/2014 to:

Chek Ng
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
cbng@gw.dec.state.ny.us

The Department may modify the proposed remedy or select another of the alternatives presented in this PRAP based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

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 Elmont Welding Site is located in a suburban area at 546 Hempstead Turnpike, in Elmont, NY. The 0.35-acre site consists of the now-demolished former welding

shop and the adjoining vacant lot to the west of the welding shop. The site is bounded by Louis Avenue to the west, Makofske Avenue to the east and Hempstead Turnpike to the south.

Site Features: The site is currently vacant and fenced-in. The welding shop has been demolished by the Town. The adjoining vacant lot is sloped downwards away from the main road. A combination of stone and timber retaining walls exists at the western part of the property.

Current Zoning: The site is zoned for commercial use. The surrounding parcels are currently zoned for a combination of commercial and residential buildings.

Past Use of the Site: The Former Elmont Welding property was originally used as an automobile garage as early as 1925. Past use of the building included an auto repair shop in the 1950s and 1960s. From the 1970s to 2006, the site was used as a welding shop, and the adjacent lot was used as a parking area for construction equipment. The site is currently inactive.

A Phase I Environmental Site Assessment was performed in 2000. A limited soil investigation was performed in 2002. The Department conducted a preliminary investigation of the property with the USEPA Targeted Site Assessment grant funding in 2006. Based on the results of the investigation the Town of Hempstead applied to the Department's Environmental Restoration Program (ERP)for remedial program funding. However, the ERP application could not be processed due to a lack of funding.

Site Geology and Hydrogeology: The soil consists mainly of sand. The depth to water is 30 to 40 feet below ground surface depending on the site topography. Groundwater flow direction is towards the south.

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 restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) are/is being evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation 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.

No PRPs have been documented to date.

No legal agreements have been signed for this site. The Environmental Restoration Program application was found to be complete, but the approval of the application was held pending issuance of the Record of Decision and availability of funds.

Since no viable PRPs have been identified, there are currently no ongoing enforcement actions. However, legal action may be initiated at a future date by the state to recover state response costs should PRPs be identified. Should funding become available and the site be deemed eligible for participation in the ERP, the Town of Hempstead will assist the state in its efforts by providing all information to the state which identifies PRPs. The Town of Hempstead will also not enter into any agreement regarding response costs without the approval of the Department.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Site Investigation

A Site Investigation (SI) has been conducted. The purpose of the SI 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 SI Report.

The following general activities are conducted during an SI:

- 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:

- groundwater
- soil

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: SI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant 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 SI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

LEAD	BENZO[K]FLUORANTHENE
BENZO(A)PYRENE	BENZ(A)ANTHRACENE
BENZO(B)FLUORANTHENE	CADMIUM

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

- soil

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.

There were no IRMs performed at this site during the SI.

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.

Nature and Extent of Contamination:

Based upon investigations conducted to date, the primary contaminants of concern for OU1 include polycyclic aromatic hydrocarbons (PAHs), cadmium and lead.

Soil - PAHs are found at higher concentrations in the shallow soils compared to deeper soils on-site. They were found primarily in the former parking lot adjacent to the welding shop. Three out of ten samples collected on-site exceeded the restricted residential SCOs for PAHs. Metals were also generally detected at concentrations slightly exceeding the SCOs in shallower soils at the welding shop.

Groundwater - No site-related contaminants were found in the groundwater. PAHs that were found in the soils were not detected in the groundwater. The analysis of unfiltered groundwater samples showed detections of metals. However, the results from the filtered groundwater samples showed that most of the metal detections found in the unfiltered groundwater samples are a result of the presence of metals in the suspended solids.

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 completely 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.

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:

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

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

SECTION 7: SUMMARY OF THE PROPOSED 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 AA 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 proposed remedy is set forth at Exhibit D.

The proposed remedy is referred to as the Excavation and Off-Site Disposal of Contaminated Shallow Soil remedy.

The estimated present worth cost to implement the remedy is $300,000. The cost to construct the remedy is estimated to be $275,000 and the estimated average annual cost is $2,000.

