

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau E
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December 15, 2015

Mr. Steve B. Olgin
Diamond Hurwitz Scrap, LLC
267 Marilla Street
Buffalo, New York 14220
steveo@libertyiron.com

RE: ENRX, Inc. - Voelker Analysis
Site ID No. C915150, Buffalo, Erie County
Remedial Work Plan & Decision Document

Dear Mr. Olgin:

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health (NYSDOH) have reviewed the Remedial Work Plan (RWP) a.k.a. the Revised Supplemental Remedial Investigative Report/Alternatives Analysis Report/Remedial Action Plan and the Alternatives Analysis Report/Remedial Action Plan Addendum for the ENRX, Inc. - Voelker Analysis site dated May 2015 and October 2015 respectively and prepared by AFI Environmental on behalf of Diamond Hurwitz Scrap, LLC. The RWP is hereby approved. Please ensure that a copy of the approved RWP is placed in the document repository. The draft plan should be removed.

Enclosed is a copy of the Department's Decision Document for the site. The remedy is to be implemented in accordance with this Decision Document. Please ensure that a copy of the Decision Document is placed in the document repository.

Please contact the Department's Project Manager, David Locey, at (716) 851-7220 or david.locey@dec.ny.gov at your earliest convenience to discuss next steps.

Sincerely,



Michael J. Cruden, P.E.
Director
Remedial Bureau E
Division of Environmental Remediation

Enclosure

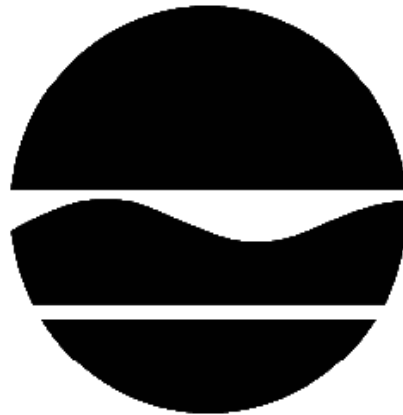
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NEW YORK
STATE OF
OPPORTUNITY
Department of
Environmental
Conservation

DECISION DOCUMENT

ENRX, Inc. - Voelker Analysis
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915150
December 2015



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

DECLARATION STATEMENT - DECISION DOCUMENT

ENRX, Inc. - Voelker Analysis
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915150
December 2015

Statement of Purpose and Basis

This document presents the remedy for the ENRX, Inc. - Voelker Analysis 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) Parts 373 (RCRA) and 375 (BCP).

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the ENRX, Inc. - Voelker Analysis 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; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Groundwater Extraction and Treatment

Groundwater extraction and treatment will be implemented to treat volatile organic compounds

(VOCs), semi-volatile organic compounds (SVOCs) and polychlorinated biphenyls (PCBs) in groundwater and to ensure contaminated groundwater does not migrate off-site. 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 well within the plume area. The system will also extract LNAPL, and separate it from the groundwater.

Air stripping will be implemented ex-situ to remove volatile contaminants from extracted groundwater. The groundwater will be contacted with an air stream to volatilize contaminants from groundwater to air. Following treatment, the groundwater will be discharged to the sanitary sewer.

3. Vapor Mitigation

The existing, and any new, on-site buildings will be required to have a sub-slab depressurization system, or a similar engineered system, to mitigate the migration of vapors into the building from groundwater.

4. Cover System

A site cover will be required to allow for commercial use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil 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 as set forth in 6 NYCRR Part 375-6.7(d).

5. Institutional Control

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

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

6. 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 5 above.

Engineering Controls: the groundwater extraction and treatment discussed in Paragraph 2 above, the sub-slab depressurization system discussed in Paragraph 3 above and the soil cover discussed in Paragraph 4 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;
- 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; and
- a schedule of monitoring and frequency of submittals to the Department.

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.

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.

Michael J Cruden

Digitally signed by Michael J Cruden
DN: cn=Michael J Cruden, o=DER, ou=RBE,
email=mjcruden@gw.dec.state.ny.us, c=US
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Date

Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

ENRX, Inc. - Voelker Analysis
Buffalo, Erie County
Site No. C915150
December 2015

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.

This site is also subject to corrective action pursuant to the New York State Hazardous Waste Management Program (also known as the RCRA Program) for releases of hazardous waste and hazardous constituents to the environment. The site is also currently categorized as a class 3 site in the New York State Inactive Hazardous Waste Disposal Site Remedial Program (State Superfund). The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Parts 373 (RCRA), it will serve as a RCRA Statement of Basis relative to corrective action. 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, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at <http://www.dec.ny.gov/chemical/61092.html>

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: The site is located at 766 New Babcock Street, near Williams Street, in the eastern portion of the City of Buffalo, Erie County.

