DECISION DOCUMENT

ENRX Annex Site
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915325
October 2019

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

DECLARATION STATEMENT - DECISION DOCUMENT

ENRX Annex Site
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915325
October 2019

Statement of Purpose and Basis

This document presents the remedy for the ENRX Annex 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 ENRX Annex 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. Groundwater Extraction and Treatment
Groundwater extraction and treatment will be implemented to treat contaminants in groundwater. The groundwater extraction system will be designed and installed so that the capture zone is sufficient to intercept the groundwater contaminant plume to stop further migration. The extraction system will create a depression of the water table so that contaminated groundwater is directed toward the extraction wells within the plume area. Groundwater will be extracted from the subsurface using submersible pumps placed in extraction wells screened in the top ten feet of bedrock.

The extracted groundwater will be passed through a separator to remove any non-aqueous phase liquids present, then treated using air stripping to remove volatile contaminants from extracted groundwater. The air stripper contacts the contaminated groundwater with an air stream to volatilize contaminants from groundwater to air. The air emission rates from this system are expected to be well below the levels requiring air pollution controls.

Granular activated carbon (GAC) will then be used to remove dissolved contaminants from the extracted groundwater by adsorption. The GAC system will consist of one or more vessels filled with carbon connected in series and/or parallel. Following treatment, the groundwater will be discharged to the municipal sewer system.

3. Cover System
A site cover will be required to allow for commercial use of the site in areas where the upper one foot 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 one foot 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.

4. 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 commercial 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 County DOH; and
- require 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 groundwater extraction and treatment discussed in Paragraph 2 above; and the soil cover discussed in Paragraph 3 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 use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

- procedures for operating and maintaining the remedy;
- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

6. Treatment Remedy Shutdown
The operation of the components of the remedy will continue until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible.

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.

October 22, 2019
Date

Jeffrey Dyktar For MC
Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

ENRX Annex Site
Buffalo, Erie County
Site No. C915325
October 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 repository:

Buffalo and Erie County Public Library
1 Lafayette Square
Buffalo, NY 14203
Phone: (716) 858-8900

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 site is located in a commercial/industrial area of the City of Buffalo. The site consists of one parcel measuring approximately 0.28 acres, with a street address of 50 Hannah Street. The site is bordered on the west by Hannah Street, on the east by New Babcock Street and on the north by the ENRX, Inc. - Voelker Analysis BCP site ("ENRX" site, #C915150). The ENRX site was issued a Certificate of Competition (COC) in December 2015; a groundwater extraction and treatment system has been in operation at this site since then.

Site Features:
The site consists of a gravel/asphalt parking lot, partially enclosed within a fence which also surrounds the adjacent ENRX site, as well as a scrap yard on the west side of Hannah Street, opposite both sites. The site is generally flat and level.

Current Zoning and Land Use:
The site is zoned for industrial use (D-1H Heavy Industry). The site is vacant. Properties in the vicinity are residential, commercial, and light industrial. The nearest residential area is located approximately 1,300 feet west of the site.

Past Use of Site:
The site was used for industrial and commercial purposes. In the late 1800s, the site was vacant and surrounded by a large complex of stockyards and a network of railways. Two adjoining structures were later built on site, initially used as an electric substation and later a hide processing facility. Those structures were demolished between 2007 and 2011. Investigations indicate that the past use of the adjacent ENRX site (#C915150) as a solvent recovery facility, contributed to this site's contamination.

Site Geology and Hydrology:
Fill material covers the entire site. It consists of gravel, sand, silt, clay, cinders and demolition debris (brick, concrete, wood fragments, glass, and plastic). The fill material overlies up to one and a half feet of native silt and clay, on top of limestone bedrock, which is found at depths of 8 to 10 feet.

Groundwater is encountered at a depth of approximately six feet and flows in a northwesterly direction, towards the ENRX site.

A site location map and site plan are attached as Figures 1 and 2 respectively.

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 that restrict the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) were evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is 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:

- air
- 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:

benzo(a)anthracene	1,1,1-trichloroethane
benzo(a)pyrene	1,1-dichloroethane
dibenzo[a,h]anthracene	chloroethane
indeno(1,2,3-cd)pyrene	cis-1,2-dichloroethene
1,1 dichloroethene	vinyl chloride

The contaminants of concern exceed the applicable SCGs for:

- groundwater and
- 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 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.

