DECISION DOCUMENT

441 Ohio Street Site
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915285
July 2016

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

DECLARATION STATEMENT - DECISION DOCUMENT

441 Ohio Street Site
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915285
July 2016

Statement of Purpose and Basis

This document presents the remedy for the 441 Ohio Street 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 441 Ohio Street 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, maintenance, and monitoring of the remediation 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 gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. EXCAVATION
Excavation and off-site disposal of contaminant source areas, including excavation and off-site

disposal of shallow PCB impacted soil/fill exceeding RRSCOs (see Figure 2a). Under this approach, approximately 300 cubic yards of impacted soil/fill would require excavation and off-site disposal. Specifically, PCB-impacted soil/fill at SB-102 is planned for excavation and off-site disposal in a permitted landfill. This action will include removal and disposal of remnant railroad ties. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site. On-site soil which does not exceed the above excavation criteria may be used below the cover system described in remedy element 3 to backfill the excavation to the extent that a sufficient volume of on-site soil is available and establish the designed subgrades at the site.

3. SITE COVER

A site cover will be required to allow for restricted residential use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil 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). A conceptual cover system layout is provided on Figure 2b.

4. RETAINING WALL AND RIVER EMBANKMENT

The site remediation may involve reuse of the existing former building foundation wall along the river as an integral part of the final remedy to structurally support and separate remaining contaminated material from the Buffalo River. Reuse of the former foundation wall will require a structural/geotechnical assessment by an experienced geotechnical/structural engineer and be repaired and stabilized, as necessary, in accordance with recommendations presented in the assessment and as approved by the Department. Other alternative measures, such as removal of the wall, sloping back the embankment, and stabilizing the embankment with rock armor and soil cover may be considered. Engineering controls used to stabilize the wall and/or retain contaminated material must be installed within the limits of the BCP site and covered under the site's institutional controls discussed in Paragraph 5 below.

For the segment of shoreline consisting of a concrete rubble armored embankment, a structural/geotechnical assessment by an experienced geotechnical/structural engineer shall evaluate on-site engineering controls necessary to structurally support and separate remaining contaminated material from the Buffalo River. Engineering controls shall be installed according to recommendations presented in the assessment and as approved by the Department. Engineering controls used to stabilize and retain remaining contaminated material, such as reshaping the embankment and stabilizing the embankment with rock armor and soil cover, must be installed within the limits of the BCP site and covered under the site's institutional controls discussed in Paragraph 5 below.

5. 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 imposition of a site cover (as a

contingency if soil greater than 2 feet but less than 15 feet deep does not meet the restricted residential SCOs), an environmental easement, and site management plan as described below.

- Environmental Easement
  Imposition of an environmental easement for the controlled property that:
  - o 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);
  - o allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
  - o restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYS or County DOH; and
  - o requires compliance with the Department approved Site Management Plan.

- Site Management Plan
  A Site Management Plan which includes the following:
  - o 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: (ICs) discussed in Paragraph 5.
  Engineering Controls: The site cover discussed in Paragraph 3 and 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 control Paragraphs 3 and 4;
    - maintaining site access controls and Department notification; and
    - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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.

Date	Michael Cruden, Director Remedial Bureau E

DECISION DOCUMENT

441 Ohio Street Site
Buffalo, Erie County
Site No. C915285
July 2016

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 & Erie County Public Library
Attn: Mary Jean Jakubowski
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 in an urban area with an official street address at 9 South Street near the intersection of Ohio Street in the City of Buffalo. A site location map is attached as Figure 1.

Site Features: The site is a 1.8-acre portion of a larger 2.25 acre parcel (see Figure 1). The topography of the site and vicinity is generally flat with little topographic elevation change. The land surface is only several feet above the water level of the adjoining Buffalo River and is situated within the 100 year floodplain of the river. The non-BCP portion of the 2.25 acre parcel is considered lands under water of the Buffalo River. This area may have been previously dredged to allow docking of commercial freight ships and barges.

