

DECISION DOCUMENT

Former Mill No. 2
Brownfield Cleanup Program
Niagara Falls, Niagara County
Site No. C932150
May 2012



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

DECLARATION STATEMENT - DECISION DOCUMENT

Former Mill No. 2
Brownfield Cleanup Program
Niagara Falls, Niagara County
Site No. C932150
May 2012

Statement of Purpose and Basis

This document presents the remedy for the Former Mill No. 2 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 Former Mill No. 2 site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

During the course of the investigation certain actions, known as interim remedial measures (IRMs), were undertaken at the above referenced site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or alternatives analysis (AA). The IRM(s) undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRM(s), the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment; therefore No Further Action is the selected remedy. The remedy may include continued operation of a remedial system if one was installed during the IRM and the implementation of any prescribed institutional controls/engineering controls (ICs/ECs) that have been identified as being part of the proposed remedy for the site.

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.

5/21/2012

Date



Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

Former Mill No. 2
Niagara Falls, Niagara County
Site No. C932150
May 2012

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 resulted in threats to public health and the environment that were addressed by actions known as interim remedial measures (IRMs), which were undertaken at the site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or alternative analysis (AA). The IRMs undertaken at this site are discussed in Section 6.2.

Based on the implementation of the IRM(s), the findings of the investigation of this site indicate that the site no longer poses a threat to human health or the environment. The IRM(s) conducted at the site attained the remediation objectives identified for this site, which are presented in Section 6.5, for the protection of public health and the environment. No Further Action is the selected remedy. A No Further Action remedy may include continued operation of any remedial system installed during the IRM and the implementation of any prescribed controls that have been identified as being part of the remedy for the site. This DD identifies the IRM(s) conducted and discusses the basis for No Further Action.

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:

Niagara Falls Public Library
Attn: Niagara Falls Public Library
Earl W. Bridges Building
1425 Main Street
Niagara Falls, NY 14305
Phone:

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 Former Mill #2 site, now known as Greenpac Mill, LLC is a facility located at 4001 Packard Road, Niagara Falls, Niagara County. The Greenpac Mill Site which includes the Former Mill #2, Northern Extension and CSX ROW is approximately 18.52 acres. The site is bounded by the active Norampac facility to the north, open land owned by Power Authority State of New York (PASNY) to the west, Royal Avenue to the south and industrial land along 47th street to the east. The site is adjacent to the Frontier Chemical Royal Ave inactive hazardous waste site #932110.

Site features:

The site is the location of a former paper mill and the majority of the surface area at the completion of the redevelopment will be covered by buildings and/or paving.

Current Zoning/Use:

Current zoning and future use will remain industrial.

Historic Use(s):

The Former Mill #2 area and buildings encompassed approximately 661,980 square feet and historically housed paper manufacturing, finishing, and packaging operations of completed

goods. The Former Mill #2 buildings consisted of several interconnected two story or five story concrete and masonry buildings which were constructed during various time frames, with the earliest being 1923 and the latest reported date of 1974. The former mill was taken out service several years ago and has fallen into disrepair to the extent that certain portions of structures have collapsed and others exhibit evidence of structural distress.

Based on existing reports, accounts and a pre-demolition asbestos survey, asbestos containing building materials were present in and on the building. Also, given the age of the facility PCBs may be present in those areas where electrical equipment had been located including the active transformer yard located near the northwest corner of the former mill.

Site Geology/Hydrogeology:

Soil below asphalt paved areas consists of fill material characterized by crushed stone or gravel, concrete, slag, and brick fragments intermixed with coarse to fine sand to a depth of approximately three feet. Underlying the veneer of fill material are apparent native soils which consist of tan to brown sandy silt. Below that strata and extending to depths of approximately 10.0 feet to 13.5 feet (where top of rock is encountered) is reddish brown and sometimes pink silt with an appreciable percentage of clay; in some locations, trace to some sand was found intermixed with the clay. Top of ground water ranges from 4.5 feet to 6.5 feet below ground surface and is limited to thin isolated perched areas on top of the bedrock and is laterally and vertically discontinuous. Lateral contaminant transport in groundwater is not significant. Shallow ground water flow is predominantly downward into the bedrock.

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 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 investigation 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 Remedial Investigation (RI) Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant(s) under the Brownfield Cleanup Agreement is a/are Volunteer(s). The Applicant(s) 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:

For OU: 01

BENZO(A)PYRENE	1,2-DICHLOROBENZENE
BENZ(A)ANTHRACENE	1,4-DICHLOROBENZENE
BENZO(B)FLUORANTHENE	1,3-DICHLOROBENZENE
DIBENZ[A,H]ANTHRACENE	ANTIMONY
indeno(1,2,3-cd)pyrene	DICHLOROETHYLENE
ARSENIC	MAGNESIUM
MANGANESE	SODIUM
MERCURY	BIS(2-ETHYLHEXYL)PHTHALATE
CHLOROBENZENE	IRON

Based on the investigation results, comparison to the SCGs, and the potential public health and environmental exposure routes, certain media and areas of the site required remediation. These media were addressed by the IRM(s) described in Section 6.2. More complete information can be found in the RI Report and the IRM Construction Completion Report.

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.

IRM-Demolition

Building demolition allowed the safe and effective remedial investigation of the subsurface near and below the structures. The above ground building structures were not suspected or considered to be contaminated. The IRMs for the site demolition were approved and demolition in the Former Mill #2 area started in the fall of 2010 and was completed in February 2012.

IRM - Soil Removal

The soil excavation IRM approved in June 2011 with an amendment in November 2011 removed soil and historic fill material having SCO above industrial goals including radiologically affected soil with disposal at an approved disposal facility. In addition, all soil generally below the foot print of the proposed manufacturing buildings was excavated to bedrock to facilitate construction of the new mill on site.

Greenpac Mill, LLC began excavating soil in building footprints on July 6, 2011. Soil that exceeded Residential SCO was transported to appropriate disposal facilities. Due to over excavation required for the facility, soils that were determined to be clean and met the residential SCO were transported to a nearby facility for re-use or re-used on site as needed.

During the performance of the Soil Excavation IRM radiologically contaminated fill material was encountered that required special handling and disposal procedures. Consultants specialized

in the identification, handling and disposal of radiologically contaminated wastes materials were brought onto the project and developed the plans necessary to address the radiological waste material. All identified radiologically contaminated areas were excavated, temporarily staged on site and shipped via truck and rail cars to an out of state landfill permitted to accept radiological waste. The removal of the radiologically contaminated materials was completed in December 2011.

All excavated areas were filled with material consistent with the NYSDEC imported fill or reuse criteria. Due to structural requirements for the new buildings most excavations were backfilled with crushed stone from a local quarry or with recycled crushed concrete from the former building demolitions.

Soil/fill excavation, backfilling and confirmation sample collection was completed in December 2011.

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.

Based upon investigations conducted to date at this site, the primary contaminants of concern identified in the Remedial Investigation prior to the IRM is described below.

SOIL:

The soil contamination identified on the site is generally associated with historic fill. The overburden soil ranges from 10 to 15' thick over the underlying bedrock.

Areas of elevated radiation levels were detected in portions of the historic fill on site. Radiation levels in the 100,000 to 2000,000 cpm range were typical with some isolated areas as high as 400,000 cpm. Radiation levels in the affected areas were generally from 20 to 30 times background. General radiation background levels in the Niagara Falls area is accepted to be 6,000 to 8,000 cpm using a Ludlum Model 2221 meter with a 44-10 sodium iodide probe.

A total of 219 soil borings were advanced for the collection of soil samples to assess the severity and extent of the soil contamination. Several samples were collected from each bore hole to assess the historic fill and native soil zones.

Numerous SVOCs, arsenic, manganese and mercury were identified above the industrial SCOs throughout the site.

Groundwater:

VOCs and metals were detected at the site along the eastern boundary with the adjacent Frontier Chemical Royal Ave hazardous waste site (#932110) and the detected VOC contamination in the overburden groundwater is associated with the adjacent hazardous waste site. Overburden groundwater at the site is limited to thin isolated areas perched on top of the bedrock and is laterally and vertically discontinuous, therefore lateral contaminate transport in groundwater is not anticipated to be significant. Overburden groundwater flow is expected to be downward into the bedrock. Due to the low levels of contamination found in the overburden groundwater, impacts of nearby hazardous waste sites and the affect on bedrock groundwater from the Falls Street tunnel, no bedrock groundwater evaluation was performed.

Because of the relatively low levels of VOC contamination in the soil and groundwater at the site, a soil vapor intrusion evaluation was not performed.

Post-Remediation

Remediation at the site has been completed. Prior to remediation, the primary contaminants of concern were SVOCs in soil and historic fill on the site. Overburden groundwater contamination was not considered to be a significant concern.

Greenpac Mill LLC performed Soil Excavation and Building Demolition IRMs to address the identified site soil contamination. All soil with contamination above the Industrial SCO has been removed and disposed off site at approved disposal facilities. Radiological wastes were discovered during the soil excavation IRM and a site wide radiologically survey was performed to identify any isolated hot spots and excavation to remove and dispose of the elevated radiation areas was performed.

The IRM remedial action removed all soil contamination above the industrial SCO and radiological wastes above an acceptable level and a Track 2 cleanup was achieved.

45 day public comment period for the AA/IRM Report and No Further Action Decision Document closed on May, 10, 2012 with no comments received.

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 the site is an operating facility that is fenced to restrict public access, and is covered by buildings or pavement, people will not come into contact with residual site-related soil and groundwater contamination unless they dig below the surface.

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:

For OU 00:

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.

For OU 01:

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

For OU 00: Site Management: Remediation at the site has been completed. Prior to remediation, the primary contaminants of concern were SVOCs in soil and historic fill on the site. Overburden groundwater contamination was not considered to be a significant concern.

Greenpac Mill LLC performed Soil Excavation and Building Demolition IRMs to address the identified site soil contamination. All soil with contamination above the Industrial SCO has been removed and disposed off site at approved disposal facilities. Radiological wastes were discovered during the soil excavation IRM and a site wide radiological survey was performed to identify any isolated hot spots and excavation to remove and dispose of the elevated radiation areas was performed.

The IRM remedial action removed all soil contamination above the industrial SCO and radiological wastes above an acceptable level and a Track 2 cleanup was achieved.