The elements of the proposed remedy are as follows:

1. Remedial Design
A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. This remedy would fully delineate the extent of the contamination in the surface and shallow subsurface soil prior to excavation. 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 gases 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. Excavation
After sampling to refine the boundary of the area requiring excavation, the top two feet of soils exceeding restricted residential soil cleanup objectives will be excavated and disposed off-site in a permitted facility. Documentation samples will then be taken from the base of the excavation.

3. Cover System

A site cover will be required to allow for restricted residential use of the site. 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 two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential 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).

4. 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 restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws; and
- requires compliance with the Department approved Site Management Plan.

5. 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 in Paragraph 4 above.

Engineering Controls: The soil demarcation and cover system discussed in Paragraph 3.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use restrictions;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls (fencing until the site is redeveloped) and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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 for which contamination was identified, 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 two categories; semi-volatile organic compounds (SVOCs) 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 4 and Section 6.1.1 are also presented.

Groundwater

Groundwater samples were collected at three depths at each location. The samples were collected at the groundwater table, ten feet below the water table and twenty feet below the groundwater table to assess the groundwater conditions on-site. All groundwater samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and inorganics (metals and cyanide). The inorganics analyses were based on unfiltered samples, and as such, their analysis values might be elevated since they included suspended solids. In addition, the drilling technique produced turbid groundwater samples that exceeded 50 Nephelometric Turbidity Units.

In order to resolve groundwater turbidity issues and to analyze the dissolved phase for metals, an up-gradient and down-gradient groundwater well was later added to the site investigation. No VOCs were detected above the SCGs in any of the groundwater samples. Only one SVOC was detected marginally above the SCGs. The analysis of filtered (dissolved phase) groundwater samples for metals showed that none of the inorganic compounds detected above the SCGs in the surface and subsurface soil samples were found in the filtered groundwater samples.

Most of the inorganic compounds detected in the unfiltered samples were not detected in the filtered samples above the SCGs, indicating that the contaminants originated from the suspended solids. Only two inorganic compounds, iron and manganese, were detected above the SCGs. Neither iron nor manganese was detected above the SCGs in the on-site soil samples. Therefore, groundwater detection of iron and manganese are not likely to have come from the on-site source but represent natural conditions.

Table 1A - Groundwater (at water table)

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
SVOCs			
Bis(2-ethylhexyl)phthalate	ND – 6.5	5	2 of 7
Inorganics			
Unfiltered Samples			
Arsenic	ND – 50.4	25	2 of 7
Barium	ND – 1190	1000	2 of 7
Beryllium	0.20 – 7.4	3	4 of 7
Chromium	235 – 738	50	7 of 7
Copper	119 – 510	200	4 of 7
Iron	89,300 – 415,000	300	7 of 7
Lead	43.8 – 187	25	7 of 7
Magnesium	13,200 – 48,000	35,000	2 of 7
Manganese	3,710 – 11,800	300	7 of 7
Nickel	136 – 408	100	7 of 7
Sodium	81,700 – 299,000	20,000	7 of 7
Thallium	8.5 – 26.6	1	7 of 7
Filtered Samples			
Iron	328 – 1750	300	2 of 2
Manganese	366 – 614	300	2 of 2

Table 1B – Groundwater (10 feet below water table)

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
SVOCs			
Bis(2-ethylhexyl)phthalate	ND – 7	5	2 of 10
Inorganics			
Unfiltered Samples			
Arsenic	ND – 57.3	25	2 of 10
Barium	221 – 1100	1000	3 of 10
Beryllium	0.73 – 7.1	3	5 of 10
Chromium	208 – 762	50	10 of 10
Copper	78.8 – 415	200	4 of 10
Iron	58,500 – 346,000	300	10 of 10
Lead	27.7 – 178	25	10 of 10
Manganese	1,090 – 13,400	300	10 of 10
Nickel	75.3 – 361	100	8 of 10

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
Sodium	25,300 – 153,000	20,000	10 of 10
Thallium	5.4 – 27.6	1	10 of 10
Filtered Samples			
Iron	220 – 474	300	2 of 3
Manganese	96 – 229	300	0 of 3

Table 1C – Groundwater (20 feet below water table)