Site Features: The site is bounded by New Babcock Street on the east, Hannah Street on the west, a gravel parking lot on the south and commercial property to the north. The main site features include a now vacant single-story warehouse/maintenance building with an attached office, gravel parking lot, equipment storage area and driveways.

Current Zoning and Land Use: The site is zoned for industrial use. The surrounding area is developed with a recycling facility to the west, NFTA bus garages to the southeast, vacant lots to the east, and industrial buildings and commercial facilities to the north, along Williams Street. The nearest residential properties are approx. 1,300 ft. to the southwest of the site.

Past Use of the Site: Voelker Analysis was a small, permitted hazardous waste facility for the processing and recovery of chlorinated organic solvents. It was housed in a multi-story wood frame structure and adjoining one-story brick and concrete block building. The facility handled waste solvents such as methylene chloride, trichloroethylene, tetrachloroethene and 1-1-1-trichloroethane. The facility was acquired by ENRX in August of 1987, which moved the solvent recovery operations from the wood frame building into the adjoining brick structure. In 1989, the facility's RCRA hazardous waste recovery permit was revoked and the facility was abandoned. Between 1990 and 1992, the USEPA removed nearly 500 drums of chlorinated solvent wastes that had been left in the facility. Between 1998 and 1999, the older wood frame portion of the facility was demolished by a subsequent owner. The site is currently vacant but was used for storage and office space.

Site Geology and Hydrogeology: Fill material covers the entire site. It consists of sand, gravel, and silty clay mixed with varying amounts of brick, concrete and wood fragments, plastic, glass, ash and cinders. Limestone bedrock was found at a depth of 8 to 10 feet, covered with one foot or less of native silt and clay. Groundwater was found at or near the interface of overburden soil and bedrock, and flows in a northerly direction.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

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

A comparison of the results of the 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

6 NYCRR Part 373 Hazardous Waste Management Facilities addresses RCRA Corrective Action. This requires owners and/or operators of hazardous waste treatment, storage and disposal facilities to investigate and, when appropriate, remediate releases of hazardous wastes and/or constituents to the environment. ENRX was a successor to Voelker Analysis which held the original permit for the facility. The facility did not complete inventory removal, nor explore the potential migration of waste to the environment. The facility permit was revoked in 1989. ENRX was found to be financially insolvent at the time EPA conducted the removal action. Diamond Hurwitz Scrap, LLC applied to the Brownfield Cleanup Program and, under 6 NYCRR Part 375 (Environmental Remediation Programs), intends to fulfill the RCRA Program obligations for this site as set forth in this Decision Document.

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Volunteer does not have an obligation to address off-site contamination. The Department has determined that this site poses a significant threat to human health and the environment and contamination may be migrating off-site; accordingly, enforcement actions are necessary. The Department will seek to identify any parties (other than the Volunteer) known or suspected to be responsible for contamination at or emanating from the site, referred to as Potentially Responsible Parties (PRPs). The Department will bring an enforcement action against the PRPs. If an enforcement action cannot be brought, or does not result in the initiation of a remedial program by any PRPs, the Department will evaluate the off-site contamination for action under the State Superfund. The PRPs are subject to legal actions by the State for recovery of all response costs the State incurs or has incurred.

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
- indoor air
- sub-slab 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. 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 contaminant(s) of concern identified at this site is/are:

1,1,1--trichloroethane	tetrachloroethene (PCE)
1,1-dichloroethane	trichloroethene (TCE)
1,1 dichloroethene	vinyl chloride
chloroethane	lead
cis-1,2-dichloroethene	benzo(a)anthracene
1,1,2-trichloro-1,2,2-triflouroethane	benzo(a)pyrene

benzo(b)fluoranthene
dibenz[a,h]anthracene
arsenic
chrysene
PCB aroclor 1016

PCB aroclor 1248
fluoranthene
fluorene
naphthalene
pyrene

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- 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.

The following IRMs have been completed between 2011 and 2013 at this site based on conditions observed during the RI.