Surface Soil/Fill
Samples were collected from the top two inches of soil/fill encountered across the site. Samples were tested for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, herbicides and metals.

In nearly every sample, one or more SVOC was reported at a concentration exceeding its commercial soil cleanup objective (CSCO), for the anticipated commercial use of the property.

The SVOCs reported were:

- Benzo(a)anthracene (up to 23 parts per million (ppm), CSCO 1 ppm);
- Benzo(a)pyrene (up to 16 ppm, CSCO 1 ppm);
- Benzo(b)fluoranthene (up to 24 ppm, CSCO 1 ppm);
- Dibenzo(a,h)anthracene (up to 2.1 ppm, CSCO 0.56 ppm); and
- Indeno(1,2,3-cd)pyrene (up to 9.1 ppm, CSCO 0.5 ppm).

VOCs, PCBs, pesticides, herbicides and metals were either not detected or were reported at concentrations below CSCOs in every sample.

Near Surface Soil/Fill
Near surface samples were collected from the top 24 inches of soil/fill, across the site. Samples were tested for VOCs, SVOCs, PCBs, pesticides, herbicides and metals.

Most of the same SVOCs present in the surface soil samples were also found in the near surface, but CSCOs were exceeded in significantly fewer samples. The SVOCs reported were:

- Benzo(a)anthracene (up to 6.2 ppm, CSCO 1 ppm);
- Benzo(a)pyrene (up to 3.9 ppm, CSCO 1 ppm);
- Benzo(b)fluoranthene (up to 5.9 ppm, CSCO 1 ppm); and
- Dibenzo(a,h)anthracene (up to 0.59 ppm, CSCO 0.56 ppm).

One sample contained PCBs at a concentration of 6.82 ppm, exceeding its CSCO of 1 ppm. In all other samples, PCBs were either not detected or reported at concentrations below the CSCO.

VOCs, pesticides, herbicides and metals were either not detected or were reported at concentrations below CSCOs in every sample.

Sub-surface Soil/Fill
Subsurface samples were collected from various depths from 2 to 8.5 feet below ground. Samples were tested for VOCs, SVOCs, PCBs, pesticides, herbicides and metals.

One sample contained SVOCs at concentrations exceeding their CSCOs. The SVOCs reported were:

- Benzo(a)pyrene (3 ppm, CSCO 1 ppm); and
- Dibenzo(a,h)anthracene (0.59 ppm, CSCO 0.56 ppm).

In all other samples, SVOCs were either not detected or reported at concentrations below the CSCOs.

VOCs, pesticides, herbicides and metals were either not detected or were reported at concentrations below CSCOs in every sample.

The contaminant concentrations in the soil/fill are attributable to the weathered, broken asphalt pavement on the surface and the soil/fill beneath it. There is little potential for off-site impacts to soil attributable to contaminant migration from the site.

Waste
At one location, clumps of a tar-like substance were found scattered within the sub-surface fill/soil that fills the basements of the two demolished, adjoining buildings. A sample was tested for VOCs, SVOCs, and PCBs.

SVOCs found at concentrations exceeding their CSCOs included:
- Benzo(a)anthracene (8.1 ppm, CSCO 1 ppm);
- Benzo(a)pyrene (up to 5.9 ppm, CSCO 1 ppm); and
- Benzo(b)fluoranthene (up to 7.6 ppm, CSCO 1 ppm).

PCBs were reported at a concentration of 1.46 ppm, slightly exceeding its CSCO of 1 ppm. VOCs were either not detected or were reported at concentrations below CSCOs.

Groundwater
Since 2015, a groundwater pump and treatment system located on the adjacent ENRX Inc.-Voelker Analysis BCP site (Site #C915150), has been capturing and treating contaminated groundwater from beneath both sites.

Samples collected in February 2019, with the ENRX site's groundwater pump and treatment system temporarily shut down, were tested for VOCs, SVOCs, PCBs, pesticides, herbicides, metals, per- and polyfluoroalkyl substances (PFAS) and 1,4 dioxane.

In every sample, one or more VOCs were reported at concentrations exceeding groundwater quality standards. The VOCs reported were:
- 1,1,1-Trichloroethane (up to 53 parts per billion (ppb), standard 5 ppb);
- 1,1-Dichloroethane (up to 30 ppb, standard 5 ppb);
- Chloroethane (one well, 9.2 ppb, standard 5 ppb);
- Cis-1,2-Dichloroethene (up to 92 ppb, standard 5 ppb);
- Freon-113 (up to 26 ppb, standard 5 ppb); and
- Vinyl chloride (up to 100 ppb, standard 2 ppb).

