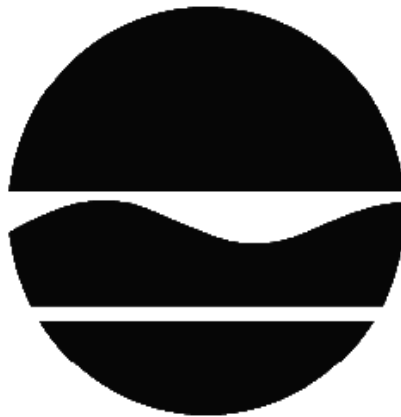


DECISION DOCUMENT

Former Boyle Auto Wreckers, Inc.
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203089
September 2019



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

DECLARATION STATEMENT - DECISION DOCUMENT

Former Boyle Auto Wreckers, Inc.
Brownfield Cleanup Program
Bronx, Bronx County
Site No. C203089
September 2019

Statement of Purpose and Basis

This document presents the remedy for the Former Boyle Auto Wreckers, Inc. site, a brownfield cleanup 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.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Former Boyle Auto Wreckers, Inc. site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected 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. 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at

a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

The existing on-site buildings will be demolished and materials which can't be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy.

Excavation and off-site disposal of contaminant source areas, including:

- Excavation and off-site disposal of all on-site soils which exceed unrestricted use SCOs, as defined by 6 NYCRR Part 375-6.8. Approximately 19,300 cubic yards of contaminated soil will be removed from the site. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy.
- Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

3. Backfill

On-site soil which does not exceed unrestricted-use soil cleanup objectives for any constituent may be used anywhere on site, including below the water table, to backfill the excavation or re-grade the site.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace excavated soil where necessary and establish the designed grades at the site.

4. Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

5. Local Institutional Controls

If no environmental easement or site management plan is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code, which prohibits potable use of groundwater without prior approval.

Contingent Track 1

The intent of the remedy is to achieve Track 1 unrestricted use; therefore, no environmental easement or site management plan is anticipated.

In the event that Track 1 unrestricted use is not achieved, the following contingent remedial elements will be required, and the remedy will achieve a Track 4 restricted residential cleanup.

Contingent Remedial Elements:

6. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 4,

restricted residential cleanup at a minimum and will include a site cover, an environmental easement, and site management plan as described below.

7. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require 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);
- allow the use and development of the controlled property for restricted residential use or commercial use or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

8. Cover System

A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of **two feet** of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

9. Site Management Plan

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

1. 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 7 above.

Engineering Controls: The cover system discussed in Paragraph 8 above.

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, and groundwater;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including a provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;

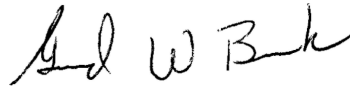
- maintaining site access controls and Department notification;
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls; and
- a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
 - monitoring for vapor intrusion for any future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

September 9, 2019

Date



Gerard Burke, Director
Remedial Bureau B

DECISION DOCUMENT

Former Boyle Auto Wreckers, Inc.
Bronx, Bronx County
Site No. C203089
September 2019

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 contaminants 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 contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

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:

New York Public Library
Westchester Square Branch
2521 Glebe Ave
Bronx, NY 10461
718-792-6744

Bronx Community Board 11
1741 Colden Avenue
Bronx, NY 10462
718-892-6262

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 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 five lot, 1.064-acre site is located at 1346 Blondell Avenue in the East Bronx, New York City.

The property has approximately 206 feet of street frontage on Blondell Avenue on the west. The east side of the site is bordered by a New York City Metropolitan Transportation Authority (MTA) rail yard, the south side by a commercial property and Cooper Avenue and to the north by an auto body shop. See Figure 1.

Site Features

The property is currently vacant with three one-story buildings consisting of two small houses and a commercial building that recently contained a motorcycle repair garage.

