New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau E, 12th Floor
625 Broadway, Albany, New York 12233-7017
Phone: (518) 402-9814 • **Fax:** (518) 402-9819
Website: www.dec.ny.gov

Joe Martens
Commissioner

October 14, 2014

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

RE: Tecumseh Phase III-5 Business Park
Site ID No. C915199E, Lackawanna (C), Erie County
Remedial Work Plan & Decision Document

Dear Nagel:

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health (NYSDOH) have reviewed the Remedial Work Plan aka Remedial Investigation/Alternatives Analysis Report dated July 2012 and the Remedial Action Work Plan (RAWP) dated July 2014 as it pertains to the Tecumseh Phase III-5 Business Park (Steel Sun) site. These reports were prepared by Benchmark on behalf of Tecumseh Redevelopment Inc. The RAWP is hereby approved. Please ensure that a copy of the approved RAWP 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, Maurice Moore, at (716)851-7220 or maurice.moore@dec.ny.gov at your earliest convenience to discuss next steps. Please recall the Department requires a seven (7) day notice prior to the start of field work.

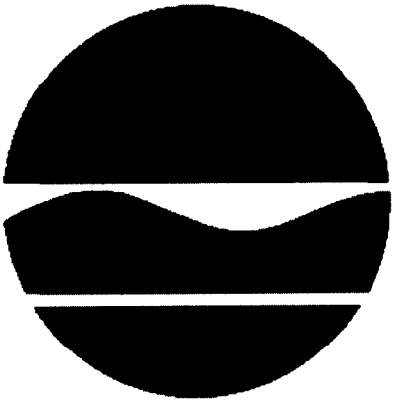
Sincerely,

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

Enclosure
ec: R. Schick, DER
M. Ryan, DER
M. Cruden, DER
M. Doster, Region 9
M. Moore, Region 9
P. Foster, Region 9
K. Anders, NYSDOH
C. Bethoney, NYSDOH
M. Forcucci, NYSDOH
T. Forbes, Benchmark
C. Slater, Esq.

DECISION DOCUMENT

Site III-5 Tecumseh Phase III Business Park
Brownfield Cleanup Program
Lackawanna, Erie County
Site No. C915199E
October 2014



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

DECLARATION STATEMENT - DECISION DOCUMENT

Site III-5 Tecumseh Phase III Business Park
Brownfield Cleanup Program
Lackawanna, Erie County
Site No. C915199E
October 2014

Statement of Purpose and Basis

This document presents the remedy for the Site III-5 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-5 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. Pipe Removal - Removal of abandoned subsurface product piping. Based on field conditions a limited amount of piping may be cleaned and capped in place. The piping will be cleaned and capped or recycled off-site; all pipe contents will be containerized, characterized, and

disposed/recycled off-site.

3. 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 of material, 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).

4. 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.)

5. A Site Management Plan is required, which includes, but not limited to, the following:

- an Institutional and Engineering Control Plan that identifies all use restrictions for the site noted above and details the steps necessary to ensure the following controls remain in place and effective;

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

- a Monitoring Plan to assess the performance and effectiveness of the site cover;

- provisions for the management and inspection of the identified engineering controls;

- maintaining site access controls and Department notification; and

- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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

- monitoring of groundwater to assess the performance and effectiveness of the remedy;
- a schedule of monitoring and frequency of submittals to the Department;

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
Date: 2014.10.07 09:16:47 -04'00'

Date

Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

Site III-5 Tecumseh Phase III Business Park
Lackawanna, Erie County
Site No. C915199E
October 2014

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

Phone: 716-851-7220

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 Tecumseh Phase III-5 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 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 Gateway Metroport and east of the remaining former Bethlehem Steel Property and Lake Erie.

Site Features:
Located in the southeast portion of Phase III north of and adjacent to Smokes Creek, the site, an 11.69 acre, non-descript, sub-parcel with no remarkable or unique features. The mostly rectangular Phase III is approximately 5,500 feet long, averages 1,500 feet wide and is 148.83 acres in size. Bisected by Smokes Creek, Phase III is flat, covered with slag fill and remnants of former steel manufacturing buildings and foundations. Most of the business park 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. Current use is vacant land. Future use anticipates commercial or industrial re-use.

Past Use of the Site:
Phase III-5 was formerly a portion of BSC's steelmaking operations. Specific processes and steelmaking facilities performed on or proximate to the Site included:

- Basic Oxygen Furnace (approximately 50% of site)
- Union Carbide Corporation – Argon Division

Site Geology and Hydrogeology:
The entire Phase III is filled with between two to eight feet of steel and iron-making slag as well

as other fill material being used for backfill. Underlying fill material are lacustrine silts and clays. Native materials are encountered from about 12 to 14 feet below ground surface.

