# Sampling and Analysis Plan

# **Former Elmont Welding**

546 Hempstead Turnpike Elmont Nassau County New York

NYSDEC Site No. E130150



Prepared by
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#### 1.0 Introduction

New York State Department of Environmental Conservation (NYSDEC) has developed this work plan to complete the pre-design investigatory work at the Former Elmont Welding Site located at 546 Hempstead Turnpike, Elmont, Nassau County, NY (referred to herein as the site). The 0.350 acre lot was a welding shop for approximately 30 years and an auto repair garage previous to that. A site investigation determined that the site's soils have been impacted by the activities that occurred on the property. Based on the results of the investigation the Town of Hempstead applied to the Department's Environmental Restoration Program (ERP) for remedial program funding. The Town of Hempstead entered into an Environmental Restoration Program with the NYSDEC in 2015 for this site.

## 2.0 Site Setting

#### 2.1 Physical Setting

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. The site is shown in Figure 1.

Site Features: The site is currently vacant and fenced-in. Site surface is sloped from southeast to the northwest. A timber retaining wall is located along Louis Avenue and a combination of stone and timber retaining walls exist along the eastern part of the property. Site features are shown on Figure 2.

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.

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.

#### 2.2 Environmental Assessment

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 upon investigations conducted to date, the primary contaminants of concern for OU1 include benzo(a)pyrene, benzo(b)fluoranthene, benzo[k]fluoranthene, and benz(a)anthracene, which are known as polycyclic aromatic hydrocarbons (PAHs) and two metals identified as cadmium and lead.

Soil - PAHs are found at higher concentrations in the shallow soils compared to deeper soils onsite. 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. The results of the soil sampling event can be seen in Figures 3 and 4.

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.

#### 2.3 Selected Remedial Action

According to the Record of Decision (ROD), based on the results of the Site Investigation Report and the criteria identified for evaluation of alternatives, the NYSDEC selected excavation and off-site disposal of contaminated soil as the selected remedial action.

The primary components of the remedy are as follows:

- Excavation of up to two feet of surface soils that exceed restricted residential soil clean up objectives (SCO) will occur at the site. The excavated soil will be disposed at a permitted facility.
- Post excavation samples will be collected to document remaining concentrations at the site.
- Backfill consisting of soil that meets NYSDEC subpart 375-6.8(b) for restricted residential SCO will be placed at the site to restore site grades.
- Where site contamination remains above restricted residential SCO, a demarcation layer and a minimum of two feet of backfill material will be placed above the contamination.

#### 2.4 Site Personnel

Project Manager - Brian Jankauskas, P.E. will be responsible for the overall management of the pre-design investigation.

Call-out laboratory – Test America

## 3.0 Sampling Plan

The purpose of this sampling event is to provide a baseline for the design of the excavation plan of the site.

The scope of work for this plan includes:

- Collection of Samples
- GPS locating of samples
- Labeling and shipment of samples
- Analysis of Samples by a Laboratory

#### 3.1 Utility Mark-outs and Off-site Access

Prior to mobilization, the necessary permits shall be obtained, utilities shall be marked out and property owners shall be contacted. A utility mark-out verification reference number for the site will be obtained. Proposed explorations shall be located a safe distance from utility mark-outs. Hand clearing each location, via hand auger, will be considered based on utility mark-outs.

#### 3.2 Collection of Samples

The Site will be divided into a grid as shown in Figure 5. In general, samples will be collected for every 30 ft by 30 ft grid. Utilizing a hand auger a hole will be drilled in the center of the grid or in the location that the sampler determines to be the best representative of the grid. A sample will be collected from each of the sample intervals indicated on Table 1. Once the sample is collected, a wooden stake will be placed in the sample location and labeled with the sample ID number. The location of the stake will be recorded with a hand held GPS device for mapping purposes. The stake will remain in place until confirmatory results are received from the lab.

The samples will be collected by the technician wearing disposable, nitrile gloves. Soil samples will be described according to the DER-10 guidance.