Previous improvements on the site consisted of a 500 x 100 foot 2-story building that occupied most of the site. The building was in an extremely dilapidated condition and had been condemned by the City of Buffalo Building Department. The building structure and most of the foundation was demolished in Spring 2015. A stone foundation wall abutting the Buffalo River was retained to be used as a retaining wall and historic riverfront architectural remnant desired by the local preservation community. The balance of the site is mostly paved or covered with gravel with some minor vegetated strip areas. A rail spur leads to the northern side of the site. Multiple rails lines previously lead to the interior of the former building.

Current Zoning and Land Use: The site is located in the M2, General Industrial District. The site is bounded by South Street to the north, with the NYSDEC recreational boat launch beyond; commercial and recreational property to the south (Bison City Rod and Gun Club), a vacant lot and Ohio Street to the east, and the Buffalo River along the western property line.

Past Use of the Site: The site has been used for various freight and warehousing operations from as early as 1889. Operations included intermodal (lake freight, rail and trucking) material handling and shipping, equipment use and maintenance, paper recycling and bundling equipment. There was some nominal storage of paints, solvents, thinners, greases, hydraulic oils, and lubricants commonly used by the former commercial recycle paper handling operations inside the former building.

Site Geology and Hydrogeology: The site is located within the Erie-Ontario lake plain physiographic province, which is typified by little topographic relief and gentle slope toward Lake Erie. Surface soils at the site consist of a layer of fill, varying in thickness from 2 to 4 feet, containing foundry sand, crushed slag, mixed soil and hard demolition debris. Below the fill layer exists a layer of reworked soil consisting of native looking soil mix containing sand, silt and clayey soils and varies in thickness from 2 to 7 feet. Native soil below consists of a lean brown clay with

varying amounts of silt, sand and gravel. A sandy soil formation exists below this clay soil layer along the northern half of the site. The native soils are encountered at depths varying from 4 to 10 feet below the surface and extend to bedrock at depths varying from 25 to 30 feet below ground surface. Bedrock consists of the Onondaga limestone formation.

Groundwater depth is approximately 10 to 11 feet below ground surface. Based on area topography and proximity to the Buffalo River, the groundwater gradient is relatively flat, and flows in a westerly direction toward the river.

SECTION 4: LAND USE AND PHYSICAL SETTING

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

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

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 contaminant(s) of concern identified at this site is/are:

benzo(a)anthracene	chrysene
benzo(a)pyrene	indeno(1,2,3-CD)pyrene
benzo(b)fluoranthene	benzo[k]fluoranthene
arsenic	barium
lead	mercury

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.

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.

Contamination at the site is limited, and is found mostly in surface and shallow soil depths. The following is a summary of the historic investigations and RI findings.

Surface-Near Surface Soil/Fill:
Several polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and metals were identified above restricted residential SCOs (RRSCOs) and in some instances, above commercial SCOs (CSCOs). Specific contaminants exceeding SCOs are noted below. No volatile organic compounds (VOCs), pesticides or herbicides were detected at concentrations above unrestricted soil cleanup objectives (USCOs).

The majority of semi-volatile organic compounds (SVOCs) were reported as non-detect or trace (estimated) concentrations. Certain SVOCs, primarily polycyclic aromatic hydrocarbons (PAHs) including benzo(a)anthracene (ranging from 1.3 to 7.7 parts per million (ppm)), benzo(a)pyrene (ranging from 1.3 to 6.7 ppm) and benzo(b)flouranthrene (ranging from 1.3 to 9.2 ppm), were detected above their respective RRSCOs (1ppm for benzo(a)anthracene; 1 ppm for benzo(a)pyrene and 1 ppm for benzo(b)flouranthrene) at three sampling locations. Contaminant levels for several of these PAHs also exceeded their respective CSCOs (5.6 ppm for benzo(a)anthracene; 1 ppm for benzo(a)pyrene; and 5.6 ppm for benzo(b)flouranthrene) at these three sampling locations..

