

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau E
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March 7, 2016

Mr. Keith A. Nagel
Tecumseh Redevelopment Inc.
4020 Kinross Lakes Parkway
Richfield, OH 44286

RE: Tecumseh Phase III-4 Business Park
Site ID No. C915199D, Lackawanna (C), Erie County
Decision Document

Dear Mr. Nagel:

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health (NYSDOH) have reviewed the section(s) of the Remedial Investigation/Alternatives Analysis applicable to the Tecumseh Phase III-4 Business Park Site dated August 2011 and prepared by Benchmark on behalf of Tecumseh Redevelopment Inc.

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(ies).

Please contact the Department's Project Manager, Maurice Moore, at (716) 851-7220 or maurice.moore@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

cc: R. Schick/M. Ryan, DER
C. Staniszewski/M. Moore/K. Draves, Region 9
K. Anders, NYSDOH
C. Bethoney, NYSDOH
M. Forcucci, NYSDOH
T. Forbes, P.E., Benchmark
C. Slater, Esq., The Slater Law Firm



Department of
Environmental
Conservation

DECISION DOCUMENT

Site III-4 Tecumseh Phase III Business Park
Brownfield Cleanup Program
Lackawanna, Erie County
Site No. C915199D
March 2016



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

DECLARATION STATEMENT - DECISION DOCUMENT

Site III-4 Tecumseh Phase III Business Park
Brownfield Cleanup Program
Lackawanna, Erie County
Site No. C915199D
March 2016

Statement of Purpose and Basis

This document presents the remedy for the Site III-4 Tecumseh Phase III Business Park 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 Site III-4 Tecumseh Phase III Business Park 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. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principals 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.

2. 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 other approved cover in areas where the upper one foot of exposed surface soil will exceed the

applicable soil cleanup objectives (SCOs). Where cover is required it will be a minimum of one foot thick, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The cover will be placed over a demarcation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

3. Imposition of an institutional control in the form of an environmental easement is required for the controlled property that:

- 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; and
- 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.)

4. A Site Management Plan is in place 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 3 above.

Engineering Controls: The cover discussed in Paragraph 2.

This plan includes, but is not limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- 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 the performance of the site cover; and
- monitoring of the groundwater to assess the performance and effectiveness of the remedy.

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

Site III-4 Tecumseh Phase III Business Park
Lackawanna, Erie County
Site No. C915199D
March 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 repositories:

Lackawanna Public Library
Attn: Jennifer Hoffman
560 Ridge Road
Lackawanna, NY 14218
Phone: 716-823-0630

NYS DEC
Attn: Maurice Moore
270 Michigan Ave.
Buffalo, NY 14203

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:

Tecumseh Phase III-4 (Site) is one of 10 sub-parcels comprising the Tecumseh Phase III Business Park (Phase III). Phase III is located at 2303 Hamburg Turnpike in the City of Lackawanna, New York. Situated in an industrial area, Phase III is part of a larger property that once included the Bethlehem Steel Company (BSC) and is identified on the Erie County Tax Maps as SBL 141.11-1-50. Phase III is located west of Route 5 and the Tecumseh Phase II Business Park, south of Smokes Creek and east of the remaining former Bethlehem Steel property.

Site Features:

Located to the south of, and adjacent to, Smokes Creek the Site is a 16.19 acre, triangular shaped, sub-parcel, with one vacant storage building. The parcel is vegetated with natural grasses, shrubs and poplar trees, typical of a primary shrub-young forest ecosystem. The entire BSC site is fenced with vehicle access limited to one automatic gate.

Current Zoning and Land Use:

The site is zoned medium industrial. Surrounding uses near the site include: to north past Smokes Creek is recently remediated Phase III-5 and III-6; to the west is a rail corridor beyond which is a portion of the BSC that is a class 2 inactive hazardous waste disposal site being addressed by the responsible party (ref. Site No.915009); and to the south are sub-parcels III-2 and III-3. Future use anticipates commercial or industrial re-use

Past Use of the Site:

Phase III-4 was formerly a portion of BSC's steel making operations. Specific processes and steel making facilities performed on or proximate to the site included:

- Electrical Stores
- Equipment Storage
- Track Hopper
- Railways

Site Geology and Hydrology:

The entire Phase III is mostly filled land with between two to eight feet of steel and iron-making slag as well as other fill material being used for backfill. Underlying the fill material are lacustrine silts and clays. At the site native materials are encountered from about 12 to 14 feet below ground surface.

Bedrock is the Middle Devonian, Levanna shale and Stafford limestone of the Hamilton Group of the Skaneateles Formation. Bedrock varies from about 24 feet deep in the southeastern corner of the site to 45 feet deep near the northern border of Phase III.