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 controls in accordance with Part 375-1.8 (h)(3);
- Allows the use and development of the controlled property for industrial use 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;
- Prohibits agriculture or vegetable gardens on the controlled property; and
- Requires compliance with the Department approved SMP.

A SMP is required, which includes the following:

An IC Plan that identifies all use restrictions for the site and details the steps and media-specific requirements necessary to ensure the following institutional control remain in place and effective:

Institutional Controls:

- Periodic certification of institutional controls;
- Restricts site use to industrial;
- Restricts the use of groundwater;
- Prohibits agriculture or vegetable; and
- Requires compliance with the Department approved Site Management Plan.

The SMP plan includes, but may not be limited to:

- o An Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- o descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- o Maintaining site access controls and Department notification; and
- o The steps necessary for the periodic reviews and certification of the institutional controls.

45 day public comment period for the AA/IRM Report and No Further Action Decision Document closed on May, 10, 2012 with no comments received.

For OU 01: Remedial Program: Based on the results of the investigations at the site, the IRMs that have been performed, and the evaluation presented here, the Department is proposing No Further Action with the implementation of Institutional Controls (ICs) consisting of a Site Management Plan (SMP) and Environmental Easement (EE), as the proposed remedy for the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.

The IRMs completed on site removed all soil/fill that exceeded the industrial SCOs and reduced radiation to acceptable levels with off-site disposal of the soil/fill at approved off-site disposal facilities.

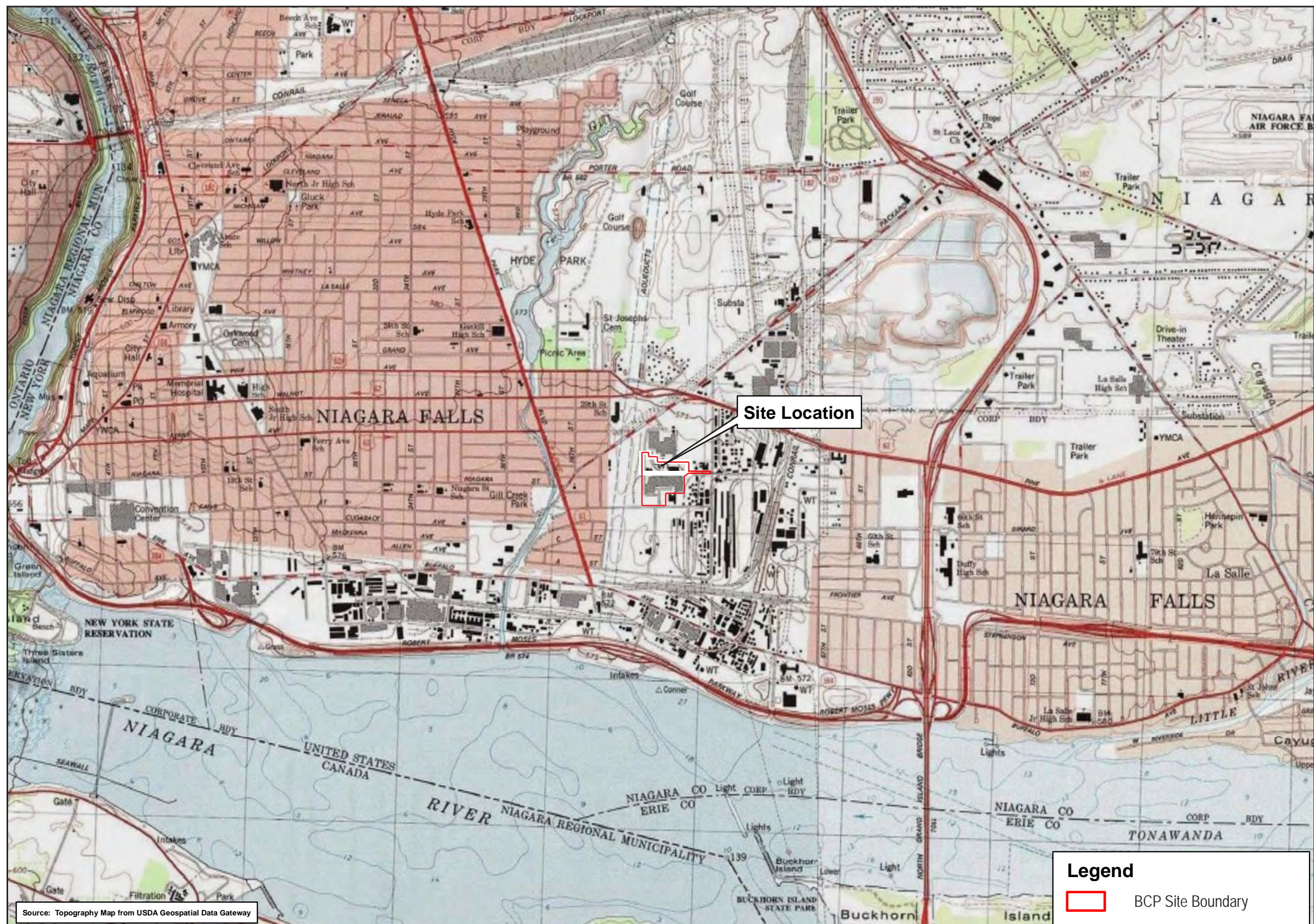
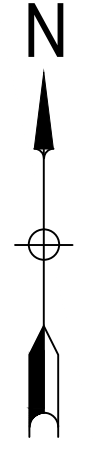
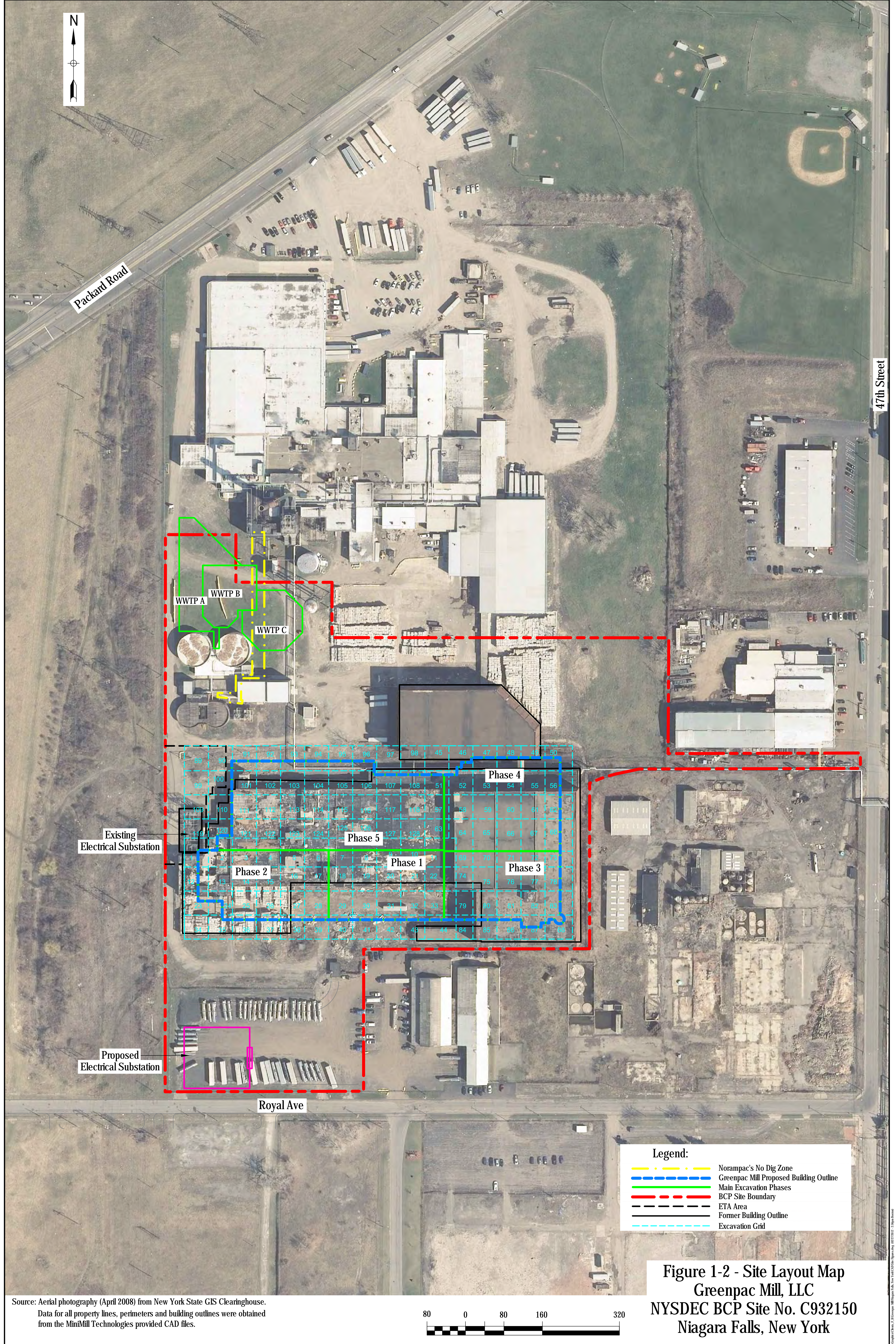


Figure 1

0 2,000 Feet

Figure 1-1 - Site Location Map
Greenpac Mill, LLC
Niagara Falls, New York
NYSDEC BCP Site #C932150





Packard Road

47th Street

WWTP A
WWTP B
WWTP C

Existing
Electrical Substation

Proposed
Electrical Substation

Phase 2

Phase 5

Phase 1

Phase 4

Phase 3

Royal Ave

- Legend:**
- Norampac's No Dig Zone
 - Greenpac Mill Proposed Building Outline
 - Main Excavation Phases
 - BCP Site Boundary
 - ETA Area
 - Former Building Outline
 - Excavation Grid

Source: Aerial photography (April 2008) from New York State GIS Clearinghouse.
Data for all property lines, perimeters and building outlines were obtained from the MiniMill Technologies provided CAD files.