Bedrock is Middle Devonian age, Skaneateles Formation, consisting of Levanna shale and Stafford limestone of the Hamilton Group. Bedrock varies from about 24 feet deep in the southeastern corner of the site to 45 feet deep with the 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 flow into the South Water Return Trench which parallels the eastern border of the property and flows southerly where it empties into Smokes Creek which discharges to the west into Lake Erie.

Groundwater, when encountered, is about 7 feet deep trending westerly and northerly 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 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/do 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:

benz(a)anthracene
benzo(b)fluoranthene
benzo(a)pyrene
dibenz[a,h]anthracene
arsenic

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

- 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.

Prior to Remediation:

Based upon investigations conducted to date, primary contaminants of concern for soils at the Tecumseh Phase III-5 site are arsenic and, to a lesser extent, semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs), such as benzo(a)pyrene, dibenzo(a,h)anthracene, benzo(a)anthracene and benzo(b)fluoranthene.

The nature and extent of metals contamination is consistent with the former site use as a steel manufacturing facility. Widespread exceedances of unrestricted use site cleanup objectives (SCOs) are common in the soil and fill however, only arsenic ranging from 4.7 ppm to 48.9 ppm exceeds both the unrestricted SCOs of 13 ppm in 4 of 8 of the samples and the commercial SCO of 16 ppm in 3 of 8 samples.

SVOCs, like metals, are widespread throughout the Phase III Business Park. Most of the contaminants are 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. The above noted contaminants were observed to exceed the unrestricted SCOs in almost all of the samples collected at the site.

When compared to the commercial use SCOs, benzo(a)pyrene ranging from 0.22 ppm to 7.3 ppm, exceeded the SCO of 1 ppm in 5 of 10 samples. Dibenzo(a,h)anthracene ranging from ND to 1.3 ppm, exceeded the SCO of 0.56 ppm in 3 of 10 samples. Benzo(a)anthracene ranging from 0.34 ppm to 9.2 ppm and benzo(b)fluoranthene from 0.24 ppm to 9.6 ppm, exceeded the SCO of 5.6 ppm in 2 of 10 samples.

No sampling locations indicated any impacts exceeding commercial or unrestricted SCOs for volatile organic compounds (VOCs.)

Polychlorinated biphenyls (PCBs) from ND to 1.73 ppm were found to exceed both the unrestricted SCO of 0.1 ppm and the commercial SCO of 1 ppm in one sample.

Groundwater from one on-site and two nearby, off-site monitoring wells did not exceed the groundwater quality standards for any chemical of concern. However, groundwater does exceed standards for chemicals that are normally associated with naturally occurring compounds such as iron, manganese and sodium. Groundwater is not used at the site and a deed restriction prohibits use of the groundwater 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. Pipe Removal - Removal of abandoned subsurface product piping. Based on field conditions a limited amount of piping may be cleaned and capped in place. The piping will be cleaned and capped or recycled off-site; all pipe contents will be containerized, characterized, and disposed/recycled off-site.

3. 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 of material, 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).

4. 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.)

5. A Site Management Plan is required, which includes, but not limited to, the following:

- an Institutional and Engineering Control Plan that identifies all use restrictions for the site noted above and details the steps necessary to ensure the following controls remain in place and effective;

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

- a Monitoring Plan to assess the performance and effectiveness of the site cover;

- provisions for the management and inspection of the identified engineering controls;

- maintaining site access controls and Department notification; and

- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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

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

- a schedule of monitoring and frequency of submittals to the Department;

