DECISION DOCUMENT

Goulds Pumps Cobalt Site
Brownfield Cleanup Program
Seneca Falls, Seneca County
Site No. C850012
November 2014

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

DECLARATION STATEMENT - DECISION DOCUMENT

Goulds Pumps Cobalt Site
Brownfield Cleanup Program
Seneca Falls, Seneca County
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Statement of Purpose and Basis

This document presents the remedy for the Goulds Pumps Cobalt 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 Goulds Pumps Cobalt 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. Green Remediation: A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation 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;
- 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. Cover System: A site cover system will be required to allow for industrial use of the site. The cover system will consist either of the structures such as buildings, pavement, sidewalks

comprising the site development or a soil/fill material cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the cover system is required it will be a minimum of one foot of soil/fill material, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for industrial use. If a vegetation layer is needed the upper six inches of the soil of the cover system will be of sufficient quality to maintain the vegetation layer. Any soil/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. Institutional Control: Imposition of an institutional control in the form of an environmental easement for the controlled property that:

- Requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- Allows the use and development of the controlled property for 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;
- Requires compliance with the Department approved Site Management Plan.

4. Site Management Plan: A Site Management Plan is required, which includes the following:
A. An Institutional and Engineering Control Plan (IC/EC 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, site use restrictions, and groundwater use restriction as presented in Item#2.
- Engineering Controls: Cover system as presented in Item #3.

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

- An Excavation Plan which details the provisions for management of future excavations at the site;
- Descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- A provision for evaluation of the potential for soil vapor intrusion for any current buildings which become occupied and/or future buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- 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;

- Monitoring for vapor intrusion for any current buildings which become occupied and/or future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed in Item #4A.

C. An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes but not limited to:

- Compliance monitoring of treatment systems to ensure proper O&M as well as providing data for any necessary permit or permit equivalent reporting;
- Maintaining site access controls and Department notification; and
- Providing the Department access to the site and O&M records.

Declaration

The remedy conforms to 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

Goulds Pumps Cobalt Site
Seneca Falls, Seneca County
Site No. C850012
November 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 repository:

Seneca Falls Public Library
Attn: Michael Caraher
47 Cayuga Street
Seneca Falls, NY 13148
Phone: 315-568-8265

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 within the Town of Seneca Falls, Seneca County in rural area adjacent to the Village of Seneca Falls. It is bounded to the north by New York State Electric & Gas substation, meadows, and woodlands; to the east by the Goulds Pumps Facility site (Brownfield Cleanup Program ID No. C850013) followed by private residences and the Ferrara Lumber Company; to the south by residential/commercial structures followed by the Seneca River (also known as the Cayuga and Seneca Canal); and to the west by the former ITT Goulds Pumps landfill (Inactive Hazardous Waste Disposal Site No. 850002) followed by residential properties. The Goulds Pumps Cobalt site is an 11.4 acre parcel.

Site Features:
The main features of the site are Building 900 known as the Project Cobalt building, the hazardous waste storage area (also known as the Northwest Storage Area), a parking lot, and the chip storage building. The Project Cobalt building is continuously occupied during normal working hours.

Current Zoning and Land Use:
The site is an active pump manufacturing facility and is zoned for industrial use. Residential and commercial properties are located directly adjacent to the site to the south.

Past Use of the Site:
Goulds Pumps began operation in the mid-19th century as a manufacturer of industrial, agricultural, and consumer pumps. The site was historically an open area with a parking lot and several small storage buildings located in the southeast corner of the site. The area was primarily used for the storage of parts and equipment. Prior to the 1980s a set of elevated rail spurs and a receiving area were located in this area for the delivery of foundry sand. The rail spur and receiving area were removed in the 1980s and the area was re-graded. The site was acquired by ITT Corporation in 1997.

A property-wide Phase I Environmental Site Assessment was conducted in 1999. The Phase I identified 25 areas of potential concern (APC) at the manufacturing facility.

A Phase II property-wide groundwater survey was completed in 2006-2007 to assess the groundwater conditions at the site.

Site Geology and Hydrogeology:
The site is underlain with fill material followed by glaciolacustrine silt and clay deposits with intermittent thin sand layers. The fill material consists of a mixture of sand, gravel, slag, brick, and

foundry sand. The fill thickness varies across the site from 1 to 10 feet. The glaciolacustrine deposits extend to approximately 62 feet below grade. The upper portion of the deposit consists of clay and silt with coarse sand or fine gravel, extend to approximately 44 feet below grade. A very dense dry basal till unit is approximately 62 feet below grade and extends to the top of bedrock. Top of bedrock at the site ranges from 82 to 84 feet below ground surface.