The majority of metals detected at the site were above USCOs but below Residential SCOs (RSCOs). Arsenic was detected above the RRSCO/CSCO (both 16 ppm) at three locations ranging from 20.1 to 30.1 ppm. Barium (751 ppm) and copper (315 ppm) were detected above the RRSCOs/CSCOs (both 400 ppm and 270 ppm, respectively) at one sampling location each.

Total PCBs of 6.1 ppm was detected above the RRSCO/CSCO (both 1 ppm) at one location. No pesticides or herbicides were detected above USCOs.

Subsurface Soil/Fill:
No VOCs, SVOCs, PCBs, pesticides or herbicides were detected above USCOs from the subsurface soils. The majority of metals detected above USCOs were below respective RSCOs. Several metals elevated above USCOs, RRSCOs, and CSCOs, respectively, were detected, primarily associated with a reworked soil/fill area from the 2-8 feet horizon below ground surface. Barium (583 ppm) was detected above its RRSCO (350 ppm) and CSCO (400 ppm), and lead (451 ppm) was detected above its RRSCO (400 ppm) in one sampling location. Mercury (2.2 ppm) was detected above its RRSCO (0.81 ppm) in one sampling location.

In general, soil contamination was primarily in the strip of land adjacent to the east side of the former building which contains the remains of a former rail siding, and in the yard area adjacent to the south side of the former building.

Groundwater:
No VOCs or PCBs were detected above groundwater quality standards (GWQS).

PAH, benzo(b)flouranthene, was detected above its GWQS (0.002 micro-gram/liter or parts per billion (ppb)) in three on-site monitoring wells ranging from 0.9 to 1.3 ppb.

Dissolved metals detected above GWQS consist of magnesium (35,000 ppb), manganese (300 ppb) and sodium (20,000 ppb). Elevated levels above the GWQSs for these naturally occurring elements ranged from 35,000 to 59,400 ppb for magnesium in three wells, 940 to 5,700 ppb for manganese in all wells, and 32,400 to 1,140,000 ppb for sodium in all wells.

Pesticides, alpha, beta and delta BHC, were detected above their respective GWQS (0.01 ppb for each compound), and ranged from 0.02 to 0.036 ppb for alpha-BHC in four on-site monitoring wells, 0.17 ppb for beta-BHC in one monitoring well, and 0.012 ppb for delta-BHC in one monitoring well .

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.*

Some building foundations and pavement exists. However, persons who dig below the ground surface may come into contact with contaminants in the subsurface soil. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not contaminated by the site.

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.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

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

SECTION 7: 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 Track 4 Restricted Residential Use Cleanup remedy.

The elements of the selected remedy, as shown in Figures 2a and 2b, are as follows:

1. REMEDIAL DESIGN

A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remediation 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 gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and

- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. EXCAVATION

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

- Excavation and off-site disposal of shallow PCB impacted soil/fill exceeding RRSCOs at SB-102 (see Figure 2a).

Under this approach approximately 300 cubic yards of impacted soil/fill would require excavation and off-site disposal. Specifically, PCB-impacted soil/fill at SB-102 is planned for excavation and off-site disposal in a permitted landfill. This action will include removal and disposal of remnant railroad ties. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site. On-site soil which does not exceed the above excavation criteria may be used below the cover system described in remedy element 3 to backfill the excavation to the extent that a sufficient volume of on-site soil is available and establish the design subgrades at the site.

3. SITE COVER

A site cover will be required to allow for restricted residential use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of two feet of soil 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). A conceptual cover system layout is provided on Figure 2b.

4. RETAINING WALL AND RIVER EMBANKMENT

The site remediation will involve reuse of the existing former building foundation wall along the river as an integral part of the final remedy to structurally support and separate remaining contaminated material from the Buffalo River. Reuse of the former foundation wall will require a structural/geotechnical assessment by an experienced geotechnical/structural engineer and be repaired and stabilized, as necessary, in accordance with recommendations presented in the assessment and as approved by the Department. Other alternative measures, such as removal of the wall, sloping back the embankment, and stabilizing the embankment with rock armor and soil cover may be considered. Engineering controls used to stabilize the wall and/or retain contaminated material must be installed within the limits of the BCP site and covered under the site's institutional controls discussed in Paragraph 5 below.