Figure 1 - Site Location
Tecumseh Phase III-5 Business Park Site
Site #C915199E

Google earth

feet 1000
meters 400

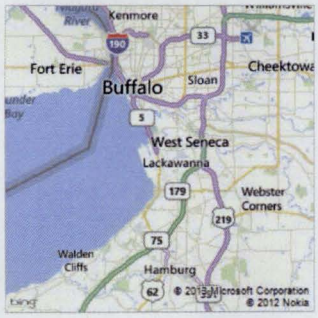
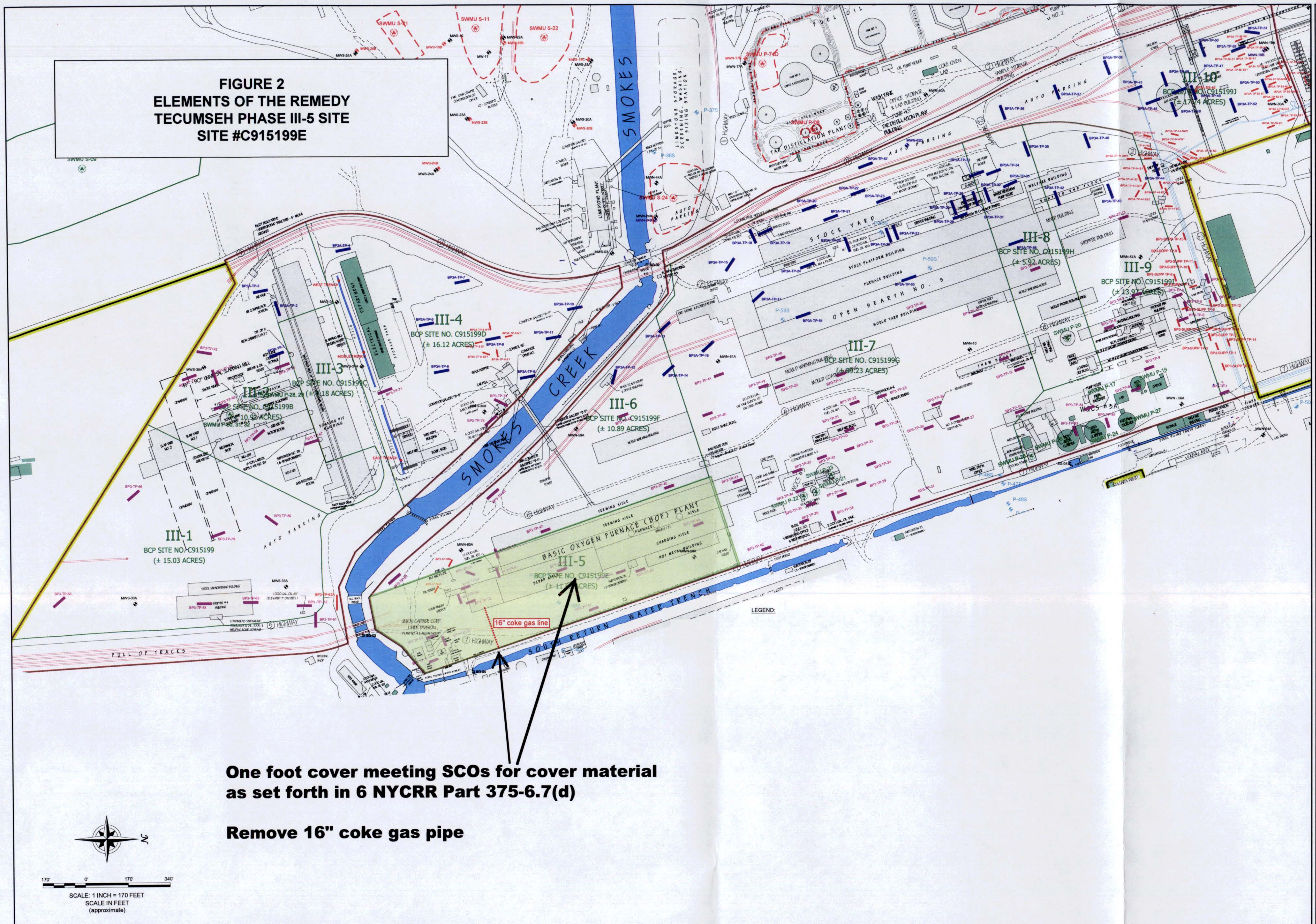


FIGURE 2
ELEMENTS OF THE REMEDY
TECUMSEH PHASE III-5 SITE
SITE #C915199E



TurnKey Environmental Restoration, LLC
2558 HAMBURG TURNPIKE
SUITE 300
BUFFALO, NY 14218
(716) 856-0635

JOB NO.: 0071-009-320

REVISIONS

NO.	BY	DATE	REMARKS

SEAL

DRAWN BY: BCH
DATE: DECEMBER 2011
CHECKED BY:
APPROVED BY:

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ELEMENTS OF THE REMEDY
REMEDIAL INVESTIGATION / ALTERNATIVES ANALYSIS REPORT
PHASE III BUSINESS PARK AREA
LACKAWANNA, NEW YORK

PREPARED FOR
TECUMSEH REDEVELOPMENT INC.

FIGURE 2