The depth to groundwater varies across the site. Groundwater levels in the glaciolacustrine silt/clay range from 4 feet to 16 feet below ground surface. Groundwater flow direction is southern towards the Cayuga Seneca Canal. Hydraulic conductivity tests indicate low permeability due to the glacial till, silt, or silty sand.

The original Brownfield Cleanup Agreement was executed October 14, 2004 for the Northwest Storage Area (NWSA) and assigned Brownfield Cleanup Program Site No. C850012 (2.17 acres).

Brownfield Cleanup Agreement Amendment #1:
Amendment #1 re-defined the site as the whole facility, including the NWSA, (minus the landfill). The site was known as the Goulds Pumps Administration, Inc. Site (40.40 acres). The amended BCP agreement was approved February 23, 2010.

Brownfield Cleanup Agreement Amendment #2:
Amendment #2 re-defined the site 6.2 acres of the former Goulds Pump Administration, Inc. site, including the NWSA, as well as 5.2 additional acres located directly south of the former Goulds Pump Administration, Inc. site boundary. The Goulds Pumps Cobalt site retained the original Brownfield Cleanup Site No. C850012 (total site acreage 11.4).

The remaining portion of the Goulds Pump Administration site will be addressed under the Brownfield Cleanup Program Site No. C850013 and is known as Goulds Pumps Facility site (34.204 acres).

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 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

One or more of the Applicants under the Brownfield Cleanup Agreement is a Participant. The

Participant(s) has/have an obligation to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary.

The original Brownfield Cleanup Agreement was executed October 14, 2004 for the Northwest Storage Area (NWSA) (2.17 acres).

Brownfield Cleanup Agreement Amendment #1:
Amendment #1 defined the site was defined as the whole facility (minus the landfill) and was known as the Goulds Pumps Administration, Inc. Site (40.40 acres). The amended BCP agreement was approved February 23, 2010.

Brownfield Cleanup Agreement Amendment #2:
Amendment #2 defined the site as 6.2 acres of the former Goulds Pump Administration, Inc. site, including the NWSA, and 5.2 additional acres located directly south of the former Goulds Pump Administration, Inc. site boundary (total site acreage 11.4). The Goulds Pumps Cobalt site will retain the Brownfield Cleanup Site No. C850012.

The remaining portion of the Goulds Pump Administration site will be addressed under the Brownfield Cleanup Program Site No. C850013 and will be known as Goulds Pumps Facility site (34.204 acres).

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:

1,1,1 TCA
POLYCHLORINATED BIPHENYLS (PCB)
LEAD
MERCURY
BENZO(A)PYRENE
DIBENZO[A,H]ANTHRACENE
1,1-DICHLOROETHANE
ARSENIC
VINYLIDENE CHLORIDE

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.

Northwest Storage Area PCB Interim Remedial Measure Soil Removal

A Remedial Action Plan for the removal of PCB contaminated soils was approved as an Interim Remedial Measure (IRM). PCB contaminated soil/fill material that exceeded 10 ppm was excavated, staged on-site, and disposed off-site at a permitted landfill facility. A geotextile

demarcation layer and 1 foot of cover material (crusher run) meeting Part 375-6.7(d) for industrial use restrictions was installed as a cover system at the NWSA site. The PCB-contaminated soil removal IRM and the cover system installation was completed in 2005.

Goulds Pumps Project Cobalt Building Interim Remedial Measures and Construction

Cobalt Building Soil Removal IRM:
Prior to construction of the Cobalt Building, six (6) areas within the construction area were identified as having exceedances of the industrial SCOS for arsenic, lead, mercury, and benzo(a)pyrene. PCBs were indicated to exceed the USEPA Industrial Regional Screening Level (RSL) of 0.74 mg/kg. Approximately 188 tons of soil/fill material was excavated and disposed off-site at a permitted landfill facility. Confirmatory sampling from the excavation areas indicated exceedances for arsenic at 2.5 and 6.6 ft. below ground surface (bgs), mercury at 6.6 ft. bgs, benzo(a)pyrene at 7 ft. bgs, benzo(b)fluoranthene at 7 ft. bgs, and dibenzo(a,h)anthracene at 7 ft. bgs.

As part of the Cobalt building construction activities, soil/fill material within the areas of exceedances were excavated to a depth of 7 ft. to 27 ft. bgs. Approximately 70,000 tons of soil/fill material from the Cobalt building construction activities was excavated and disposed off-site at a permitted landfill facility. As part of the Cobalt building construction, clean fill material meeting the requirements of 6 NYCRR Part 375-6.7(d) was imported to the site to complete backfilling of the Cobalt building construction excavations and establish the designed grades for the construction of the Cobalt Building.