Current Zoning and Land Use

The site is currently zoned M1-1. M1 districts typically include light industrial uses and warehouses. The land use in the immediate vicinity of the site includes an MTA rail yard and related facilities to the east, commercial properties to the north and west consisting primarily of auto repair shops and warehouse buildings, and residential and commercial office buildings to the south.

The developer is currently in the process of rezoning the property from M1-1 manufacturing to R7A residential with a C2-4 commercial overlay.

Past Use of the Site

A review of Sanborn maps indicated that the site was historically occupied by vacant lots, residential dwellings and an auto repair building. The site was also identified as an auto junk yard from 1977 to 1996 and was most recently used for long-term vehicle storage and partially occupied by a motorcycle repair shop.

Site Geology

Subsurface soils at the site consist of historic fill materials to approximately two to five feet below grade followed by native silty-sand with some clay layers. The property is approximately seven feet above sea level. The area gradually slopes to the east toward the MTA rail yard. On-

site groundwater is approximately six feet below grade and flows northeasterly.

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, a restricted residential alternative and an unrestricted use alternative were evaluated.

A comparison of the results of the Remedial Investigation (RI) against unrestricted use standards, criteria and guidance values (SCGs) for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil
- 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. 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 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 below. Additionally, the RI Report contains a full discussion of the data. The contaminants of concern identified at this site are:

lead	1,3,5-trimethylbenzene
mercury	benzo(a)anthracene
barium	benzo(a)pyrene
ethylbenzene	benzo(b)fluoranthene
xylene (mixed)	benzo[k]fluoranthene
naphthalene	indeno(1,2,3-cd)pyrene
1,2,4-trimethylbenzene	chrysene

The contaminants of concern exceed the applicable SCGs for soil and groundwater.

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 Decision Document.

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

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. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and pesticides. Groundwater samples were also analyzed for PFAS compounds and 1,4-dioxane.

Soil

A 2006 Phase II investigation found lead in soil across the site with a maximum concentration of 2,400 parts per million (ppm). A subgroup of SVOCs, polycyclic aromatic hydrocarbons (PAHs), were detected at low concentrations, below unrestricted use soil cleanup objectives (SCOs). The presence of lead and PAHs indicate historic fill from an off-site source. A 2015 Phase II investigation found lead in soil across the site with a maximum concentration of 1,730 ppm. PAHs were observed at higher concentrations; benzo(a)pyrene (20 ppm), benzo(a)anthracene (19 ppm), benzo(b)fluoranthene (18 ppm), benzo(k)fluoranthene (15 ppm) and chrysene (20 ppm).

An additional investigation conducted in 2016 found petroleum-related VOCs in soil above unrestricted use SCOs (UUSCOs) in three of 12 locations sampled. PAHs were observed above restricted residential SCOs (RRSCOs) in two locations.

The 2018 remedial investigation (RI) confirmed the presence of volatile organic compounds (VOCs), PAH and metals contamination in on-site soil. The petroleum-related VOCs; 1,2,4-trimethylbenzene (1,400 ppm), 1,3,5-trimethylbenzene (520 ppm), meta and para-xylenes (930 ppm) and naphthalene (210 ppm), were detected above their respective RRSCOs.

Naphthalene (63 ppm), benzo(k)fluoranthene (1.2 ppm), and chrysene (2.7 ppm) were detected above their respective UUSCOs. Benz(a)anthracene (2.2 ppm), benzo(a)pyrene (1.8 ppm), benzo(b)fluoranthene (1.3 ppm) and indeno(1,2,3-cd)pyrene (0.940 ppm) were present above RRSCOs.

Barium (691 ppm), lead (598 ppm) and mercury (0.91 ppm) were observed in soil above their respective RRSCOs during the RI. Chromium was detected above its UUSCO at 86.9 ppm. Soil data are shown on Figure 2. There is no indication of site-related impacts to off-site soil.