SVOCs, PCBs, pesticides, herbicides and metals were either not detected or were reported at concentrations below groundwater quality standard/guidance values.

For PFAS, perfluorooctanoic acid (PFOA) and perflourooctanesulfonic acid (PFOS) were reported at concentrations of up to 28.3 and 10.4 parts per trillion (ppt), respectively, exceeding the 10 ppt screening levels for groundwater. No other PFAS exceeded the 100 ppt screening levels. The total concentration of PFAS, including PFOA and PFOS, were reported at

concentrations of up to 135 ppt, below the 500 ppt screening level for groundwater There are no known wells used as sources of drinking water within at least one-half mile of the site. The City of Buffalo provides drinking water to the site vicinity from a separate source that is not affected by this contamination.

Samples were collected from off-site locations, immediately to the north and northwest of the site, on the ENRX site and in the middle of Hannah Street respectively. The samples were tested for VOCs, SVOCs, PCBs and metals.

The same VOCs reported on site were also reported off site. The highest total concentration of VOCs was on the ENRX site; up to 2,670 ppb was reported. In Hannah Street, the total concentration of VOCs was 242 ppb. On-site, the highest total concentration of VOCs reported was 317 ppb, in the northwest corner of the site.

SVOCs, PCBs, and metals were either not detected or were reported at concentrations below groundwater quality standard/guidance values in the off-site.

The distribution of contaminant concentrations in groundwater indicate the potential for consequential off-site impacts to groundwater, attributable to contaminant migration from this site.

Soil Vapor / Outdoor Air
Samples were collected of the vapor within the soil/fill, between 4 and 5 feet below ground, and tested for VOCs. The VOCs reported at significant concentrations included:

- Trichloroethene (up to 25.1 micrograms per cubic meter (ug/m3);
- 2-Butanone (up to 120 ug/m3);
- Acetone (up to 306 ug/m3);
- Freon 113 (up to 2.62 ug/m3); and
- Trichlorofluoromethane (22.9 up to ug/m3).

Two of the VOCs listed above were also reported in outdoor air samples:

- Acetone (up to 4.13 ug/m3); and
- Trichlorofluoromethane (up to 1.48 ug/m3).

None of the other VOCs listed above were detected.

These VOCs pose the potential to adversely impact indoor air quality due to soil vapor intrusion. If any structures are built on site, the impacts will need to be evaluated to determine if there is a potential for soil vapor intrusion to impact the indoor air of the proposed building.

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.*

Persons who enter the site could contact contaminants in soil by walking on the soil, digging or otherwise disturbing the soil. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source 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 site is currently vacant, however the potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on site redevelopment and occupancy. Sampling indicates there is a potential for soil vapor intrusion to be a concern for off-site buildings and it is being addressed under site management of the adjacent site ENRX #C915150.

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.

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 4: restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Site Cover, and Groundwater Extraction and Treatment remedy.

The elements of the selected remedy, as shown in Figure 3, 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. Groundwater Extraction and Treatment

Groundwater extraction and treatment will be implemented to treat contaminants in groundwater. The groundwater extraction system will be designed and installed so that the capture zone is sufficient to intercept the groundwater contaminant plume to stop further migration. The extraction system will create a depression of the water table so that contaminated groundwater is directed toward the extraction wells within the plume area. Groundwater will be extracted from the subsurface using submersible pumps placed in extraction wells screened in the top ten feet of bedrock.

The extracted groundwater will be passed through a separator to remove any non-aqueous phase liquids present, then treated using air stripping to remove volatile contaminants from extracted groundwater. The air stripper contacts the contaminated groundwater with an air stream to volatilize contaminants from groundwater to air. The air emission rates from this system are expected to be well below the levels requiring air pollution controls.

Granular activated carbon (GAC) will then be used to remove dissolved contaminants from the extracted groundwater by adsorption. The GAC system will consist of one or more vessels filled with carbon connected in series and/or parallel. Following treatment, the groundwater will be discharged to the municipal sewer system.

3. Cover System
A site cover will be required to allow for commercial use of the site in areas where the upper one foot 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 one foot 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.