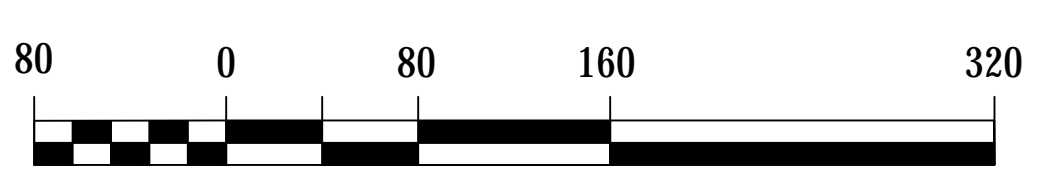
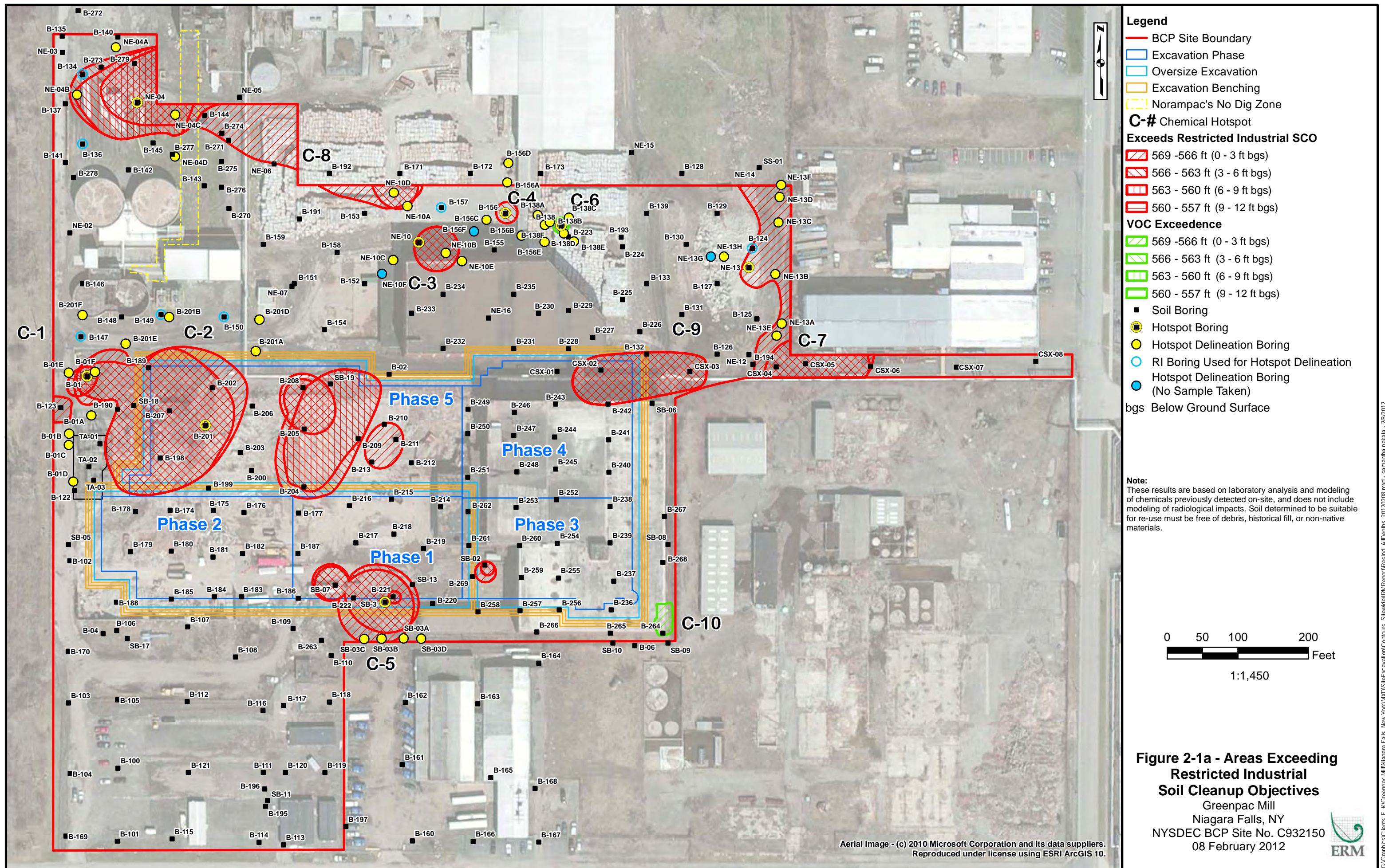
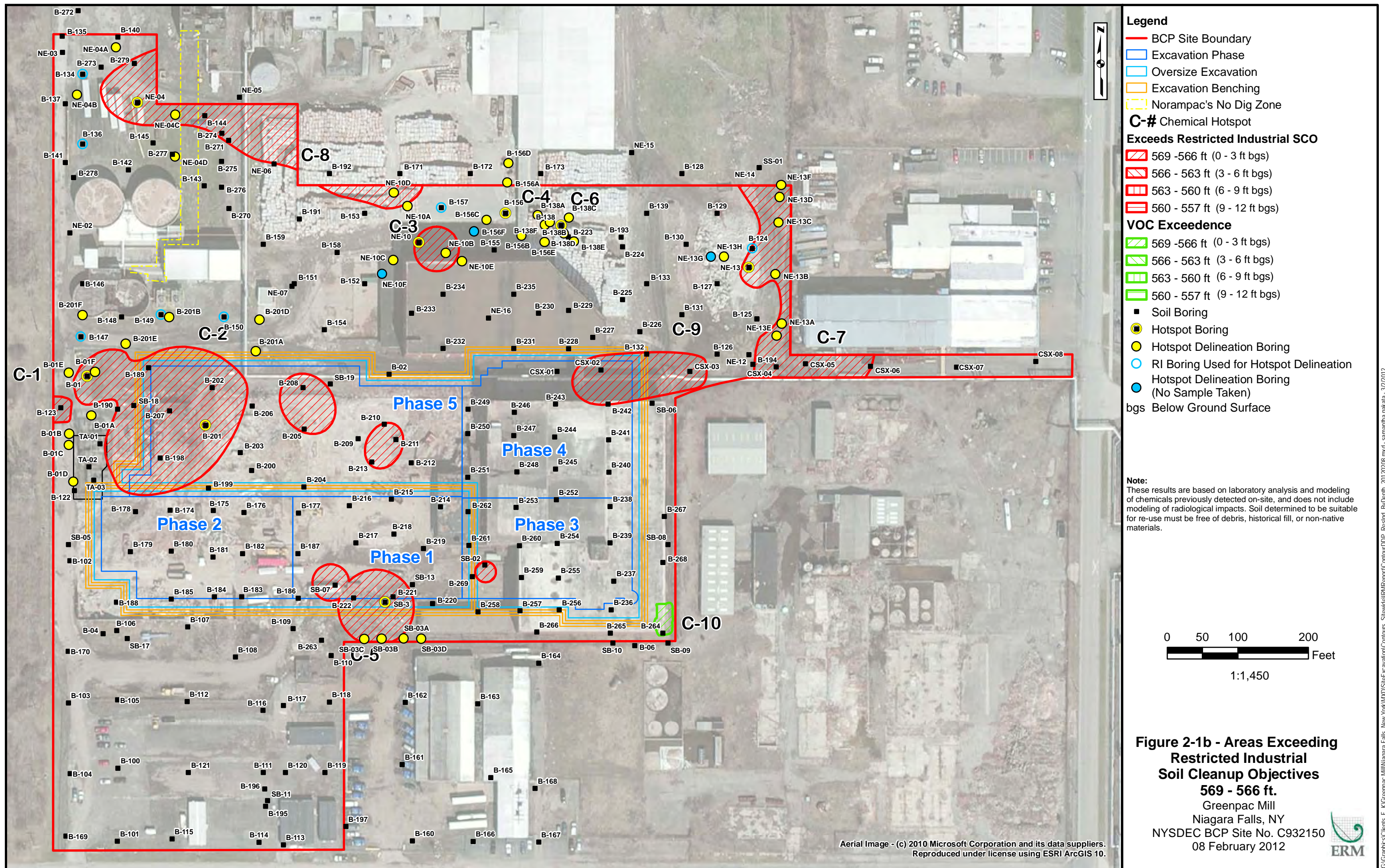
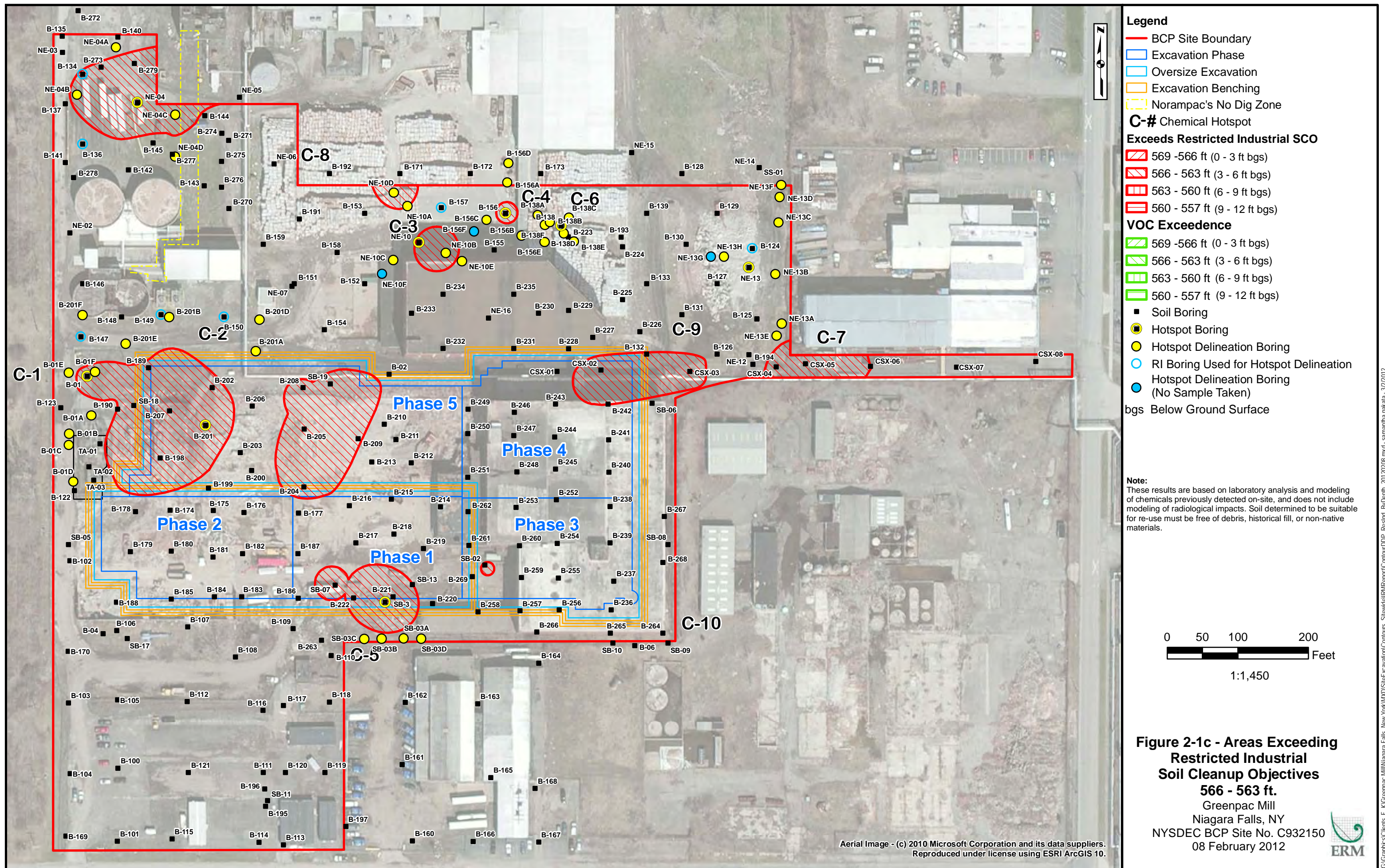
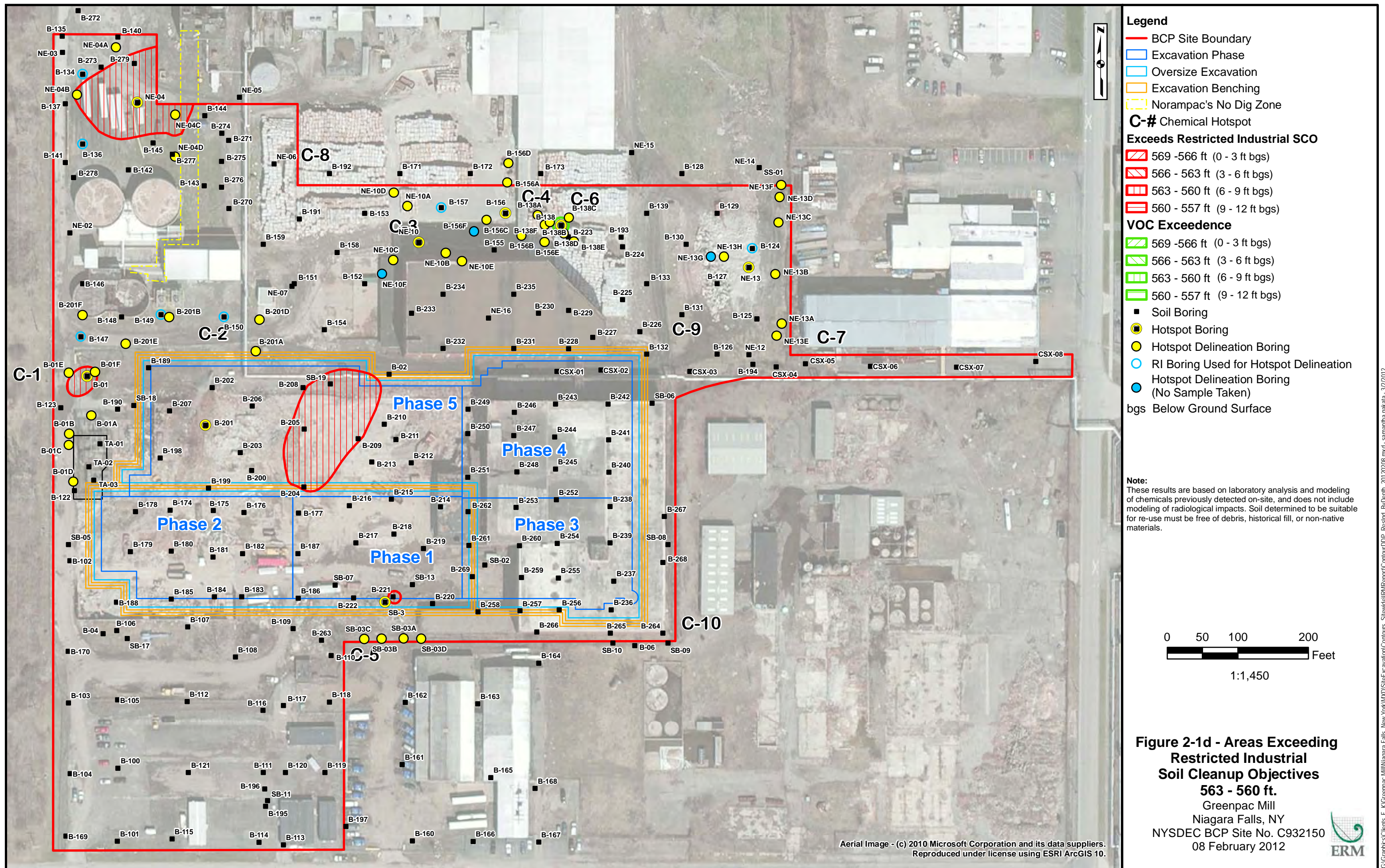