Groundwater

On-site groundwater contained the following petroleum-related VOCs above the applicable ambient water quality standards (AWQS); benzene (76 parts per billion (ppb)), toluene (120 ppb), ethylbenzene (14 ppb), total xylene (468 ppb), MTBE (41 ppb), isopropylbenzene (87 ppb) and n-propylbenzene (140 ppb). The RI investigation observed that one groundwater monitoring well had significant petroleum-related contamination indicative of gasoline; notably, ethylbenzene (900 ppb), and total xylene (1,930 ppb). Petroleum-related contaminants in groundwater may be migrating off-site in a northerly direction toward the MTA rail yard.

The PAHs naphthalene (38 ppb), benzo(a)anthracene (0.16 ppb), benzo(b)fluoranthene (0.15 ppb), benzo(k)fluoranthene (0.14 ppb), chrysene (0.07 ppb) and indeno(1,2,3-cd)pyrene (0.12 ppb) were detected above their respective AWQS. Groundwater data are shown on Figure 3.

Site-related metals were not detected above standards in groundwater. Nine Perfluoroalkyl substances (PFAS) were detected in groundwater ranging from non-detect to 62.1 parts per trillion (ppt). 1,4-dioxane was not detected in site groundwater.

Soil Vapor

Gasoline-related contaminants were detected in soil vapor throughout the site. Chlorinated VOCs were present in some locations at relatively low concentrations that are unlikely to result in off-site impacts. The maximum concentrations for chlorinated VOCs were tetrachloroethene (1.71 micrograms per cubic meter, or $\mu\text{g}/\text{m}^3$), trichloroethene (0.38 $\mu\text{g}/\text{m}^3$) and cis-1,2-dichloroethene (0.30 $\mu\text{g}/\text{m}^3$). Vinyl chloride was not detected in on-site soil vapor.

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, however, persons who enter the site could come in contact with 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 affected by this contamination. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the 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 people to inhale site contaminants due to soil vapor intrusion in any future redevelopment and occupancy. Sampling indicates soil vapor intrusion is not a concern for off-site buildings.

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 ingestion of groundwater with contaminant levels exceeding drinking

water standards.

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

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- 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: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 1: Unrestricted use remedy.

The selected remedy is referred to as the Excavation to Track 1, Unrestricted Use remedy.

The elements of the selected remedy, as shown in Figure 2, 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. 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

The existing on-site buildings will be demolished and materials which can't be beneficially reused on site will be taken off-site for proper disposal in order to implement the remedy.

Excavation and off-site disposal of contaminant source areas, including:

- Excavation and off-site disposal of all on-site soils which exceed unrestricted use SCOs, as defined by 6 NYCRR Part 375-6.8. Approximately 19,300 cubic yards of contaminated soil will be removed from the site. If a Track 1 cleanup is achieved, a Cover System will not be a required element of the remedy.
- Excavation and removal of any underground storage tanks (USTs), fuel dispensers, underground piping or other structures associated with a source of contamination.

3. Backfill

On-site soil which does not exceed unrestricted-use soil cleanup objectives for any constituent may be used anywhere on site, including below the water table, to backfill the excavation or re-grade the site.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace excavated soil where necessary and establish the designed grades at the site.

4. Vapor Intrusion Evaluation

As part of the Track 1 remedy, a soil vapor intrusion evaluation will be completed. The evaluation will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

5. Local Institutional Controls

If no environmental easement or site management plan is needed to achieve soil, groundwater, or soil vapor remedial action objectives, then the following local use restriction will be relied upon to prevent ingestion of groundwater: Article 141 of the NYCDOH code, which prohibits potable use of groundwater without prior approval.

Contingent Track 1

The intent of the remedy is to achieve Track 1 unrestricted use; therefore, no environmental easement or site management plan is anticipated.

In the event that Track 1 unrestricted use is not achieved, the following contingent remedial elements will be required, and the remedy will achieve a Track 4 restricted residential cleanup.

Contingent Remedial Elements:

6. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 4, restricted residential cleanup at a minimum and will include a site cover, an environmental easement, and site management plan as described below.

7. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require 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);
- allow the use and development of the controlled property for restricted residential use or commercial use or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or NYCDOH; and
- require compliance with the Department approved Site Management Plan.