4. 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 commercial 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 County DOH; and
- require 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 groundwater extraction and treatment discussed in Paragraph 2 above; and the soil cover discussed in Paragraph 3 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 use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department;
- monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

c. an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

- procedures for operating and maintaining the remedy;
- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

6. Treatment Remedy Shutdown

The operation of the components of the remedy will continue until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible.

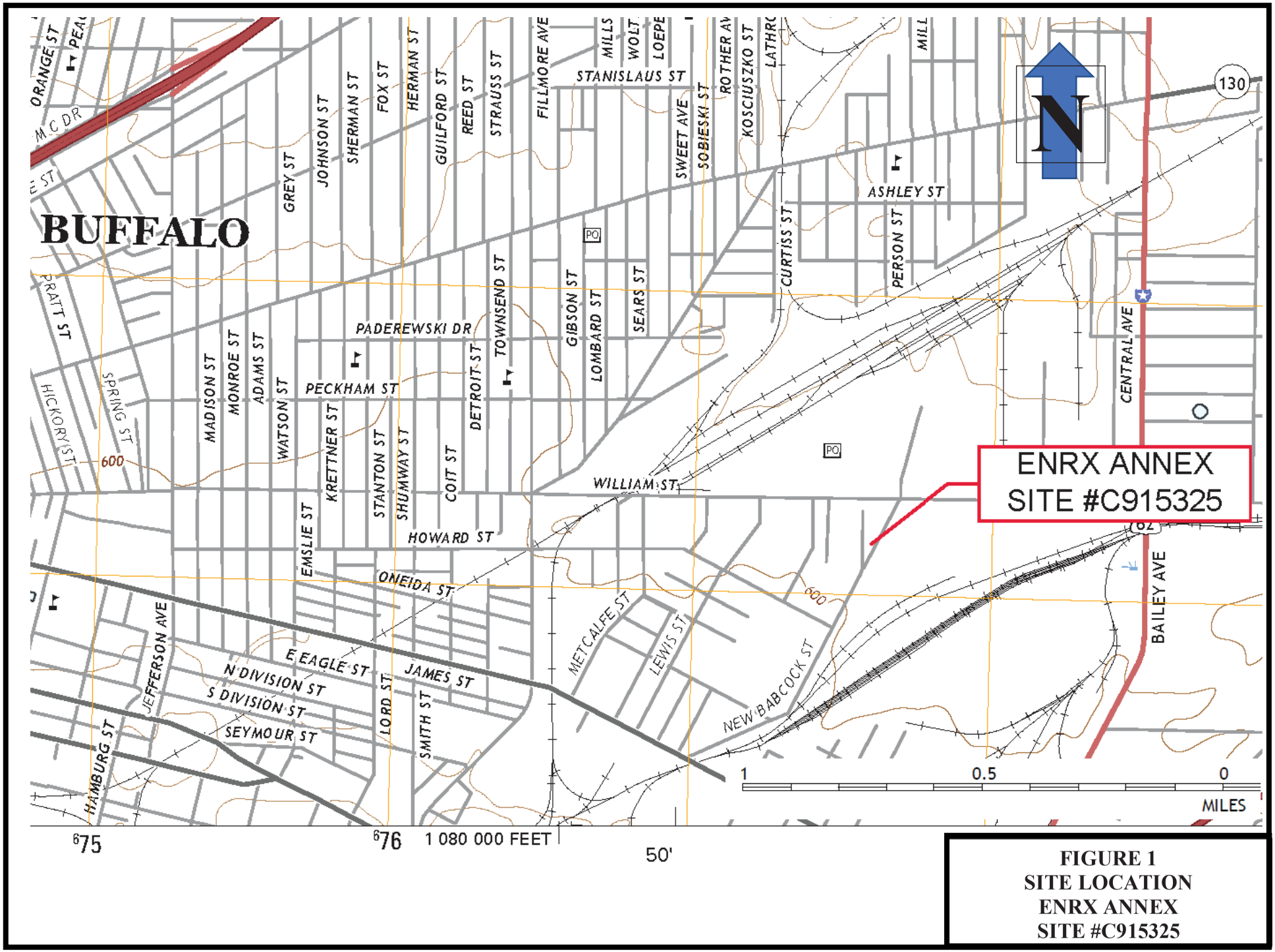

FIGURE 1
SITE LOCATION
ENRX ANNEX
SITE #C915325

Gate

HANNAH (40' WIDE) STREET

SW- 2

SW- 1

HANNAH STREET

MONITORING WELL "BR-12"

MONITORING WELL "BR-11"