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
SVOCs			
Bis(2-ethylhexyl)phthalate	ND – 5.3	5	1 of 10
Inorganics			
Unfiltered Samples			
Arsenic	ND – 56.8	25	4 of 10
Beryllium	0.39 – 5.5	3	2 of 10
Chromium	122 – 616	50	10 of 10
Copper	141 – 304	200	2 of 10
Iron	68,100 – 271,000	300	10 of 10
Lead	26.6 – 164	25	10 of 10
Manganese	921 – 8,400	300	10 of 10
Nickel	103 – 305	100	9 of 10
Sodium	32,400 – 134,000	20,000	10 of 10
Thallium	3.5 – 20.2	1	10 of 10
Filtered Samples			
Iron	440 – 1260	300	2 of 2
Manganese	108 – 396	300	1 of 2

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).

No site-related groundwater contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for groundwater.

Soil

Shallow subsurface, deep subsurface and deep soil samples were collected at the site. Shallow subsurface soil samples were collected from a depth of 0 - 8 inches. Deep subsurface soil samples were collected from a depth

of 18 - 24 inches. Deep soil samples were collected from a depth of 35 - 60 feet to assess soil contamination impacts to groundwater. The results indicate that soil at the site exceed the unrestricted SCG for semi-volatile organics and metals. No VOCs were detected above their SCGs in any soil samples, and no SVOCs were detected above their SCGs in the deep soil samples. The concentration of SVOCs in soil shows a decreasing trend with depth. Figure 2 shows the nature and extent of the soil contamination in the surface and shallow subsurface soil. Figure 3 shows the nature and extent of the soil contamination in the deep subsurface soil. Most of the inorganic compounds were detected above the SCGs at the former welding shop property.

Table 2A - Shallow Subsurface Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG[c] (ppm)	Frequency Exceeding Restricted SCG
SVOCs					
Benzo(a)anthracene	0.08 – 31	1	3 of 10	1	3 of 10
Benzo(a)pyrene	0.09 – 26	1	3 of 10	1	3 of 10
Benzo(b)fluoranthene	0.11 – 32	1	3 of 10	1	3 of 10
Benzo(k)fluoranthene	0.04 – 17	0.8	2 of 10	3.9	1 of 10
Chrysene	0.11 – 29	1	3 of 10	3.9	1 of 10
Dibenzo(a,h)anthracene	0.06 – 2.1	0.33	1 of 10	0.33	1 of 10
Indeno(1,2,3-cd)pyrene	0.03 – 7.2	0.5	2 of 10	0.5	2 of 10
Pentachlorophenol	0.89 – 0.94	0.8	4 of 10	6.7	0 of 10
Inorganics					
Cadmium	ND – 4.5	2.5	2 of 10	4.3	1 of 10
Chromium	5 – 86.8[d]	1[e], 30[f]	10 of 10	110[e], 180[f]	0 of 10
Copper	7.7 – 186	50	4 of 10	270	0 of 10
Lead	3.8 – 1200	63	8 of 10	400	2 of 10
Mercury	0.047 – 0.6	0.18	4 of 10	0.81	0 of 10
Nickel	10.6 – 61.4	30	1 of 10	310	0 of 10
Zinc	12.4 – 895	109	6 of 10	10,000	0 of 10

Table 2B – Deep Subsurface Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG[c] (ppm)	Frequency Exceeding Restricted SCG
SVOCs					
Benzo(a)anthracene	0.09 – 4.3	1	3 of 10	1	3 of 10
Benzo(a)pyrene	0.19 – 4.4	1	3 of 10	1	3 of 10
Benzo(b)fluoranthene	0.11 – 8	1	3 of 10	1	3 of 10
Benzo(k)fluoranthene	0.057 – 2.8	0.8	3 of 10	3.9	0 of 10