The following outlines the soil sampling procedures that will be employed to collect the soil samples:

- Using a pre-cleaned stainless steel hand auger or stainless steel scoop, advance the sampling equipment to the specified depths, see Table 1, and remove the soil.
- Place the soil into a stainless steel mixing bowl.
- Composite the contents of the mixing bowl and place an adequate volume into the appropriate containers.
- Appropriately label the jars
- Place the sample on ice in a cooler.
- Record observations in field book.
- Decontaminate equipment after each use and between sample locations.

#### 3.3 Decontamination procedure

All down-hole drilling equipment, hand augers, and other tools will be decontaminated prior to its arrival at the site and between each use. All reusable sampling equipment will be decontaminated with a three step washing process that consists of a tap water rinse, an alconox and tap water wash, followed by a tap water rinse.

If visual contamination remains, new sampling equipment will be obtained or decontaminated procedures will be modified.

#### 3.4 Analysis of Samples

All samples will be submitted to a New York State Department of Health-Environmental Laboratory Approval Program (NYSDOH-ELAP)-certified laboratory for analysis of metals via Method 6010 and semi-volatile organic compounds (SVOCs) via Method 8270 with a standard 2-week turnaround period. Soil samples will be collected unpreserved in laboratory supplied 6-oz jars with 180 day sample holding time for metals analysis and 14 day sample holding time for SVOCs both stored at 4°C. ASP Category B deliverables will be reported for each sample.

Table 1 – Summary Table of Proposed Sampling Locations

Location	Matrix	Depths	Analytical	Method	QA/QC
			Parameters		
SB-A1	Soil	0-2", 18-24",	Metals	Method 6010	
		30-36", 42-48"	SVOCs	Method 8270	
SB-A2	Soil	0-2", 18-24",	Metals	Method 6010	
		30-36" 42-48"	SVOCs	Method 8270	
SB-A3	Soil	0-2", 18-24",	Metals	Method 6010	
		30-36", 42-48"	SVOCs	Method 8270	
SB-A4	Soil	0-2", 18-24",	Metals	Method 6010	
		30-36", 42-48"	SVOCs	Method 8270	
SB-A5	Soil	0-2", 18-24",	Metals	Method 6010	MS/MSD
		30-36", 42-48"	SVOCs	Method 8270	
SB-B1	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-B2	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-B3	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-B4	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-B5	Soil	0-2", 6-12",	Metals	Method 6010	MS/MSD
		18-24"	SVOCs	Method 8270	
SB-C1	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-C2	Soil	0-2", 6-12",	Metals	Method 6010	

		18-24"	SVOCs	Method 8270	
SB-C3	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-C4	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-C5	Soil	0-2", 6-12",	Metals	Method 6010	MS/MSD
		18-24"	SVOCs	Method 8270	
SB-D1	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-D2	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-D3	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-D4	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-D5	Soil	0-2", 6-12",	Metals	Method 6010	MS/MSD
		18-24"	SVOCs	Method 8270	
SB-E2	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-E3	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
SB-E4	Soil	0-2", 6-12",	Metals	Method 6010	
		18-24"	SVOCs	Method 8270	
FD-X x 4	Soil	TBD	Metals	Method 6010	Field Duplicate
			SVOCs	Method 8270	
Total of 74 sa	amples+ 4 Fie	eld Duplicates + 4 M	S/MSD		

Samples will be identified by using site number, sampling date, sample location, and sample depth.

## 3.5 Waste Characterization Sampling

The following samples will be collected for the purposes of waste characterization for the upcoming excavation activities planned for the site.