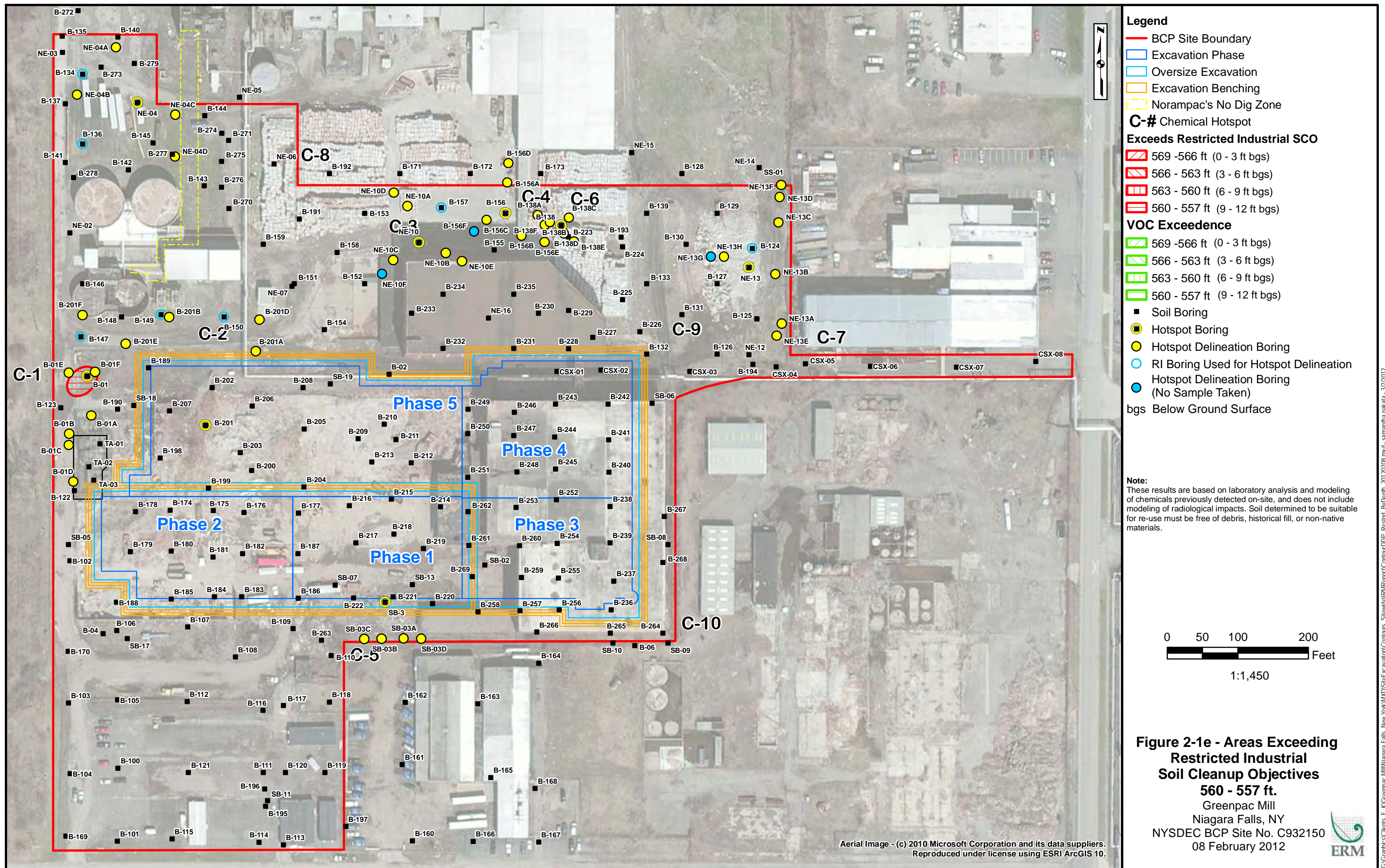
Figure 1-2 - Site Layout Map
Greenpac Mill, LLC
NYSDEC BCP Site No. C932150
Niagara Falls, New York