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG[c] (ppm)	Frequency Exceeding Restricted SCG
Chrysene	0.11 – 4.4	1	3 of 10	3.9	1 of 10
Dibenzo(a,h)anthracene	0.04 – 0.7	0.33	2 of 10	0.33	2 of 10
Indeno(1,2,3-cd)pyrene	0.05 – 2.4	0.5	3 of 10	0.5	3 of 10
Pentachlorophenol	0.86 – 1	0.8	6 of 10	6.7	0 of 10
Inorganics					
Barium	24.2 – 427	350	2 of 10	400	2 of 10
Chromium	6.6 – 28.5[d]	1[e], 30[f]	10 of 10	110[e], 180[f]	0 of 10
Copper	7.8 – 136	50	8 of 10	270	0 of 10
Lead	2.2 – 1260	63	3 of 10	400	3 of 10
Mercury	ND – 0.82	0.18	4 of 10	0.81	1 of 10
Nickel	7.7 – 40.6	30	1 of 10	310	0 of 10
Zinc	9.6 – 600	109	6 of 10	10,000	0 of 10

Table 2C – Deep Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Use SCG[c] (ppm)	Frequency Exceeding Restricted SCG
Inorganics					
Chromium	6.6 – 28.5[d]	1[e], 30[f]	9 of 9	110[e], 180[f]	0 of 10

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 Restricted Residential Use, unless otherwise noted.
d - The range of values represent the total analysis of trivalent and hexavalent chromium.
e -- This value represents the SCG for hexavalent chromium.
f -- This value represents the SCG for trivalent chromium.

The primary soil contaminants are inorganics and polycyclic aromatic hydrocarbons (PAHs), both of which are attributable to the past use of the site as a welding shop and parking area for road construction vehicles. Based on the findings of the Site Investigation, the past disposal of hazardous waste 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 cadmium, lead and PAHs.

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 Action

The No Action Alternative is evaluated as a procedural requirement and as a basis for comparison. This alternative leaves the site in its present condition and does not provide any additional protection to public health and the environment.

Alternative 2: Excavation and Off-Site Disposal of Contaminated Shallow Soil

Prior to excavation, a pre-design sampling program will be done using a grid approach. Based on the results of the sampling, areas of the site with contaminants exceeding NYSDEC Subpart 375-6.8(b) restricted residential soil cleanup objectives would be excavated up to two feet below ground surface. Documentation samples will be taken at the base of the excavation in areas where the excavated depth is two feet and a demarcation layer will be placed if soils at the two-foot depth still exhibit contaminants exceeding NYSDEC Subpart 375-6.8(b) restricted residential soil cleanup objectives. Sheet piles will be installed next to the timber retaining walls at the site boundary if needed to allow for safe excavation.

For cost estimation purposes, it is assumed that about half the site would be contaminated with shallow subsurface soils concentrations exceeding restricted residential soil cleanup objectives. The resulting approximately 600 cubic yards of soil would be excavated and disposed off-site in a permitted facility.

Backfill required to achieve proper post-excavation grading would be clean soil as defined in NYSDEC 6NYCRR Part 375-6.7(d).

The excavated areas would be backfilled with up to two feet of clean soil meeting the SCOs for restricted residential. This alternative would also include a site management plan for any soils requiring demarcation. If needed, the existing fencing would be repaired to maintain site security.

An environmental easement, including a site management plan, would be issued to limit the future use of this property to restricted residential. A remedial design program would be developed to address the specifics of the excavation such as dust control, excavation profile, staging set-up and erosion control.

Present Worth: *$300,000*
Capital Cost: *$275,000*

Alternative 3: Restoration to Pre-Disposal or Unrestricted Conditions

Pre-design sampling would be performed at two, four and six-foot depths at eight locations. Based on the sampling results, excavation would be performed to a maximum depth of six feet followed by confirmatory sampling. If needed, additional excavation would be done at spot locations until soil meeting unrestricted use SCOs is met. Based on a six-foot excavation depth from half the site area, it is estimated that 1,700 cubic yards of soil would be excavated and transported off-site.

Backfill required to achieve proper post-excavation grading would be clean soil defined as soil with no analyte in exceedance of NYSDEC Part 375 soil cleanup objectives for unrestricted use. Removal of the surface and subsurface soil as specified above would immediately eliminate any exposure to on-site contamination sources and return the site to unrestricted use, with the assumption that all end point soil sampling meets or exceeds the unrestricted soil cleanup objectives.