For the segment of shoreline consisting of a concrete rubble armored embankment, a structural/geotechnical assessment by an experienced geotechnical/structural engineer shall evaluate on-site engineering controls necessary to structurally support and separate remaining contaminated material from the Buffalo River. Engineering controls shall be installed according to recommendations presented in the assessment and as approved by the Department. Engineering controls used to stabilize and retain remaining contaminated material, such as reshaping the embankment, and stabilizing the embankment with rock armor and soil cover, must be installed within the limits of the BCP site and covered under the site's institutional controls discussed in

Paragraph 5 below.

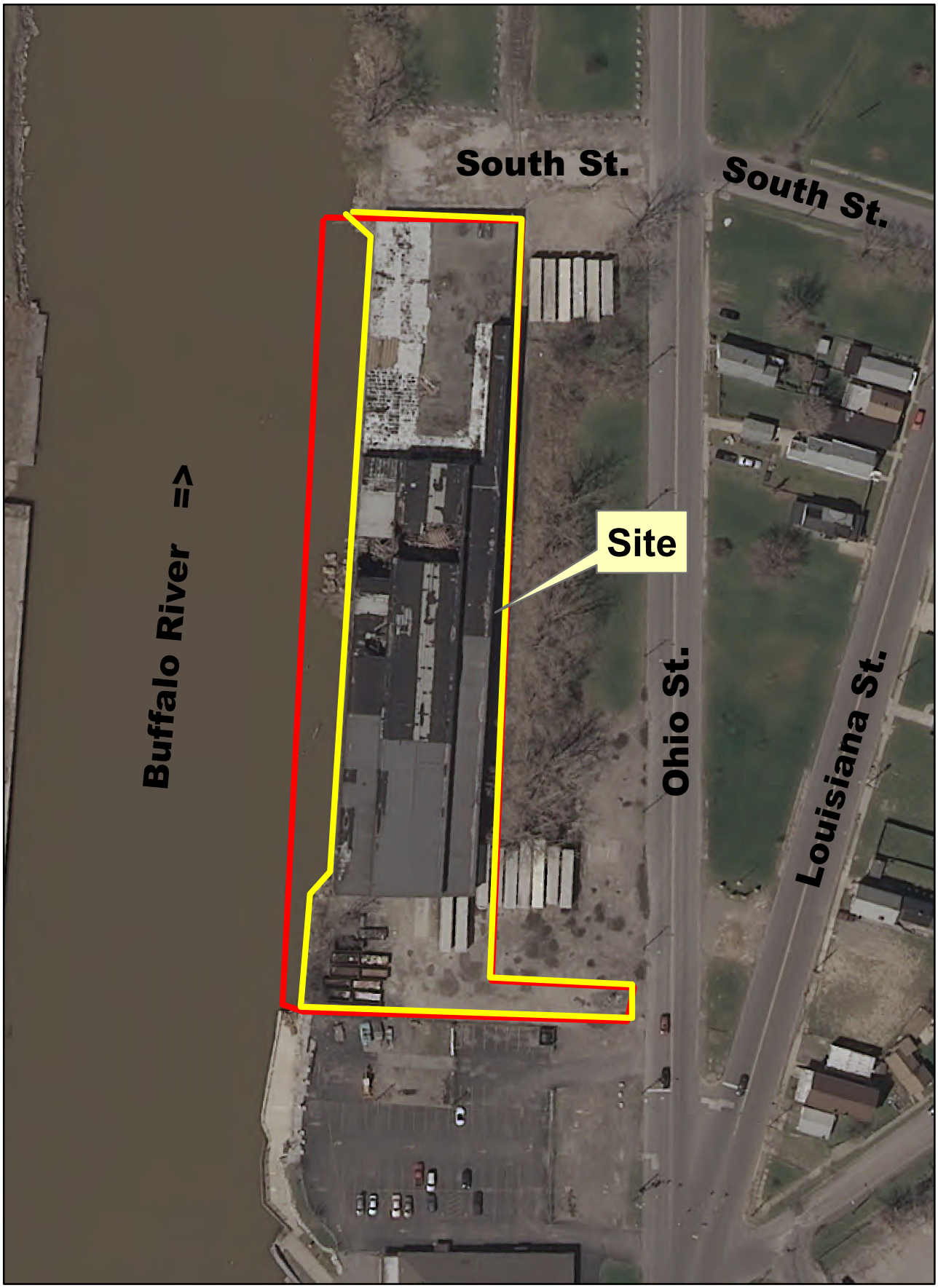
5. INSTITUTIONAL CONTROLS

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 imposition of a site cover, an environmental easement, and site management plan as described below.

- Environmental Easement
  Imposition of an environmental easement for the controlled property that:
  - requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
  - allows the use and development of the controlled property for restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
  - 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; and
  - requires compliance with the Department approved Site Management Plan.

- Site Management Plan
  A Site Management Plan which includes the following:
  - 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: (ICs) discussed in Paragraph 5.
  Engineering Controls: The site cover discussed in Paragraph 3 and 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 Paragraph 3 and 4;
    - maintaining site access controls and Department notification; and
    - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.



Property Boundary
BCP Boundary

N
W E
S

0 35 70 140 210 280 Feet

441 Ohio Street Site
NYSDEC BCP No. C915285
City of Buffalo, Erie Co.

Figure 1
Site Plan

DATE: REV DECEMBER 2015
DRAFTED BY: KRR

LEGEND:

- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- ~~EXISTING ON-SITE STRUCTURE~~ Former Structure
- FENCE
- SB-110 RI SOIL BORING LOCATION
- SB-106/TMW-2 RI TEMPORARY MONITORING WELL LOCATION
- SB-5 HISTORIC SOIL BORING LOCATIONS
- B-1/PZ GEOTECHNICAL BORING/ PIEZOMETER LOCATION (BY OTHERS)
- PLANNED TRACK 4 RRSCO CLEANUP EXCAVATION AREA

South Street

SOUTH STR

B-1/PZ

SB-108/TMW-3

SB-8

SB-7

SB-107

SB-109/TMW-4

SB-110

SB-6

SB-106/TMW-2

BUFFALO RIVER

OHIO STREET

SB-111/TMW-5

SB-5

SB-105

SB-112

SB-4

SB-113/TMW-6

SB-2

SB-103

B-2

SB-3

SB-104

SB-1

SB-102/TMW-1

SB-101

SB-102 (0-2)	mg/Kg	RRSCO
TOTAL PCBs	6.1	1

N

60' 0' 60' 120'

SCALE: 1 INCH = 60 FEET
SCALE IN FEET
(approximate)

Figure 2a

FIGURE

TRACK 4 RRSCO CLEANUP ALTERNATIVE

REMEDIAL INVESTIGATION - ALTERNATIVE ANALYSIS REPORT

441 OHIO STREET SITE
BCP SITE NO. C915285
BUFFALO, NEW YORK

PREPARED FOR

441 OHIO STREET, LLC

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0292-013-002

DATE: REV DECEMBER 2015
DRAFTED BY: KRR

LEGEND:

- BCP PROPERTY BOUNDARY
- PARCEL BOUNDARY
- PROPOSED NEW BUILDING
- SOIL COVER AREA

Figure 2b

FIGURE

CONCEPTUAL COVER SYSTEM LAYOUT

REMEDIAL INVESTIGATION - ALTERNATIVE ANALYSIS REPORT

441 OHIO STREET SITE
BCP SITE NO. C915285
BUFFALO, NEW YORK

PREPARED FOR

441 OHIO STREET, LLC

BENCHMARK Environmental Engineering & Science, PLLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0599

JOB NO.: 0292-013-002