**Table 2 - Waste Characterization Samples** 

Sample ID	Location	Discrete or	Analysis	Analytical
		Composite		Method
WC - B1 (18-24)	B1 (18-24")	Discrete	Total VOC	8260
WC - C1 (0-2)	C1 (0-2")	Discrete	Total VOC	8260
WC - C2 (18-24)	C2 (18-24")	Discrete	Total VOC	8260
WC - A3 (0-2)	A3 (0-2")	Discrete	Total VOC	8260
WC - B3 (0-2)	B3 (0-2")	Discrete	Total VOC	8260

WC - B3 (18-24)	B3 (18-24")	Discrete	Total VOC	8260
WC - C3 (0-2)	C3 (0-2")	Discrete	Total VOC	8260
WC - D3(6-12)/	D3(6-12")/	Semi-Composite	TCLP VOC	1311, 8260
D4(6-12)	D4(6-12")			
WC - C1(18-24)/	C1(18-24")/	Semi-Composite	TCLP VOC	1311, 8260
A3(18-24)	A3(18-24")			
WC - C2(0-2)/	C2(0-2") A4(0-	Semi–Composite	TCLP VOC	1311, 8260
A4(0-2)	2")			
WC - Deep (Total)	C1 (18-24"),	Composite	Total SVOCs,	8270, 6010,
	C2(18-24"),		Metals, PCBs,	8280
	C3 (18-24"),		Pesticides	
	B3(18-24")			
WC -Deep (TCLP)	C1 (18-24"),	Composite	TCLP SVOCs,	1311, 8270,
	C2(18-24"),		Metals, PCBs,	6010, 8280
	C3 (18-24"),		Pesticides	
	B3(18-24")			
WC - Shallow Total	E4 (0-6"),	Composite	Total SVOCs,	8270, 6010,
	E3(0-6"),		Metals, PCBs,	8280
	A3(0-6"),		Pesticides	
	C3(0-6")			
WC - Shallow TCLP	E4 (0-6"),	Composite	TCLP	1311, 8270,
	E3(0-6"),		SVOCs, Metals,	6010, 8280
	A3(0-6"),		PCBs, Pesticides	
	C3(0-6")			

Samples will be identified by using site number, sampling date and sample ID.

The following outlines the semi-compositing soil sampling procedures that will be employed to collect the TCLP VOC samples:

- Using a pre-cleaned stainless steel hand auger or stainless steel scoop, advance the sampling equipment to the specified depths, see Table 2, and remove the soil.
- Place the soil into a sampling jar filling up half way
- Move to the second location listed in Table 2 for the composite sample
- Having Decontaminated the stainless steel hand auger or stainless steel scoop, advance the sampling equipment to the specified depth
- Place the soil into the sampling jar filling up the rest of the way to the cap.
- Seal cap
- Appropriately label the jars
- Place the sample on ice in a cooler.
- Record observations in field book.
- Decontaminate equipment after each use and between sample locations.

#### 3.6 Schedule

This task is expected to occur in early to mid-April 2015.

# 4.0 Reporting

#### 4.1 Data Validation and Electronic Data Deliverables

Laboratory data will be reviewed by a NYSDEC data reviewer and a data quality report will be prepared. Category B data deliverables and NYSDEC electronic data deliverables (EDD) will be provided by the laboratories. An EDD submission to NYSDEC will be performed.

#### 4.2 Tabulation and Report of Results and Conclusion

The data obtained from this pre-design investigation will be summarized in letter report form and tabulated and figures generated. All soil samples collected will be compared to Part 375-6 restricted-residential use SCOs.

# Appendix A Health and Safety Plan

## Elmont - 546 Hempstead Turnpike-aka-Elmont Welding Site Address: 546 Hempstead Turnpike, Elmont, NY 11003 **Nassau County**

Site No.: E130150

The proposed date of sampling is Early to Mid-April 2015.

Has this site been sampled and/or investigated before?

The Site Investigation of the property is dated November 2006. It is an abandoned property and is an empty lot.

The contaminants of concern at this site include lead, cadmium, benzo (a)pyrene, benzo(b)fluoranthene, benzo[k]fluoranthene, and benz(a)anthracene

The overall hazard level anticipated on-site for the activities as listed in this sampling and analysis plan are low.