MONITORING WELL "BR-10"

MONITORING WELL "BR-3"

MONITORING WELL "BR-4"

MONITORING WELL "BR-15"

MONITORING WELL "BR-1"

MONITORING WELL "BR-13"

MONITORING WELL "BR-14"

MONITORING WELL "BR-2"

MONITORING WELL "BR-9"

MONITORING WELL "BR-6"

MONITORING WELL "BR-8"

MONITORING WELL "BR-7"

MONITORING WELL "BR-5"

SB-10 SB-8 SB-6 SB-9 SB-7 SB-5 SB-4 SB-3 SB-1 SB-2

STP-4 STP-6 STP-5 STP-2 STP-1 STP-3

SV-4 SV-3 SV-1 SV-5 SV-2

STP-4 Exploration

DIAMOND HURWITZ SCRAP, LLC
REPUTED OWNER
LIBER 11201 OF DEEDS AT PAGE 5771

GWP&T System Trailer

CONCRETE BLOCK BUILDING
NO. 766
DIAMOND HURWITZ SCRAP, LLC
REPUTED OWNER
LIBER 11183 OF DEEDS AT PAGE 5771
0.84± ACRES

CONCRETE BARRIERS

CONC. WALL

218.86'

245.84'

111.84'

NEW BABCOCK STREET (66' WIDE)

NEW BABCOCK STREET

FENCE

ENRX Annex
BCP #C915325
Site Boundary

ENRX BCP
#C915150
Site Boundary

Gate

LEGEND	
□	GAS METER
⊠	LIGHT STANDARD
△	ANCHOR
⌀	UTILITY POLE
—OHW—	OVERHEAD WIRES
—UGE—	UNDERGROUND ELECTRIC
●	BOLLARD
◉	MONITORING WELL
⊸	SIGN
—×—	FENCE LINE
●	FOUND/SET REBAR/PIN
●	FOUND/SET PIN & CAP
○	FOUND PIPE
▲	FOUND MONUMENT
×	BENCHMARK

Supplemental Test Pit Location

Exploratory Test Pit Excavation

Soil Boring Location

Soil Vapor Probe Location

30' 0' 30' 60'

GRAPHIC SCALE 9/16" = 30'

AFI ENVIRONMENTAL

FIGURE 2
SITE PLAN
ENRX ANNEX
SITE #C915325

Gate

Contingent location of proposed piping trench*

Location of Existing Framework for GWP&T System

Contingent Proposed GWP&T System Location*

SW- 2

SW-1

HANNAH STREET

NEW BABCOCK STREET

MONITORING WELL "BR-15"

MONITORING WELL "BR-12"

MONITORING WELL "BR-11"

MONITORING WELL "BR-10"

MONITORING WELL "BR-13"

MONITORING WELL "BR-1"

MONITORING WELL "BR-3"

MONITORING WELL "BR-4"

MONITORING WELL "BR-14"

MONITORING WELL "BR-2"

MONITORING WELL "BR-9"

GWP&T System Trailer

CONCRETE BLOCK BUILDING
NO. 766
DIAMOND HURWITZ SCRAP, LLC
REPUTED OWNER
LIBER 11183 OF DEEDS AT PAGE 5771
0.84± ACRES

MONITORING WELL "BR-6"

MONITORING WELL "BR-7"

MONITORING WELL "BR-8"

MONITORING WELL "BR-5"

CONCRETE BARRIERS

ENRX Annex BCP #C915325 Site Boundary

Proposed area of sub-cap excavation and Asphalt cap installation

Gate

ENRX BCP #C915150 Site Boundary

LEGEND	
□	GAS METER
☼	LIGHT STANDARD
△	ANCHOR
⌀	UTILITY POLE
—OHW—	OVERHEAD WIRES
—UGE—	UNDERGROUND ELECTRIC
●	BOLLARD
◉	MONITORING WELL
▪	SIGN
—×—	FENCE LINE
●	FOUND/SET REBAR/PIN
●	FOUND/SET PIN & CAP
○	FOUND PIPE
▲	FOUND MONUMENT
×	BENCHMARK

*The proposed remedy is to use BR-13 as an extraction point, with its own GWP&T system, only if the ENRX system becomes unavailable in the future.

30' 0' 30' 60'

GRAPHIC SCALE 9/16" = 30'

AFI ENVIRONMENTAL

FIGURE 3
SITE REMEDY
ENRX ANNEX
SITE #C915325