A remedial action work plan would be developed to address the specifics of the excavation like dust control, excavation profile, staging set-up and erosion control. The expected duration for project implementation is one year.

Capital Cost:.....$900,000

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
No Action	0	0	0
Excavation and Off-Site Disposal of Contaminated Shallow Soil	275,000	2,000	300,000
Restoration to Pre-Disposal or Unrestricted Conditions	900,000	0	900,000

Exhibit D

SUMMARY OF THE PROPOSED REMEDY

The Department is proposing Alternative 2, Excavation and Off-Site Disposal of Contaminated Shallow Soil as the remedy for this site. Alternative 2 would achieve the remediation goals for the site by removing the surface and shallow subsurface soils that exceed the restricted residential use SCOs. The protective cover of clean fill on excavated locations will prevent exposure by the public to residual subsurface soil contamination. The implementation of an environmental easement that requires a site management plan would further ensure that the subsurface soil is properly managed. The elements of this remedy are described in Section 7.

Basis for Selection

The proposed remedy is based on the results of the RI and the alternatives analysis. 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 below.

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 proposed remedy (Alternative 2) would satisfy this criterion by removing the shallow contaminated soils and applying a clean fill over any remaining subsurface soil contamination. Furthermore, the implementation of an environmental easement further ensures that the subsurface soil is properly managed. Alternative 3 would achieve the threshold criteria and return the site to unrestricted use with the removal of all contaminated soils that exceeds the unrestricted SCOs. Alternative 1 (No Action) does not provide any additional protection to public health and the environment and will not be evaluated further.

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.

Alternatives 2 and 3 would comply with SCGs to the extent practicable. Alternative 2 would address shallow areas of contamination and comply with the restricted residential soil cleanup objectives at the surface through excavation and backfill. Alternative 3 would define and eliminate deeper soil contamination at the site, ensuring a more thorough cleanup of the property. Because 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.

Alternative 3 would achieve better long-term effectiveness and permanence than Alternative 2 since Alternative 3 includes removal of all contaminated soils. Under Alternative 2, the exposure to the remaining subsurface soil contamination would be minimized by applying a clean soil cover over the excavated areas. The potential for exposure would be further reduced by the implementation of an institutional control in the form of an environmental easement which would limit the site to restricted residential use.

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.

Both Alternatives 2 and 3 would be effective in reducing the toxicity, mobility or volume of the contaminated soils on-site. Alternative 2 reduces the toxicity, mobility and volume of on-site shallow soils by transferring the soil material to an approved off-site location. Further mobility reduction is achieved by the application of a clean fill meeting the restricted residential use restrictions. Alternative 3 goes a step further in the reduction of toxicity, mobility and volume by requiring deeper contaminated soils to be excavated and removed off-site, with backfill meeting requirements of unrestricted use for the site.

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. However, Alternative 2 takes significantly shorter time to achieve the remedial objectives compared to Alternative 3 since there is less volume of excavated soil. Hence, Alternative 2 presents less inconvenience to the surrounding neighborhood and businesses due to shorter time required in excavating the soils and placing clean backfill.

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.

Alternative 2 is easier to implement than Alternative 3. With the reduction in volume and depth of excavation, Alternative 2 requires less time, manpower and energy to implement than Alternative 3. With Alternative 3, there are some concerns regarding the stability of the timber retaining walls adjacent to the site in the event that soil was to be excavated deeper. Additional engineering assessment would have to be performed, with possible recommendations of additional sheet piles and supports in order to ensure the integrity of the existing retaining wall. The additional volume of excavated soil would necessitate increased truck traffic on local roads for a longer duration.

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 cost of the proposed remedy for Alternative 2 is $435,000 while the cost of Alternative 3 is $900,000. This cost increment is due to the increase in excavation depth and soil backfill from two feet for Alternative 2 to an estimated depth of six feet for Alternative 3. Also, Alternative 3 has significantly deeper soil boring depths and larger number of soil samples for analysis than Alternative 2. Part of the cost increase for Alternative 3 is also due to the expectation that extensive sheet piling would be constructed to support the existing timber retaining walls adjacent to a residential house in the event that deeper excavation is needed. In this regard, cost effectiveness is one of the major reasons for the selection of Alternative 2.