A large diameter sump, approximately three feet deep, located at the base of a loading dock in the garage area of the existing building, was cleaned of debris and later filled with clean stone and paved. A small floor drain in the garage area was also cleaned and sealed. The cleaning and closure of the sump and floor drain are documented in the August 2011 Limited Phase II Site Assessment and the June 2013 RI report

Two large underground storage tanks (USTs), (each approximately 8000-gallon capacity) were removed during the completion of RI test pits. The two contained a total of approximately 10,000 gallons of wastewater, with a floating, or "light", layer of non-aqueous phase liquid (LNAPL). The liquid contained in the tanks was disposed off-site. The USTs were located in concrete vaults, which were power washed before being backfilled with clean clay and crushed stone meeting the backfill requirements of Part 375-6.7(d) for commercial use. The removal of the USTs is documented in the June 2013 RI report.

A total of 1,235 tons of soil/fill and construction and demolition debris, unsuitable for future site redevelopment, was disposed off-site during these IRM activities. The excavations were backfilled with clean material meeting the backfill requirements of Part 375-6.7(d) for commercial use.

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 - Post-IRM Remediation

On-site:

Groundwater-

Based upon investigations conducted to date, the primary contaminants of concern in groundwater are chlorinated volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and to a lesser extent, polychlorinated biphenyls (PCBs).

Groundwater samples were tested for VOCs, SVOCs, PCBs and metals. The VOCs trichloroethene (TCE), tetrachloroethene (also known as perchloroethene or PCE) and their associated degradation products, were found in all but one of the monitoring wells on-site, at concentrations exceeding groundwater standards (typically 1 to 5 ppb). The highest concentrations of VOCs were found in a monitoring well BR-1, located in the southwest corner of the site, where the total concentration of VOCs was 14,016 ppb. At the northern edge or downgradient end of the site, total VOC concentrations ranged from 43 to 631 ppb.

One or more SVOCs, in particular the subset known as polycyclic aromatic hydrocarbons (PAHs), were detected at concentrations exceeding groundwater standards in all but two of nine monitoring wells on site. The PAHs included: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and indeno(123-cd)pyrene. The groundwater standards for the PAHs range from non-detect; to 0.002 ppb. The total concentrations of these PAHs ranged from 0.03 to 15.2 ppb, with the highest concentrations occurring in the southwest portion of the site at monitoring well BR-2.

PCBs were detected in BR-2 at 8 ppb. Groundwater sampled from the off-site well BR-11, located a short distance from the southwest corner of the site, contained 1.37 total PCBs; it was the only other groundwater sample to contain PCBs at concentrations exceeding the standard.

A floating layer of light non-aqueous phase liquid (LNAPL), approximately <0.01 ft and 0.1 ft thick, was found in the groundwater at monitoring wells BR-11 and BR-2 respectively, during the course of groundwater recovery pump tests.

Lead was found at concentrations exceeding its 25 ppb groundwater standard at just two monitoring wells, BR-3 and -4 located along the western site boundary, at 76.25 and 35.41 ppb respectively. Antimony exceeded its 3 ppb groundwater standard in only the downgradient monitoring well, BR-5, at concentrations of 14 and 18.78 ppb.

Soil-

SVOCs and, to a lesser extent, select metals are the primary contaminants of concern in the soil/fill.

Soil/fill samples were analyzed for VOCs, SVOCs, metals and PCBs. VOCs were generally either not detected or found at concentrations below the unrestricted use SCOs. SVOCs were detected across the entire site but only the PAHs were found at concentrations exceeding the commercial use and protection of groundwater SCOs. The total concentrations of PAHs ranged from 15.2 to 1,187 ppm, with the higher concentrations in the southern half of the site, in the vicinity of the removed USTs.

Arsenic and copper exceeded the respective commercial SCOs of 16 and 270 ppm; in four samples the arsenic concentrations ranged from 16 to 22 ppm, copper was found in just two samples at concentrations of 1,220 and 1,600 ppm.

PCBs were generally either not detected or found at concentrations below the unrestricted SCO (0.1 ppm). The one exception was the 3.3 ppm found at a depth of 4 feet from test pit TP-6, located between monitoring wells BR-2 and -9 in the southern half of the site. The commercial SCO for PCBs is 1 ppm, the SCO for the protection of groundwater is 0.1 ppm.

Sub-slab Soil Vapor and Indoor Air-

Soil vapor beneath the on-site building was found to be impacted by site-related contamination. The concentration of trichloroethene (TCE) in the soil vapor beneath the garage/warehouse portion of the on-site building was 1,200 micrograms/cubic meter. Tetrachloroethene (PCE) and TCE-related degradation products were either not detected or found in the soil vapor and indoor air at concentrations which do not warrant remedial action. Compounds which include chloroform, tetrahydrofuran, m,p-xylenes, styrene and 1,2 dichlorobenzene were detected in the office space indoor air at concentrations above background ranges.