Due to the porous nature of the slag/soil fill there is very little storm water retention or surface runoff as most of the precipitation seeps into the highly permeable slag/soil fill. Any surface waters would tend to flow northerly toward Smokes Creek which empties to the west into Lake Erie.

Groundwater, when encountered, is about 7 feet deep trending northerly and westerly toward Lake Erie.

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 that restrict 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

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	indeno(1,2,3-CD)pyrene
benzo(b)fluoranthene	arsenic
benzo(a)pyrene	cadmium
dibenz[a,h]anthracene	naphthalene

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 IRM(s) has/have been completed at this site based on conditions observed during the RI.

Interim Remedial Measure

Elevated arsenic is ubiquitous at the site. Samples exceeding 118 ppm of arsenic are considered to be hotspots and cause for removal and disposal. An IRM, implemented from August 2013 to December 2013, excavated and disposed of two areas determined "hotspots". One area located in the former Slabbing Mill Return Water Trench was excavated to a depth of two feet in an area 5 feet by 375 feet. Excavation of arsenic containing soil from the trench removed a potential source of groundwater contamination. A total of 320.84 tons of material from this excavation was disposed off-site. A second area 35 feet by 20 feet located in the center of the site removed arsenic containing soils to a depth of two feet resulting in a total of 215.67 tons of material disposed of off-site. A Construction Completion Report (CCR) detailing the IRM was submitted in January 2014.

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:

The nature and extent of metals contamination is consistent with the former site use as a steel manufacturing facility. Based upon investigations conducted to date, the primary contaminants of concern for soils at the Tecumseh Phase III-4 site are metals including arsenic and cadmium. Contaminants of concern to a lesser extent are semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs), such as benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene.

Widespread exceedances of unrestricted use soil cleanup objectives (SCOs) are common in the soil and fill. When compared to the unrestricted SCO of 13 parts per million (ppm) post-IRM soil concentrations for arsenic, ranging from 7.5 ppm to 110 ppm exceeds the SCO in 15 of 18 samples. When compared to commercial SCO of 16 ppm, 12 of 18 samples exceeded the SCO. Cadmium from 0.052 ppm to 10.8 ppm exceeds the unrestricted SCO of 2.5 ppm in 2 of 9 samples and exceeds the commercial SCO of 9.3 ppm in only one sample.

SVOCs, like metals, are widespread throughout the Phase III Business Park. Most of the contaminants are polycyclic aromatic hydrocarbons (PAHs) and are usually associated with those activities that include burning of fossil fuels and heavy rail use, both of which were ubiquitous at the former steel mill. At the site, PAHs consistently exceed the unrestricted SCOs, however, when compared to the commercial use SCO only benzo(a)pyrene, with an SCO of 1 ppm, exceeded the value in 6 of 9 samples exceeding benzo(b)fluoranthene (5.6 ppm) and dibenzo(a,h)anthracene (0.56 ppm) exceeded in 2 of 9 samples; and benzo(a)anthracene (5.6 ppm) and indeno(1,2,3-cd)pyrene (5.6 ppm) exceeded SCOs in 1 of 9 samples.

Sampling did not indicate any volatile organic compounds (VOCs) or polychlorinated biphenyls (PCBs) exceeding either the commercial or the unrestricted SCOs at the site.

Groundwater from two of three monitoring wells on the site exceed groundwater quality standards (GwQS) for pH (6.5 to 8.5), with a pH of 9.9 units and 9.41 units. Higher pH groundwater is common in areas where large quantities of limestone or slag were used, stored or produced. One groundwater sample with arsenic concentrations at 33.4 parts per billion (ppb) exceeded the GwQS of 25 ppb, however, the sample was filtered to remove suspended particulates and re-analyzed. The results for arsenic for this filtered sample was 20.8 ppb which did not exceed the GwQS. The IRM removal of the arsenic from the drainage ditch adjacent to the impacted monitoring well addressed a potential source of arsenic contamination. Samples collected from two additional monitoring wells onsite did not exceed for arsenic. Groundwater also exceeded the guidance value of 10 ppb for naphthalene in one monitoring well with a result of 30 ppb, and exceeded the guidance value of 0.002 ppb for chrysene in a different monitoring well with a result of 0.33 ppb. Groundwater at the site is prohibited from use for either potable or non-potable purposes without treatment.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure*.

The site is completely fenced, which restricts public access. However, persons who enter the site could contact contaminants in the soil by walking on the site, digging or otherwise disturbing the soil. 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.

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 impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

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 Cover with Institutional Controls remedy.

The elements of the selected remedy, as shown in Figure 2, are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principals 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.

2. 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

other approved cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where cover is required it will be a minimum of one foot thick, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The cover will be placed over a demarcation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

3. Imposition of an institutional control in the form of an environmental easement is required for the controlled property that:

- 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; and
- 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.)