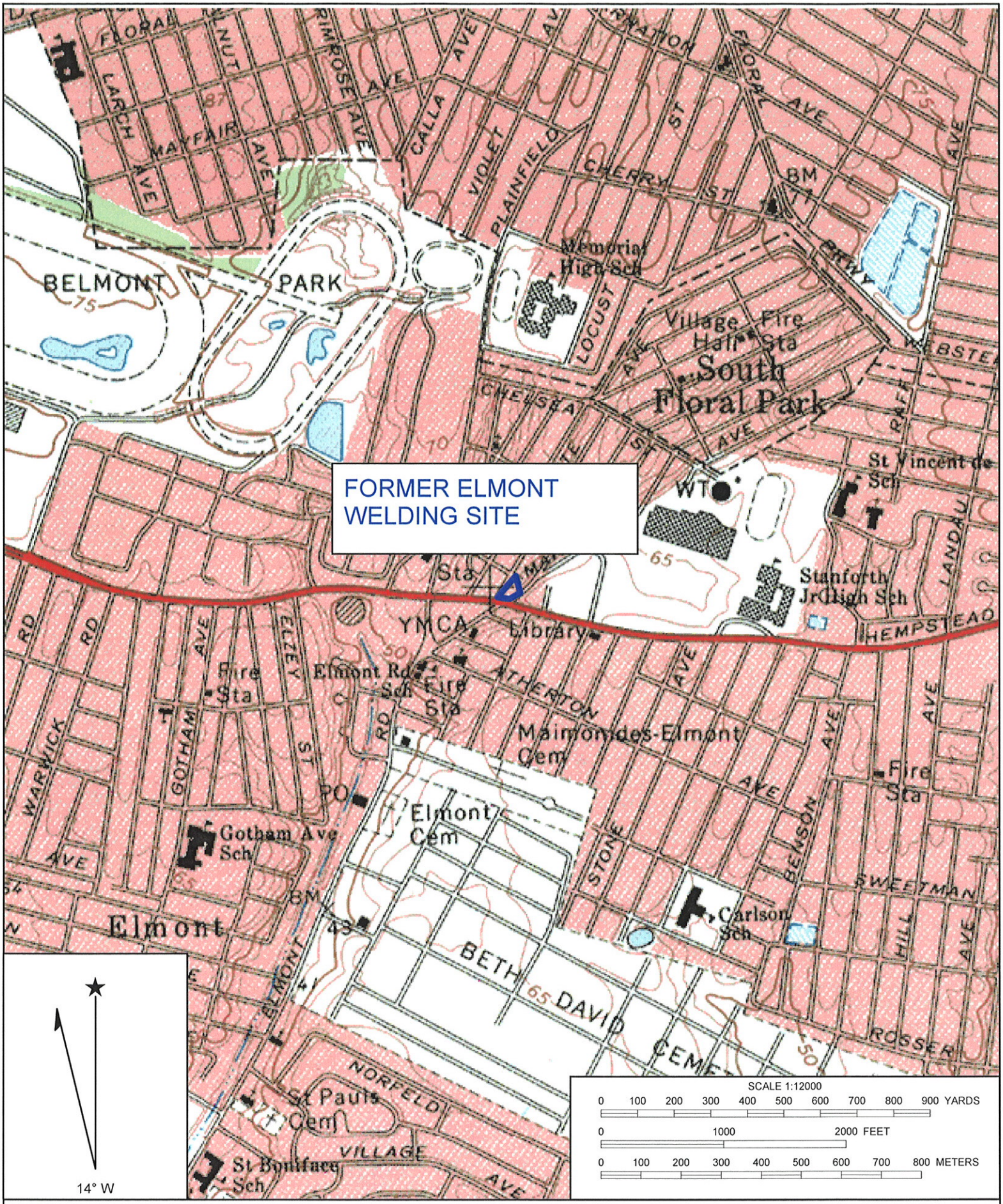
8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

Since the anticipated use of the site is restricted residential, Alternatives 2 would be equally desirable. Any residual contamination with Alternative 2 would be controllable with implementation of a Site Management Plan. With Alternative 3, it is likely that restrictions on the site use would not be necessary since deeper soil contamination would be excavated and backfill meeting unrestricted use would be brought into the site.