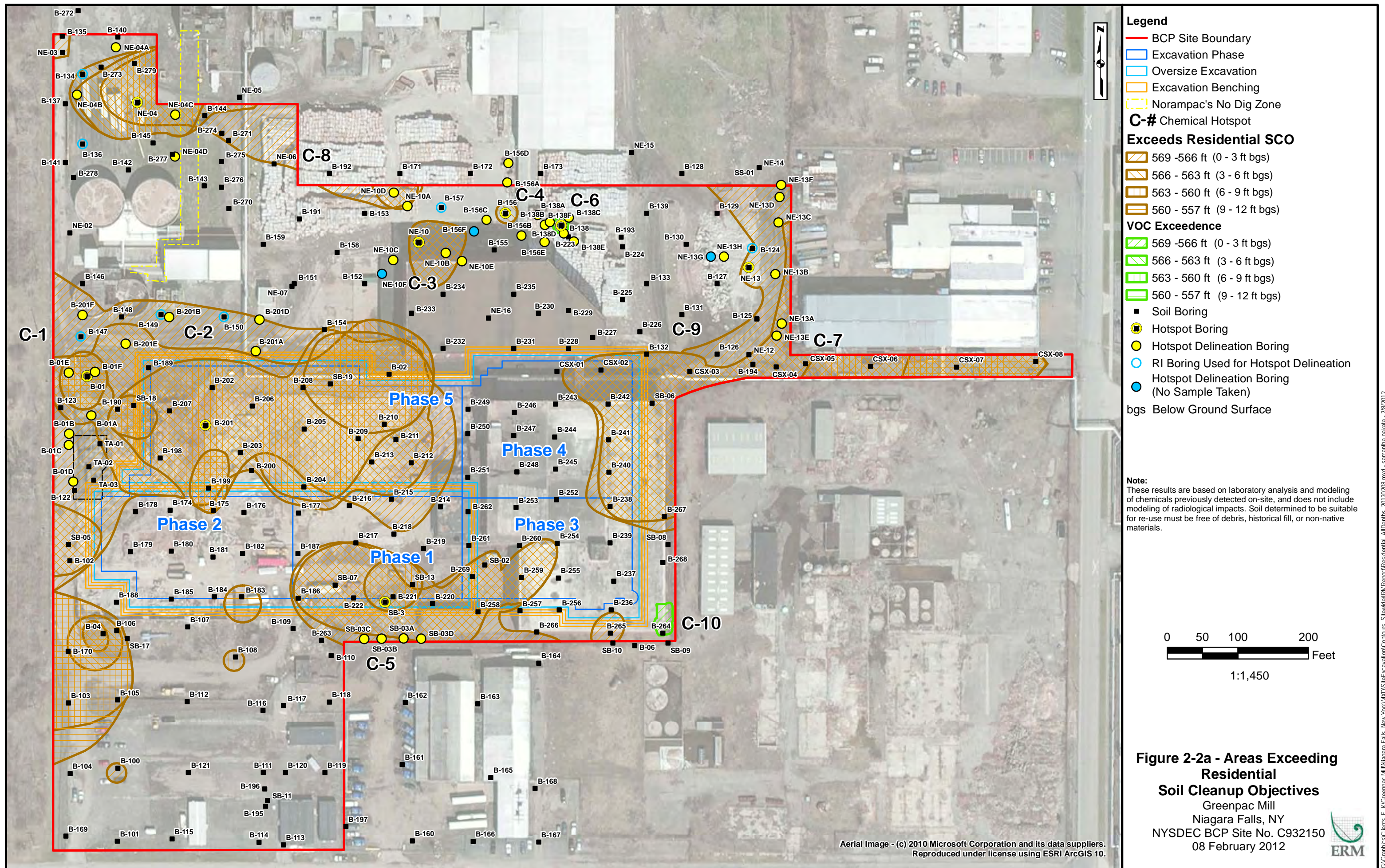


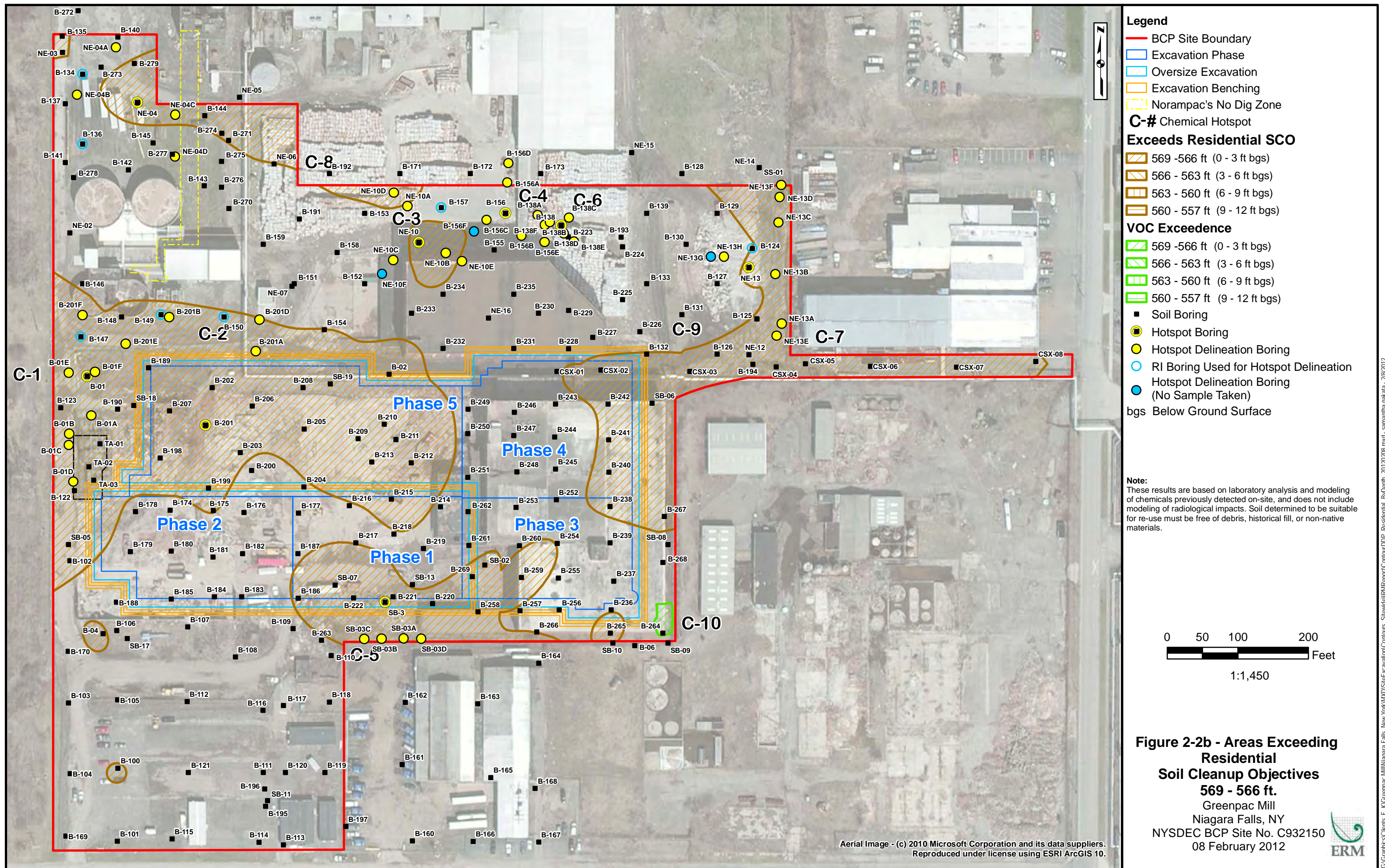


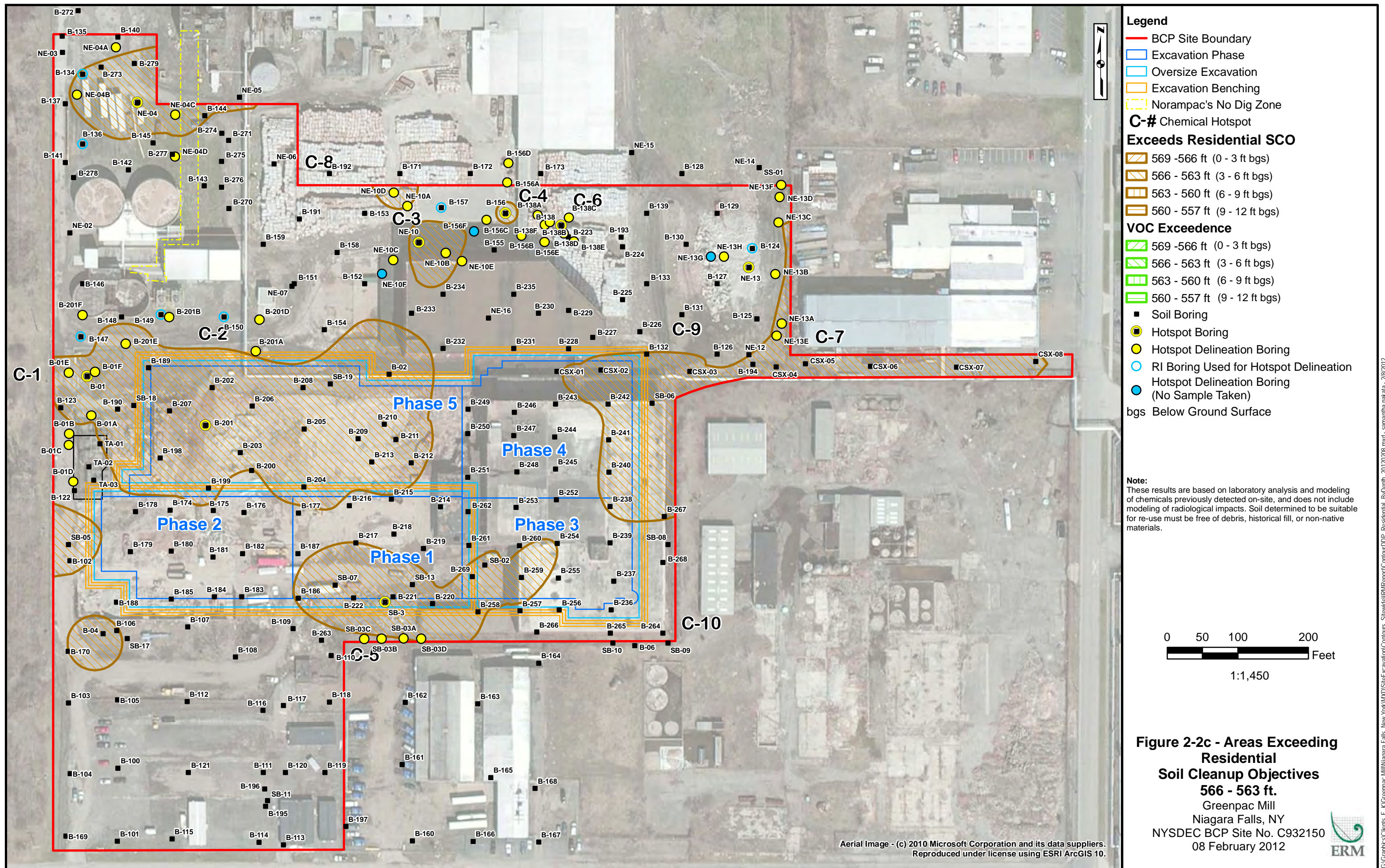


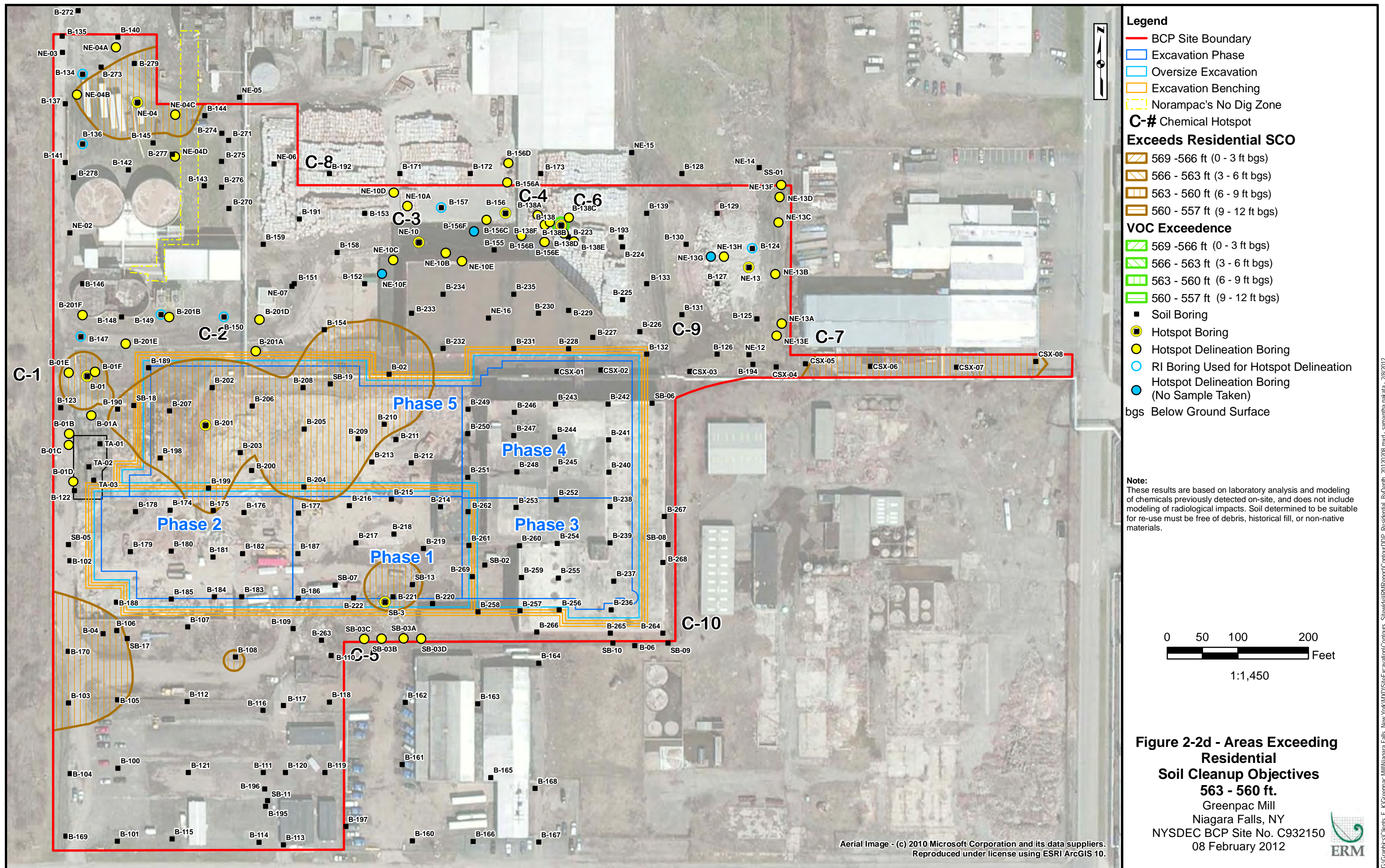


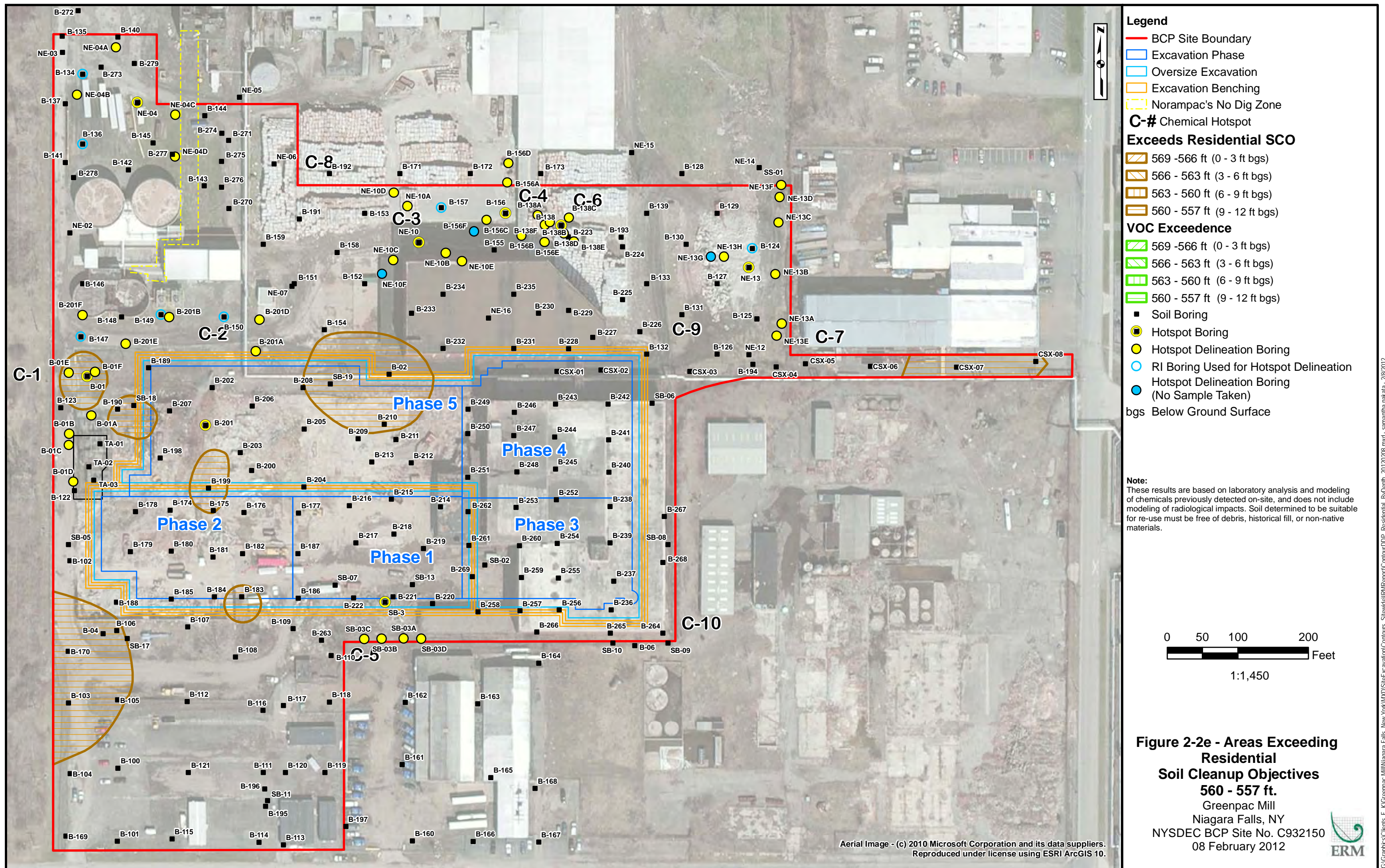


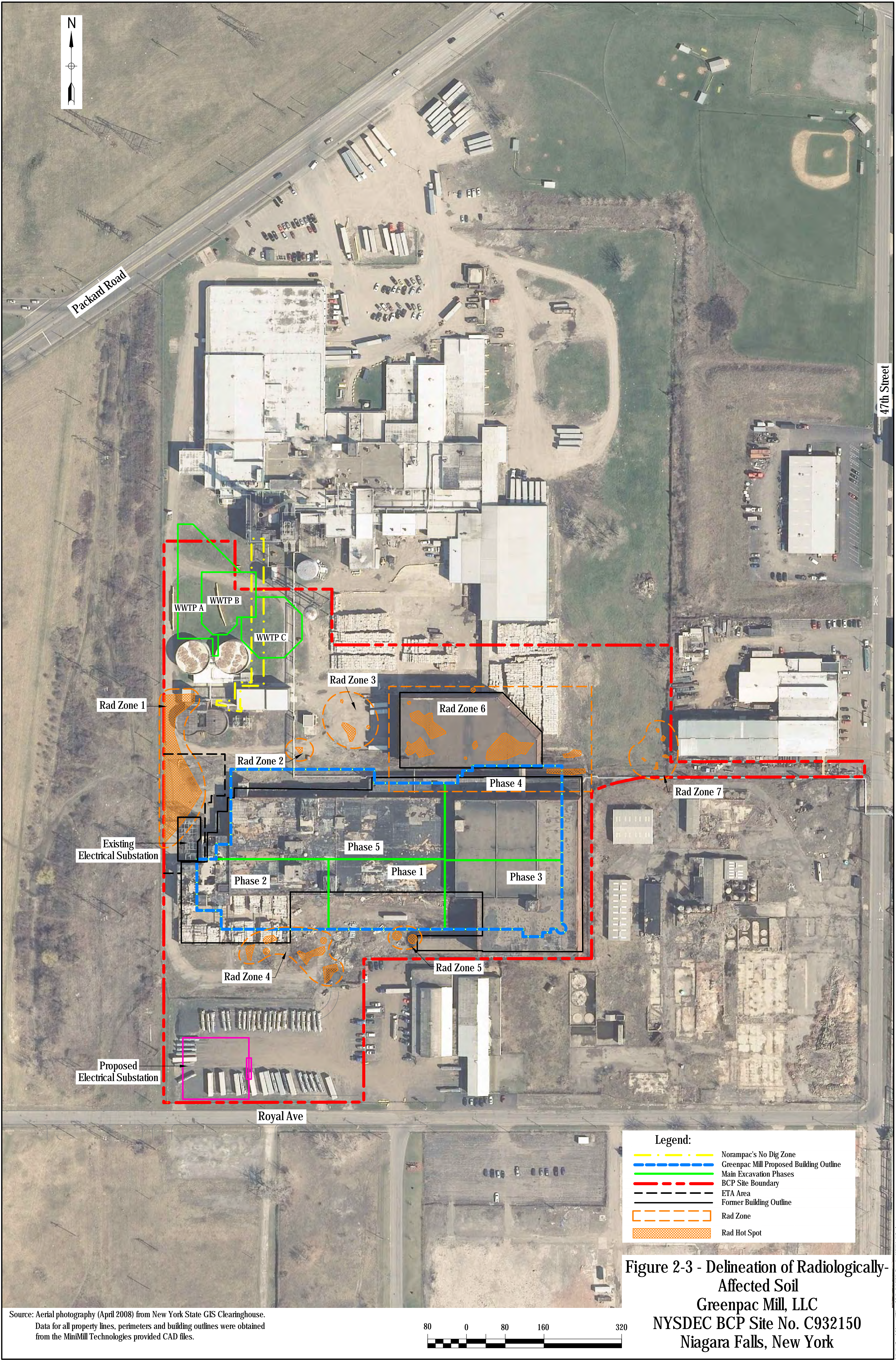


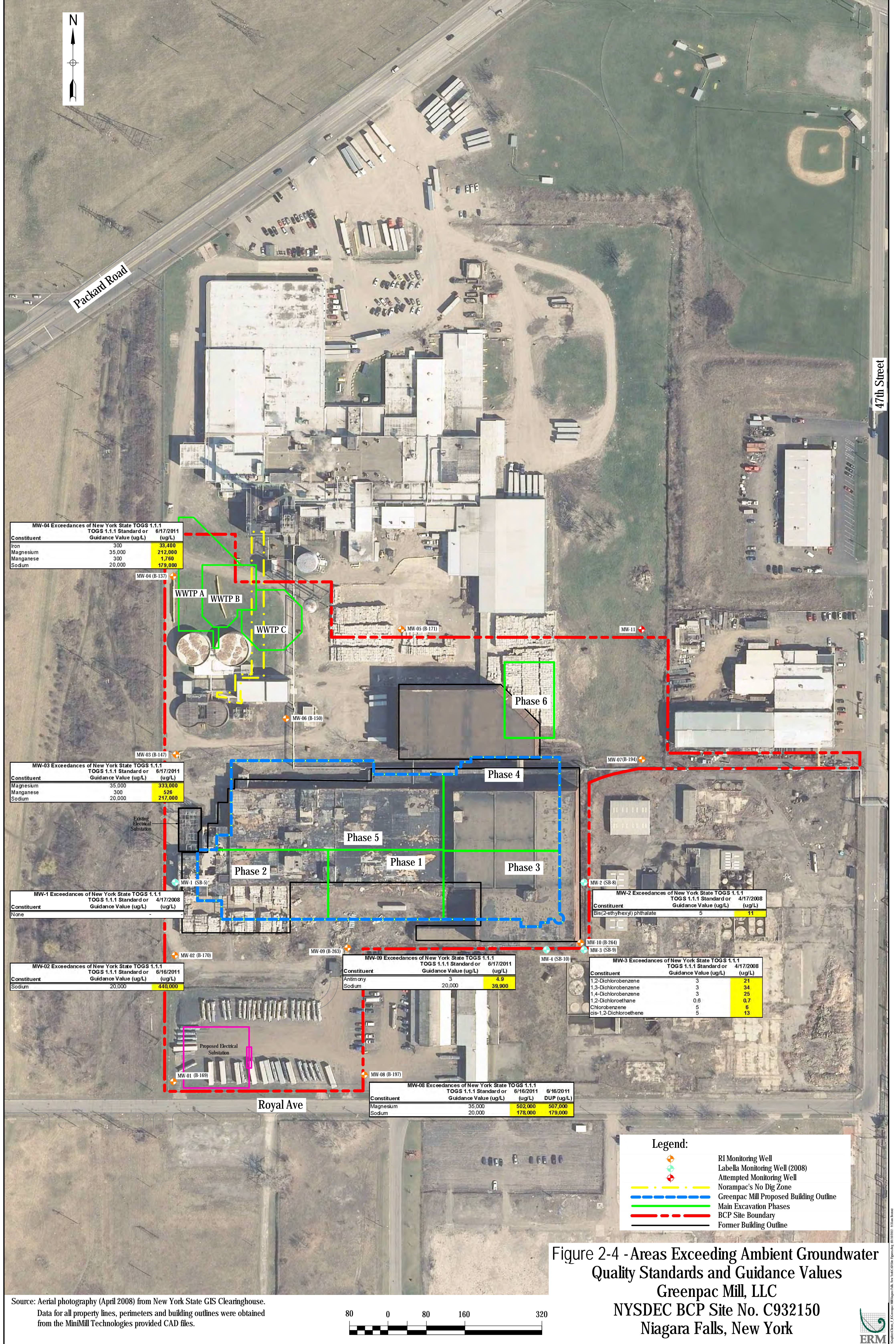