#### **ON-SITE ACTIVITIES**

 $\boxtimes$ Yes  $\square$  No

⊠Ves □ No

Has the site perimeter been identified?	⊠Yes □ No
Is the site fenced?	oxtimesYes $oxtimes$ No
Is a site map/sketch available?	oxtimesYes $oxtimes$ No
Has areas of contamination been identified?	oxtimesYes $oxtimes$ No
Will air quality monitoring be done on-site?	$\square$ Yes $\boxtimes$ No
Is sampling planned at this site?	⊠Yes □ No
Soil Parameters to be analyzed for: Metals and SVOCs	
<ul> <li>The proposed on-site activities include:</li> <li>Drilling down to 4 ft below ground surface (bgs) with a hare</li> <li>Collection, compositing, and sampling of soil samples</li> <li>Decontamination of the hand auger and any other tools the Survey of the sampling point using a Trimble GPS unit</li> </ul>	-
Respiratory Protection Required?	□Yes ⊠ No
Personnel Protection anticipated:	Level D (no external respiratory protection)
Personal Protection Equipment for Level D:	work clothes work boots nitrile gloves
	- 1 -

Air quality monitoring equipment to be used:

None

#### **General Safety Practices**

All project personnel shall follow the following safety practices:

- Avoid skin exposure to subsurface materials. Remove any excess residual soil from clothes prior to leaving the site.
- No eating or drinking in designated work areas. Thoroughly wash hands prior to these activities outside the work area. Avoid sitting on the ground during breaks or while eating and drinking. Thoroughly wash all exposed body areas at the end of the workday.
- Be aware of site conditions (slips trips and falls) and climatic conditions (heat and cold) when performing site activities.

#### **EMERGENCY PLANNING**

Hospital	Address Franklin Hospital 900 Franklin Ave Valley Stream, NY 11580	Phone 911 (516) 256-6353
Ambulance	Emergency Department at Franklin Hospital	911
	900 Franklin Ave. Valley Stream, NY 11580	(516) 256-6353
Police	Hempstead Police Department Village Hall	911 (516) 483-6200
	99 Nichols Ct	(310) 483-0200
	Hempstead, NY 11550	
NYSDEC	Brian Jankauskas	(518) 402-9620
	625 Broadway Albany, NY 12233-7015	
NYSDOH	Steve Karpinski Bureau of Environmental Exposure Investigation	(518)402-7860
	Empire State Plaza, Corning Tower Room 1787 Albany, NY 12237	
	Albulty, IVI 12231	
Town of Hem	pstead - Owner George L. Bakich	(516) 489-5000
	Town Supervisor	(310) 403-3000

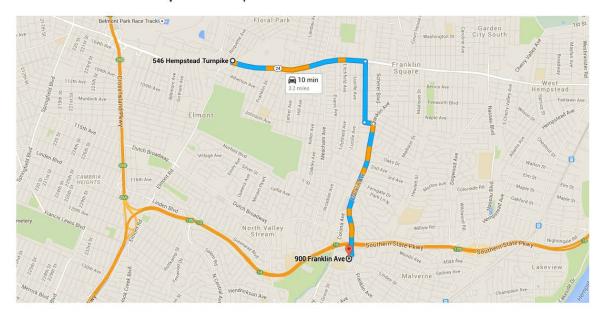
200 N. Franklin St. Hempstead, NY 11550

Town of Hempstead – Applicant Norene Domino Economic Developer 200 N. Franklin St. Hempstead, NY 11550

(516) 489-5000



#### Directions from 546 Hempstead Turnpike to 900 Franklin Ave



### o 546 Hempstead Turnpike

Elmont, NY 11003

1. Head east on Hempstead Turnpike toward Marguerite Ave

1.3 mi

2. Turn right onto Catherine Ave

3. Turn left onto Park Ave

4. Turn right onto Franklin Ave

1.3 mi

1.3 mi

1.3 mi

1.3 mi

#### 900 Franklin Ave

Valley Stream, NY 11580

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Map data @2015 Google

https://www.google.com/maps/dir/546+Hempstead+Turnpike,+Elmont,+NY+11003/900+Franklin+Ave,+Valley+Stream,+NY+11580/@40.694939,-73.7181378,... 1/1