8. Cover System

A site cover will be required to allow for restricted residential use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of **two feet** of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

9. Site Management Plan

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

1. 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 7 above.

Engineering Controls: The cover system discussed in Paragraph 8 above.

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, and groundwater;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including a 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;
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls: and
- a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
 - monitoring for vapor intrusion for any future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Figure 1
Site Location
Former Boyle Auto Wreckers
Site N. C203089



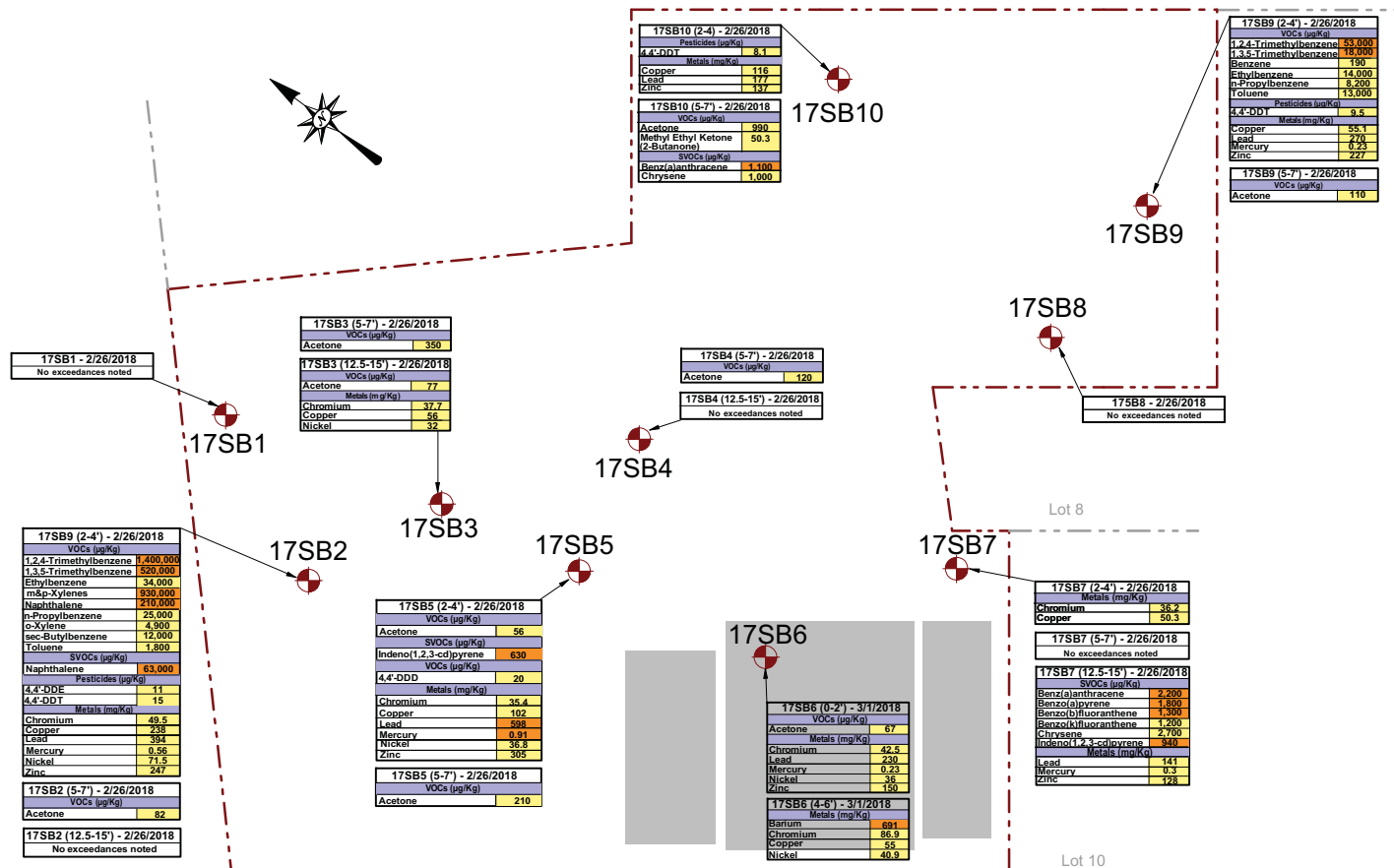
aproximate
site boundary

Boyle Auto Wreckers

© 2016 Google

Google earth

Imagery Date: 10/11/2014 40°50'31.17" N 73°50'30.88" W elev 10 ft eye alt 1663 ft



SIDEWALK

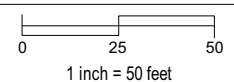
BLONDELL AVENUE

Note:
 Detections above Unrestricted Use SCOs
 Detections above Restricted Residential Use SCOs

KEY:

- Site Boundary
- 2016 Phase II Soil Boring Location
- Soil Boring Location
- Monitoring Well Location
- Soil Gas Location

SCALE:



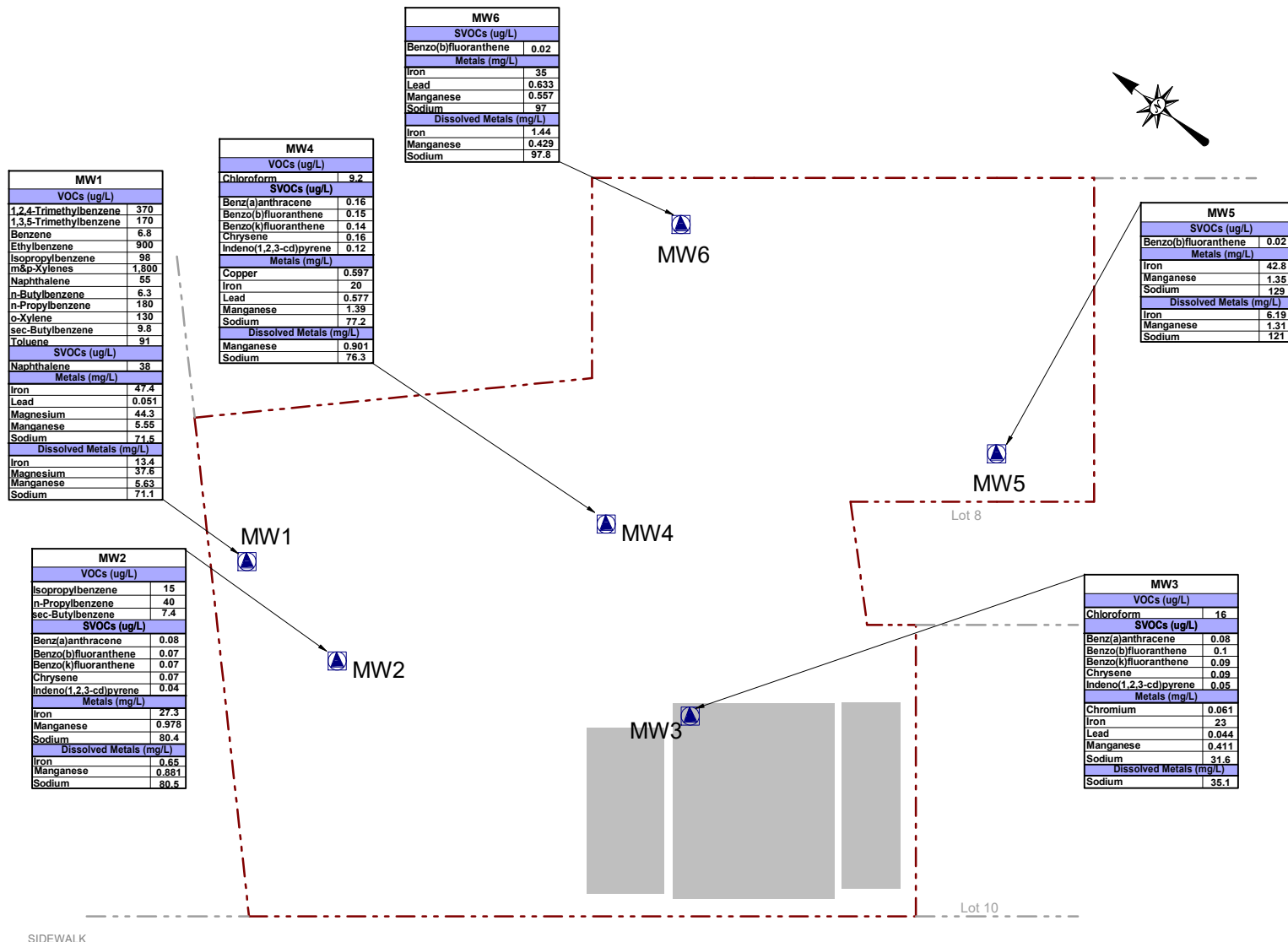
IBC

Environmental Business Consultants

Phone 631.504.6000
 Fax 631.924.2870

Figure No.
2

Site Name: Former Boyle Auto Wreckers Site
 Site Address: 1346 Blondell Avenue, Bronx NY
 Drawing Title: Soil Exceedance Figure



SIDEWALK

BLONDELL AVENUE

KEY:

Site Boundary
MWx Monitoring Well Location

SCALE:

0 25 50
1 inch = 50 feet

IBC

Environmental Business Consultants

Phone 631.504.6000
Fax 631.924.2870

Figure No.
3

Site Name: Former Boyle Auto Wreckers Site
Site Address: 1346 Blondell Avenue, Bronx NY
Drawing Title: Groundwater Exceedance Map

SG1 - 3/15/2018	
1,2,4-Trichlorobenzene	2.08
1,2,4-Trimethylbenzene	3.28
1,3,5-Trimethylbenzene	1.16
1,3-Dichlorobenzene	2.45
4-Methyl-2-pentanone	1.52
Acetone	710
Benzene	2.01
Carbon Disulfide	1.15
Carbon Tetrachloride	0.53
Cyclohexane	1.63
Dichlorodifluoromethane	2.97
Ethanol	115
Ethyl Acetate	2.32
Ethylbenzene	2.87
Heptane	3.81