Source: Aerial photography (April 2008) from New York State GIS Clearinghouse.
Data for all property lines, perimeters and building outlines were obtained from the MiniMill Technologies provided CAD files.

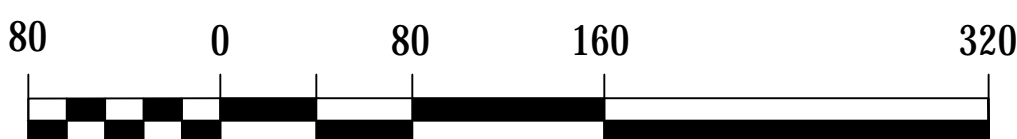
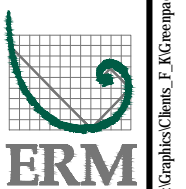
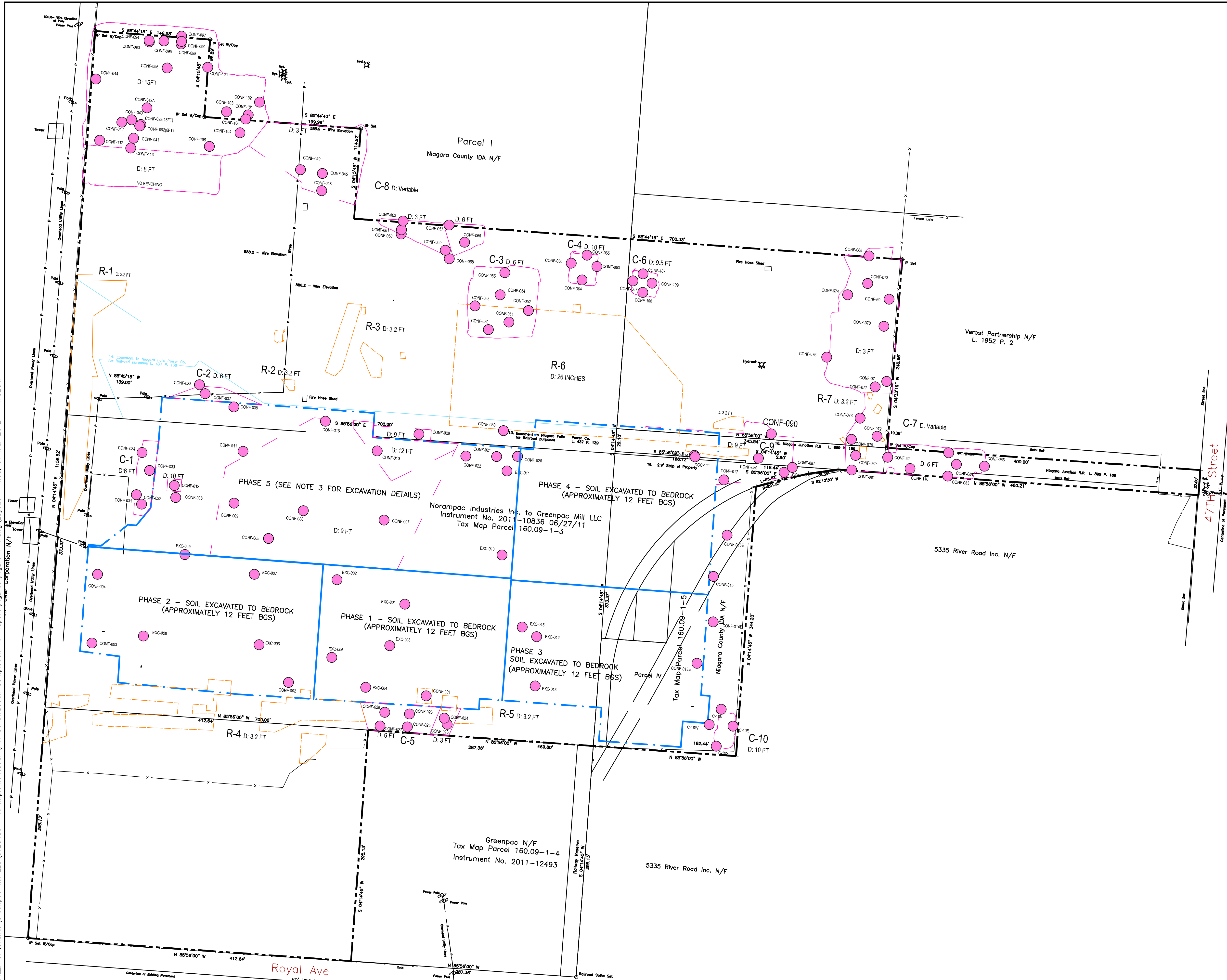


Figure 2-4 - Areas Exceeding Ambient Groundwater Quality Standards and Guidance Values
Greenpac Mill, LLC
NYSDEC BCP Site No. C932150
Niagara Falls, New York



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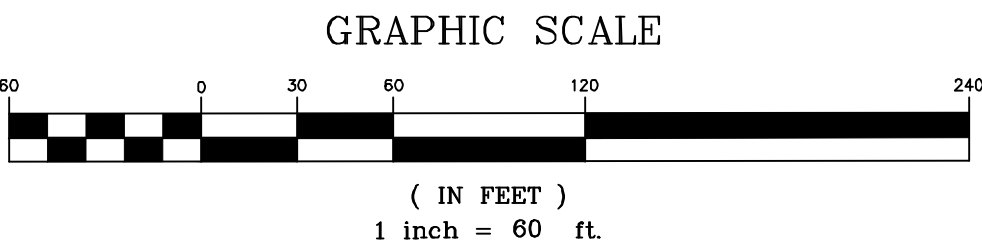