Off-site:

Groundwater-

Groundwater samples were tested for VOCs, SVOCs, and PCBs. VOCs, including TCE, PCE and their degradation products, were detected at concentrations exceeding groundwater standards in monitoring wells installed upgradient of the site. The highest concentrations were found in monitoring well BR-11, located approximately 15 feet west of and cross-gradient of the site, in the middle of Hannah Street. The total VOC concentration in BR-11 was 13,976 ppb. The concentrations found in wells directly south (upgradient) of the site were significantly lower; cis 1,2 dichloroethene, trans 1,2 dichloroethene and vinyl chloride were the only VOCs detected at concentrations exceeding groundwater standards. Total VOC concentrations in these southern, off-site wells ranged from 6.63 to 252.4 ppb.

SVOCs and PCBs were either not detected or found at concentrations below their groundwater standards.

Further evaluation of the groundwater off-site is needed to determine if there are other contaminant sources, up-gradient of the site, and to determine the extent of impact down-gradient of the site

Soils-

Soil samples were tested for VOCs, SVOCs, PCBs and metals. None of the samples exceeded the unrestricted use SCOs for VOCs, and SVOCs and PCBs were generally either not detected or found at concentrations below unrestricted SCOs. Metals were generally found at concentrations below their respective unrestricted use SCOs. The only exception was arsenic, detected in one subsurface soil sample at 13 ppm, which is the unrestricted use SCO.

Sewer sediment and wastewater-

Samples of sediment collected from the sanitary sewer beneath Hannah Street were analyzed for VOCs, SVOCs, PCBs and metals. The sediment was not significantly impacted by site contaminants of concern.

Wastewater samples were collected from the same upstream and downstream sewer locations as the sediments, and analyzed for VOCs and metals. The total concentrations of VOCs found in the wastewater were 14.8 ppb and 617.3 ppb in the upstream and downstream locations respectively. The downstream sample included cis 1,2 dichloroethene (270 ppb), 1,1,1 trichloroethane (180 ppb), TCE (50 ppb) and vinyl chloride (59 ppb). The increased concentrations in the downstream samples are most likely attributable to on-site chlorinated solvent contamination. Metals contamination in the wastewater was not attributable to site-related contaminants.

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*.

Since some contaminated soils remain at the site below pavement or clean backfill, people will not come in contact with contaminated soils unless they dig below the surface materials. People are not coming into contact with 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. A sub-slab depressurization system (system that ventilates/removes the air beneath the building) has been installed in the on-site building to prevent the indoor air quality from being affected by the contamination in soil vapor beneath the building. The potential exists for soil vapor intrusion in off-site structures.

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

The selected remedy is referred to as the Groundwater extraction and treatment, site cover and SVI mitigation 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; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Groundwater Extraction and Treatment

Groundwater extraction and treatment will be implemented to treat VOCs, SVOCs and PCBs in groundwater and to ensure contaminated groundwater does not migrate off-site. 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 well within the plume area. The system will also extract LNAPL, and separate it from the groundwater.

Air stripping will be implemented ex-situ to remove volatile contaminants from extracted groundwater. The groundwater will be contacted with an air stream to volatilize contaminants from groundwater to air. Following treatment, the groundwater will be discharged to the sanitary sewer.

3. Vapor Mitigation

The existing, and any new, on-site buildings will be required to have a sub-slab depressurization system, or a similar engineered system, to mitigate the migration of vapors into the building from groundwater.

4. Cover System

A site cover will be required to allow for commercial use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil 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 as set forth in 6 NYCRR Part 375-6.7(d).

5. Institutional Control

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

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

6. 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 5 above.

Engineering Controls: the groundwater extraction and treatment discussed in Paragraph 2 above, the sub-slab depressurization system discussed in Paragraph 3 above and the soil cover discussed in Paragraph 4 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;
- 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; and
- a schedule of monitoring and frequency of submittals to the Department.

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.