Hexane	4.44
Isopropylalcohol	25.3
Xylene (m&p)	11
Methyl Ethyl Ketone	33
Xylene (o)	4.95
Propylene	20.4
Styrene	2.47
Tetrachloroethene	1.17
Tetrahydrofuran	23.5
Toluene	21.1
Trichlorofluoromethane	1.43

SG3 - 3/15/2018	
Acetone	636
Benzene	1.1
Carbon Disulfide	2.07
Carbon Tetrachloride	0.62
Chloromethane	1.26
Cyclohexane	1.71
Dichlorodifluoromethane	1.71
Ethanol	58.4
Ethyl Acetate	2
Heptane	1.54
Hexane	3.01
Isopropylalcohol	26.5
Xylene (m&p)	3.39
Methyl Ethyl Ketone	14.1
Xylene (o)	1.09
Propylene	15
Styrene	2.47
Toluene	5.54
Trichlorofluoromethane	1.33

SG5 - 3/15/2018	
Acetone	7,190
Benzene	7.18
Carbon Disulfide	89.9
Carbon Tetrachloride	0.3
cis-1,2-Dichloroethene	0.3
Cyclohexane	15.8
Dichlorodifluoromethane	2.43
Ethanol	101
Ethyl Acetate	2.82
Heptane	14
Hexane	23.8
Isopropylalcohol	35.1
Xylene (m&p)	3.49
Methyl Ethyl Ketone	197
Xylene (o)	1.17
Propylene	157
Tetrahydrofuran	2.73
Toluene	6.52
Trichlorofluoromethane	1.16