LEGEND

- MAIN EXCAVATION EXTENT
- PHASE BOUNDARY FOR MAIN EXCAVATION
- CHEMICAL HOTSPOT EXCAVATION EXTENT
- RADIOLOGICAL HOTSPOT EXCAVATION EXTENT
- D: X FT FINAL EXCAVATION DEPTH
- CONF-000 APPROXIMATE CONFIRMATION/EXCAVATION DOCUMENTATION SAMPLE LOCATION
- BCP BOUNDARY
- PROPERTY LINE
- FENCE LINE
- POWER POLE
- OVERHEAD UTILITY
- HYDRANT

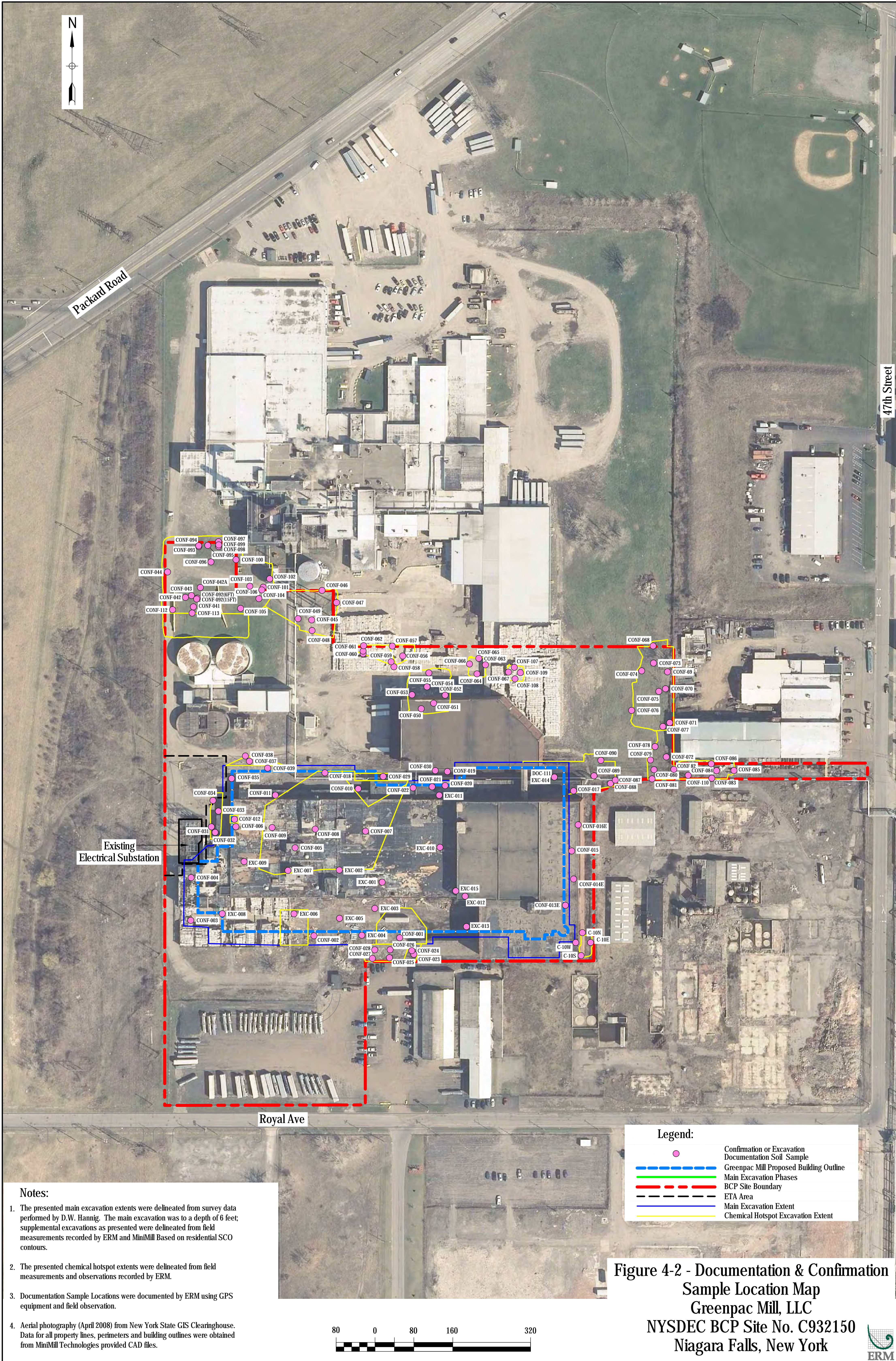
NOTES:

- ALL EXCAVATIONS GREATER THAN 4 FEET IN DEPTH WERE BENCHMARKED AT APPROXIMATELY A 1:1 HORIZONTAL TO VERTICAL RATIO, UNLESS OTHERWISE INDICATED.
- THE PRESENTED DEPTHS OF SOIL EXCAVATION BELOW THE GROUND SURFACE WERE BASED ON MODELED DATA FROM THE RI THAT UTILIZED APPROXIMATE SITE ELEVATIONS TO DESIGNATE THE DEPTH OF SOILS EXCEEDING SOIL CLEANUP OBJECTIVES. CONFIRMATION SAMPLES WERE TAKEN TO VERIFY THE FINAL EXCAVATION DEPTH WAS SUFFICIENT FOR REMOVAL OF IMPACTED SOIL.
- THE PRESENTED MAIN EXCAVATION EXTENTS WERE DELINEATED FROM SURVEY DATA PERFORMED BY D.W. HANNIG. THE BOUNDARIES OF PHASE 1 THRU 5 WERE BASED ON FIELD MARKINGS BY MINIMILL. ALL SOIL WITHIN PHASES 1 THRU 4 OF THE MAIN EXCAVATION EXTENTS WAS REMOVED TO BEDROCK AT A DEPTH OF APPROXIMATELY 12 FEET. THE TARGET DEPTH WAS 6 FEET FOR PHASE 5. SOIL WAS REMOVED TO THE EXTENTS SHOWN TO ACHIEVE INDUSTRIAL SCOs IN THOSE AREAS OF PHASE 5. THESE EXTENTS WERE DELINEATED BASED ON FIELD MEASUREMENTS AND OBSERVATIONS RECORDED BY ERM AND MINIMILL. ADDITIONAL SOIL WAS REMOVED FROM PHASE 5 FOR STRUCTURAL PURPOSES AND THOSE EXTENTS ARE NOT PRESENTED.
- THE PRESENTED CHEMICAL HOTSPOT EXTENTS WERE DELINEATED FROM FIELD MEASUREMENTS AND OBSERVATIONS RECORDED BY ERM.
- THE PRESENTED RADIOLOGICAL HOTSPOT EXTENTS WERE DELINEATED FROM FIELD MEASUREMENTS RECORDED BY ERM AND FIELD MARKINGS BY MINIMILL.
- CONFIRMATION AND DOCUMENTATION SAMPLE LOCATIONS WERE DOCUMENTED BY ERM USING GPS EQUIPMENT AND FIELD OBSERVATIONS.
- THE BASE INFORMATION SHOWN HEREIN IS FROM AN ALTA/ASCM LAND TITLE SURVEY PREPARED BY D.W. HANNIG L.S., P.C., AND COMPLETED 08 MARCH 2011 AND REVISED ON 13 FEBRUARY 2012. ADDITIONAL FEATURES INCLUDING EXCAVATION EXTENTS, PHASE DELINEATION, AND CONFIRMATION SAMPLE LOCATIONS WERE PROVIDED BY ERM.



WARNING:

IT IS A VIOLATION OF THE NYS EDUCATION LAW ARTICLE 145 FOR ANY PERSON, UNLESS HE/SHE IS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS ITEM IN ANY WAY.



Notes:

1. The presented main excavation extents were delineated from survey data performed by D.W. Hannig. The main excavation was to a depth of 6 feet; supplemental excavations as presented were delineated from field measurements recorded by ERM and MiniMill Based on residential SCO contours.
2. The presented chemical hotspot extents were delineated from field measurements and observations recorded by ERM.
3. Documentation Sample Locations were documented by ERM using GPS equipment and field observation.
4. Aerial photography (April 2008) from New York State GIS Clearinghouse. Data for all property lines, perimeters and building outlines were obtained from MiniMill Technologies provided CAD files.

Legend:

- Confirmation or Excavation Documentation Soil Sample
- Greenpac Mill Proposed Building Outline
- Main Excavation Phases
- BCP Site Boundary
- ETA Area
- Main Excavation Extent
- Chemical Hotspot Excavation Extent

Figure 4-2 - Documentation & Confirmation
Sample Location Map
Greenpac Mill, LLC
NYSDEC BCP Site No. C932150
Niagara Falls, New York

Maximum Contaminant Concentrations
Former Mill No. 2 Site
Niagara Falls, New York
NYSDEC BCP No. C932150

SOIL

CONSTITUENT	UNITS	6NYCRR Part 375 Restricted SCO Industrial	# of Instances	Max Value
SVOCs				
Benzo(a)anthracene	(µg/kg)	11000	4	43000
Benzo(a)pyrene	(µg/kg)	1100	36	36000
Benzo(b)fluoranthene	(µg/kg)	11000	4	70000
Dibenzo(a,h)anthracene	(µg/kg)	1100	6	6600
Indeno(1,2,3-cd)pyrene	(µg/kg)	11000	2	22000
Metals				
Arsenic	(mg/kg)	16	24	244
Manganese	(mg/kg)	10000	7	55000
Mercury	(mg/kg)	5.7	1	8.4

GROUNDWATER

CONSTITUENT	UNITS	TOGS 1.1.1 Standard Value or Guidance Value	# of Instances	Max Value
VOCs				
1,2- Dichlorobenzene	(µg/L)	3	1	21
1,2- Dichloroethane	(µg/L)	0.6	1	0.7
1,3- Dichlorobenzene	(µg/L)	3	1	34
1,4- Dichlorobenzene	(µg/L)	3	1	25
Chlorobenzene	(µg/L)	5	5	6
cis-1,2-Dichloroethene	(µg/L)	5	5	13
SVOCs				
Bis(2-ethylhexyl) phthalate	(µg/L)	5	1	11
Metals				
Antimony	(µg/L)	3	1	4.9
Manganese	(µg/L)	300	2	2286
Magnesium	(µg/L)	35000	3	1047000
Sodium	(µg/L)	20000	5	1053900