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.

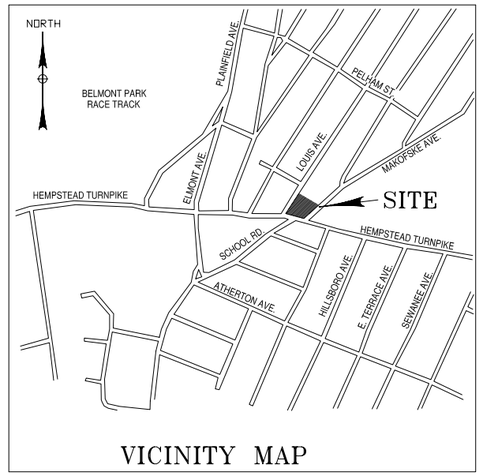
9. Community Acceptance. Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the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

Alternative 2 is being proposed because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.



Name: LYNBROOK
Date: 7/13/2006
Scale: 1 inch equals 1000 feet

Location: 040° 42' 28.64" N 073° 42' 28.79" W
Caption: FIGURE 1
SITE LOCATION MAP
NYSDEC 1-30-150



VICINITY MAP

NOT TO SCALE

LEGEND

SB-12	SOIL BORING ONLY
SB-02 GW-02	SOIL BORING AND GROUNDWATER SAMPLING LOCATION
SC-01	SOIL CONDUCTIVITY BORING
TP-01	TEMPORARY PEIZOMETER

Notes:

SB-01 thru SB-10: (soil samples taken from 0"-4" bgs and 18"-24" bgs)

SHALLOW SUBSURFACE SOIL EXCEEDANCE ABOVE SCGs

20 10 0 5 10 15

feet

Site Boundary

NOTE: The former welding shop was demolished.

TITLE

SITE PLAN
FORMER ELMONT WELDING
NYSDEC SITE NO. 1-30-150

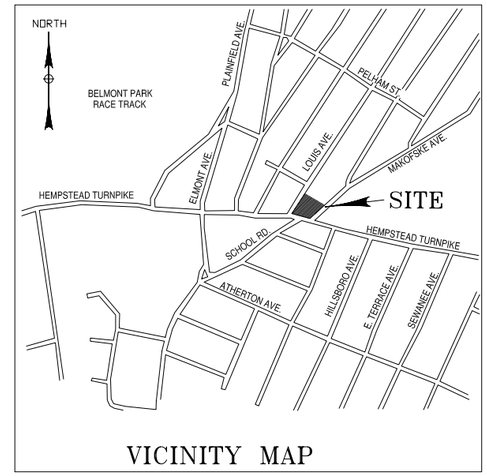
PREPARED FOR

NYSDEC

Environmental Resources Management
ERM

DRAWN:	JOB NO.:	FILE NAME:	SCALE	FIGURE
JMC/CWW	0037437	0037437-02-003	GRAPHIC	2

DATE 10/30/06



VICINITY MAP

NOT TO SCALE

LEGEND

SB-12	SOIL BORING ONLY
SB-02 GW-02	SOIL BORING AND GROUNDWATER SAMPLING LOCATION
SC-01	SOIL CONDUCTIVITY BORING
TP-01	TEMPORARY PEIZOMETER

Notes:

SB-01 thru SB-10: (soil samples taken from 0"-4" bgs and 18"-24" bgs)

DEEP SUBSURFACE SOIL EXCEEDANCE ABOVE SCGs

20 10 0 5 10 15

feet

Site Boundary

NOTE: The welding shop was demolished.

TITLE

SITE PLAN
FORMER ELMONT WELDING
NYSDEC SITE NO. 1-30-150

PREPARED FOR

NYSDEC

Environmental Resources Management

ERM

DRAWN: JMC/CWW	JOB NO.: 0037437	FILE NAME: 0037437-02-003	SCALE: GRAPHIC	FIGURE: 3
			DATE: 10/30/06	