4. A Site Management Plan is in place 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 3 above.

Engineering Controls: The cover discussed in Paragraph 2.

This plan includes, but is not limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- 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.

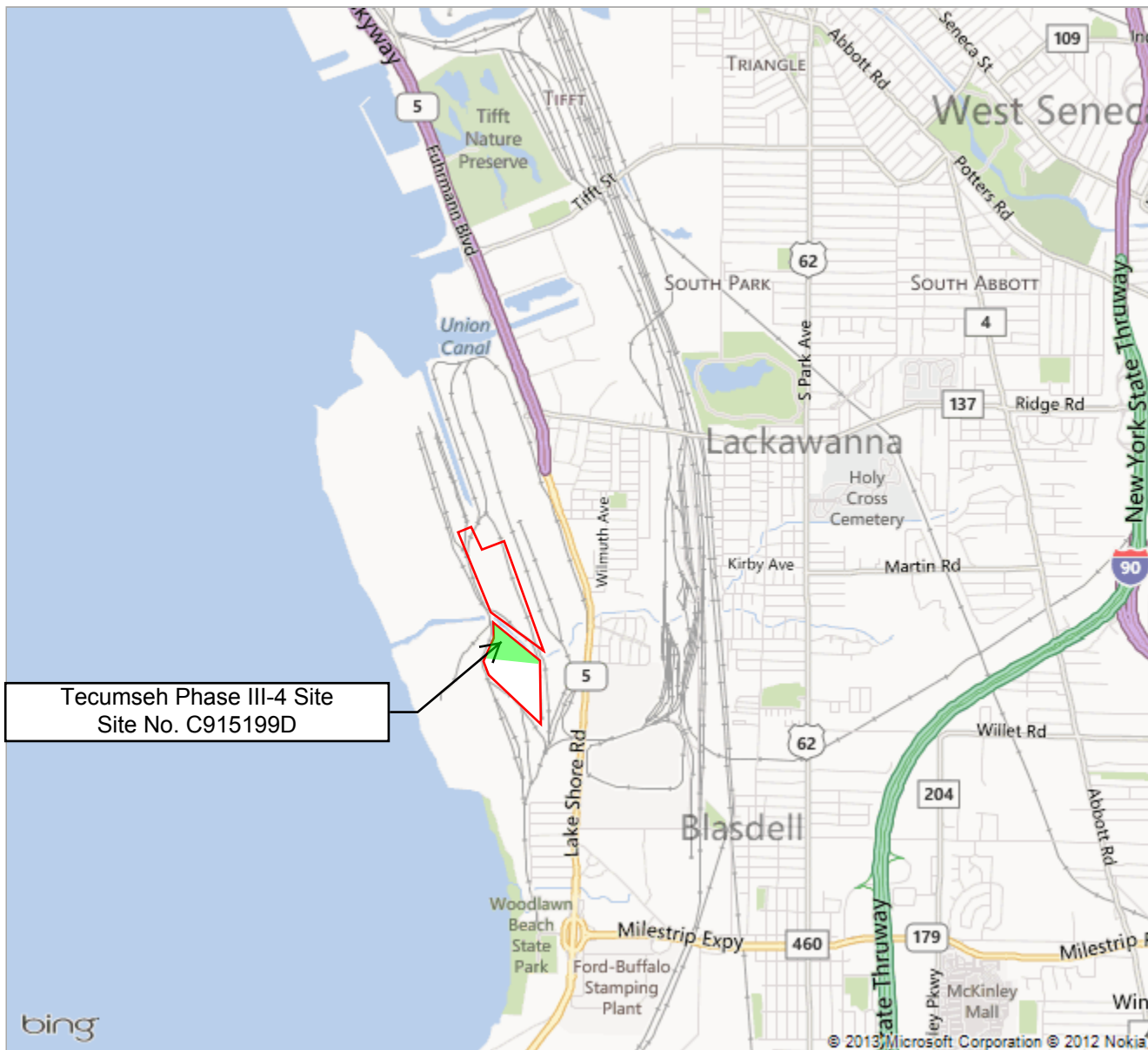
b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes but may not be limited to:

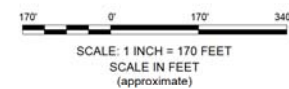
- monitoring the performance of the site cover; and
- monitoring of the groundwater to assess the performance and effectiveness of the remedy.

FIGURE 1

Site Location
Tecumseh Phase III Business Park

Phase III-4 Site
Site No. C915199D





ELEMENTS OF THE REMEDY
REMEDIAL INVESTIGATION / ALTERNATIVES ANALYSIS REPORT
PHASE III BUSINESS PARK AREA
LACKAWANNA, NEW YORK
PREPARED FOR
TECUMSEH REDEVELOPMENT INC.

FIGURE 2