SG6 - 3/15/2018	
2-Hexanone	4.18
Acetone	3,580
Benzene	1.23
Carbon Disulfide	3.86
Carbon Tetrachloride	0.41
Dichlorodifluoromethane	2.62
Ethanol	134
Heptane	2.12
Hexane	1.54
Isopropylalcohol	51.8
Xylene (m&p)	3.15
Methyl Ethyl Ketone	162
Xylene (o)	1.74
Propylene	14.6
Tetrachloroethene	0.95
Tetrahydrofuran	1.43
Toluene	4.44
Trichlorofluoromethane	1.13

SG2 - 3/15/2018	
Acetone	620
Carbon Tetrachloride	0.43
Cyclohexane	2.43
Dichlorodifluoromethane	2.33
Ethanol	63.1
Ethyl Acetate	2.61
Heptane	1.65
Hexane	11.8
Isopropylalcohol	24.1
Xylene (m&p)	3.92
Methyl Ethyl Ketone	16.8
Xylene (o)	1.07
Propylene	28.9
Tetrachloroethene	1.71
Tetrahydrofuran	1.4
Toluene	11
Trichlorofluoromethane	16.3

SG4 - 3/15/2018	
Acetone	539
Benzene	27.9
Carbon Disulfide	85
Carbon Tetrachloride	0.48
Chloromethane	1.42
Cyclohexane	413
Dichlorodifluoromethane	2.87
Ethanol	1,080
Ethylbenzene	1.3
Heptane	25.7
Hexane	100
Isopropylalcohol	7.81
Xylene (m&p)	3.64
Methyl Ethyl Ketone	15.3
MTBE	262
Xylene (o)	1.14
Propylene	73.8
Tetrachloroethene	0.26
Toluene	10.5
Trichlorofluoromethane	1.45
Trichlorotrifluoroethane	1.17

SG7 - 3/15/2018	
1,2,4-Trimethylbenzene	3.17
1,3,5-Trimethylbenzene	1.57
1,3-Dichlorobenzene	1.13
4-Ethyltoluene	1.43
Acetone	242
Carbon Disulfide	17.5
Carbon Tetrachloride	0.31
Chloroform	1.72
Cyclohexane	389
Dichlorodifluoromethane	2.58
Ethanol	36.3
Ethylbenzene	8.29
Heptane	496
Hexane	340
Isopropylalcohol	3.78
Xylene (m&p)	16.4
Methyl Ethyl Ketone	14.7
Xylene (o)	8.03
Propylene	45.6
Styrene	1.75
Tetrachloroethene	0.78
Tetrahydrofuran	24.3
Toluene	17.3
Trichloroethene	0.38
Trichlorofluoromethane	1.62

SG8 - 3/15/2018	
1,2,4-Trimethylbenzene	3.33
Acetone	205
Carbon Tetrachloride	0.41
Chloromethane	1.2
Dichlorodifluoromethane	2.43
Ethanol	19.2
Ethyl Acetate	3.53
Hexane	1.18
Isopropylalcohol	44.7
Xylene (m&p)	3.2
Methyl Ethyl Ketone	45.7
Xylene (o)	1.41
Propylene	3.32
Tetrachloroethene	0.48
Tetrahydrofuran	41.6
Toluene	4.29
Trichlorofluoromethane	1.15

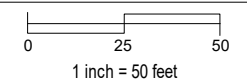
BLONDELL AVENUE



KEY:

Site Boundary
SGx Soil Gas Location

SCALE:



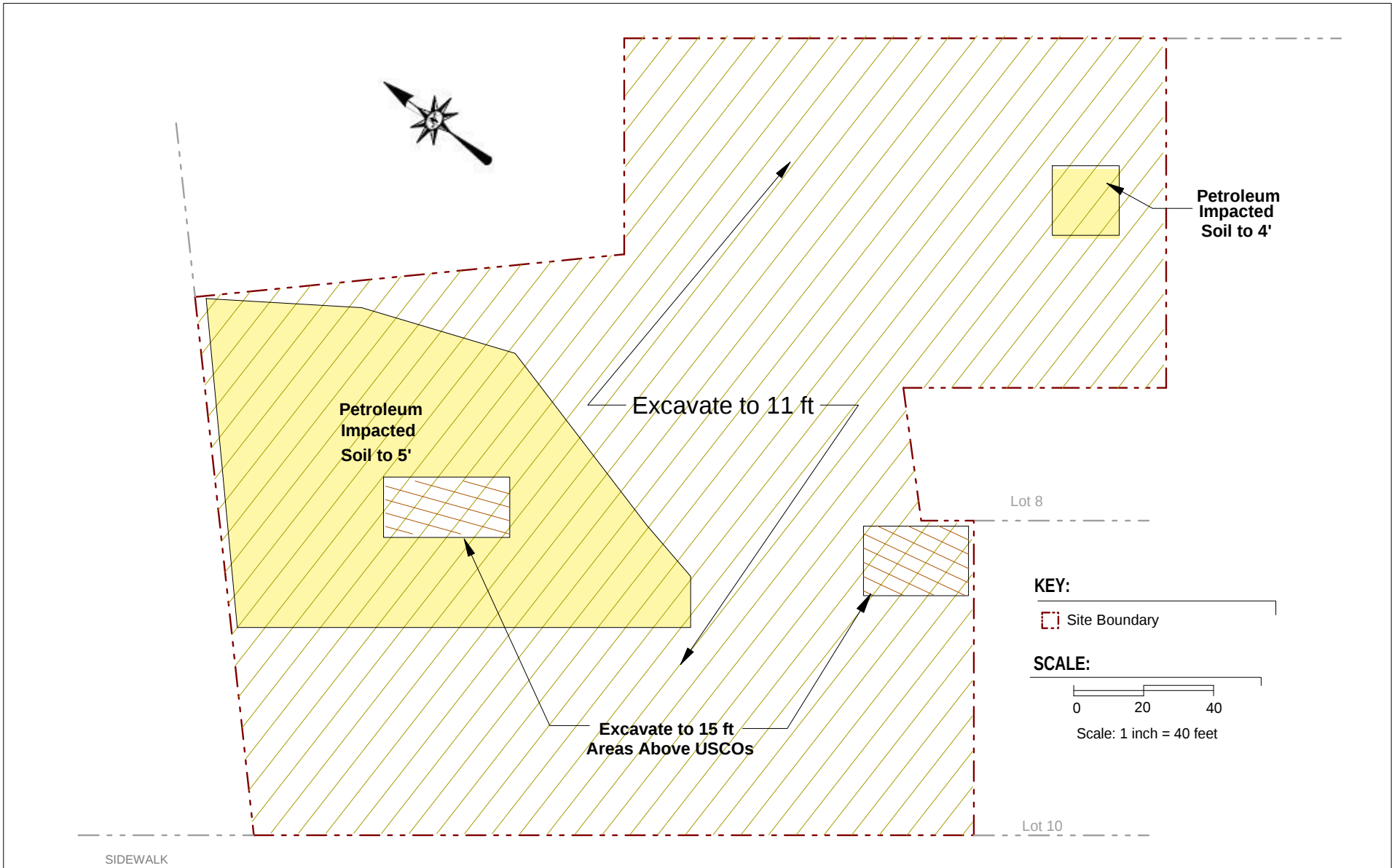
EB

Environmental Business Consultants

Phone 631.504.5000
Fax 631.924.2870

Figure No.
4

Site Name: Former Boyle Auto Wreckers Site
Site Address: 1346 Blondell Avenue, Bronx NY
Drawing Title: Soil Gas Detections



BLONDELL AVENUE

 AMC Engineering 1836 42nd Street Astoria, NY 11105	Figure No. 5	Site Name: FORMER BOYLE AUTO WRECKERS SITE
		Site Address: 1346 BLONDELL AVENUE, BRONX NY
		Drawing Title: EXCAVATION PLAN