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

U.S. POST OFFICE

Williams Street

**ENRX INC-VOELKER
ANALYSIS
BCP SITE #C915150**

**HANNAH ST
RECYCLING**

Hannah St

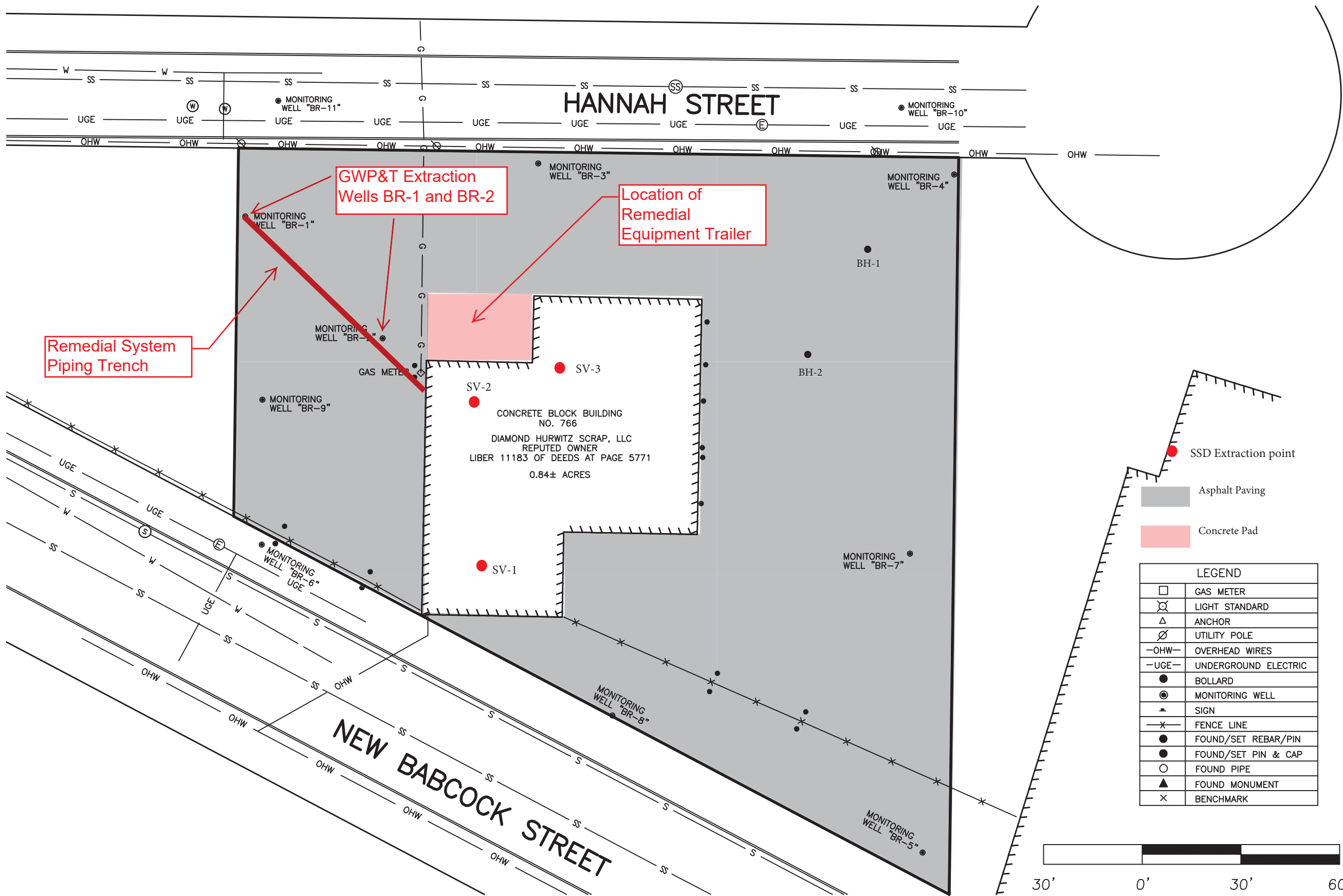
New Babcock St

NFTA GARAGE



scale
APPROX. 300 FT

FIGURE 1



GWP&T Extraction Wells BR-1 and BR-2

Location of Remedial Equipment Trailer

Remedial System Piping Trench

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

SSD Extraction point
 Asphalt Paving
 Concrete Pad

LEGEND	
□	GAS METER
⊗	LIGHT STANDARD
△	ANCHOR
⊙	UTILITY POLE
-OHW-	OVERHEAD WIRES
-UGE-	UNDERGROUND ELECTRIC
●	BOLLARD
⊙	MONITORING WELL
▲	SIGN
-x-	FENCE LINE
●	FOUND/SET REBAR/PIN
○	FOUND/SET PIN & CAP
○	FOUND PIPE
▲	FOUND MONUMENT
x	BENCHMARK



GRAPHIC SCALE 1" = 30'



Engineering Control
 Location Map

FORMER ENRX, INC. - VOELKER ANALYSIS SITE
 766 NEW BABCOCK STREET, BUFFALO, NY 14206



DATE
 09/29/15

SCALE
 1"=30'

FIGURE 2

PROJECT #
 A12B-ENRX BCP

REVISION #
 Rev1 spl