The cover system within the Cobalt building construction area includes the Cobalt building, concrete sidewalks, asphalt parking, and 1 foot of cover material and was completed August 2014. The installed cover system meets Part 375-6.7(d) for the industrial use restriction. A soil vapor intrusion evaluation was conducted prior to the construction of the Cobalt Building and it was determined that no additional actions were needed for the building based on sampling from the footprint of the building and construction specifications.

USEPA Self Implementing Plan PCB IRM Soil Removal:
Additional soil sampling at the site indicated that PCB concentrations in the soil/fill material exceeded the industrial SCO of 25 ppm as well as the USEPA Industrial Regional Screening Level (RSL) of 0.74 mg/kg in three (3) areas on the site. Approximately 351 tons of soil/fill material was excavated and transported off-site for disposal at a permitted landfill facility. Confirmatory sampling in 2 of the 3 areas indicated that exceedances of the Protection of Groundwater SCO and the RSL remained. Clean fill material meeting the requirements of 6 NYCRR Part 375-6.7(d) was imported to the site to complete backfilling of the PCB excavations and establish the designed grades for the site. The cover system installed includes concrete sidewalks, asphalt parking, and 1 foot of cover material was completed August 2014. The installed cover system meets the industrial use restrictions.

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:

Northwest Storage Area PCB Interim Remedial Measure Soil Removal:

Based on the investigation conducted the primary contaminants of concern include PCBs, 1,1,1-Trichloroethane, 1,1-Dichloroethane, and 1,1-Dichloroethene (vinylidene chloride).

Soil -
Soil sampling indicated that PCBs that exceeded the industrial soil cleanup objective (SCO). PCB contamination was detected in shallow soils of the site from 0-5 feet below ground surface. Concentrations of PCBs ranged from non-detect to 277 parts per million (ppm).

Groundwater -
Groundwater sampling indicates chlorinated volatile organic compounds, PCBs, and metals that exceeded the standards, criteria, and guidance values. 1,1,1-Trichloroethane and its associated degradation products have been detected at concentrations that exceed the State's standards and guidance values. 1,1,1-Trichloroethane concentration ranged from non-detect to 6200 ppb (SCG value 5 ppb). 1,1-Dichloroethane concentrations ranged from non-detect to 1000 ppb (SCG value 5 ppb). 1,1-Dichloroethene concentration ranged from non-detect to 2400 ppb (SCG value 5 ppb). Aroclor 1260 concentration ranged from non-detect to 680 ppb (SCG value 0.09 ppb). Aroclor 1254 ranged from non-detect to 19 ppb (SCG value 0.09 ppb). Metals such as lead, chromium, and cadmium have been detected at the site. Lead concentration ranged from non-detect to 74.9 ppb (SCG value 25 ppb). Cadmium concentration ranged from non-detect to 6.66 ppb (SCG value 5 ppb).

Post-Remediation Northwest Storage Area PCB Interim Remedial Measure Soil Removal:
PCB contaminated soil/fill material that exceeded 10 ppm was excavated, staged on-site, and disposed off-site at a permitted landfill facility. A geotextile demarcation layer was installed and 1 foot of cover material (crusher run) was installed on top of the demarcation layer meeting Part 375-6.7(d) for industrial use restrictions. A recent groundwater sampling completed in June 2014 indicates concentrations of 1,1,1-TCA at 250 and 180 ppb and 1,1-DCE at 160 and 180 ppb and 1,1-DCA at 140 and 120 ppb. A recent sampling events (10/2013 and 05/2014) indicated PCB concentrations in groundwater ranged from non-detect to 0.66 ppb.

Goulds Pumps Project Cobalt Building Interim Remedial Measures and Construction.

USEPA Self Implementing Plan PCB Interim Remedial Measure Soil Removal:
Soil sampling indicated that PCB concentrations in soil/fill material exceeded the industrial SCO of 25 ppm as well as the USEPA Industrial Regional Screening Level (RSL) of 0.74 mg/kg in three (3) areas on the site. The PCB concentrations in soil ranged from non-detect to 120 ppm.

Post-Remediation USEPA Self Implementing Plan PCB Interim Remedial Measure Soil Removal:
PCB contaminated soils in three (3) areas of the site that exceeded the Part 375 Industrial SCO and the RSL were excavated and disposed off-site at a permitted landfill facility. In addition, a concrete pad within the excavation area was removed and disposed off-site at a permitted landfill facility. Confirmatory sampling in 2 of the 3 areas indicated exceedances of the PCB Part 375 Protection of Groundwater SCO and the RSL. The 2 areas with the exceedances of the Part 375 Protection of Groundwater SCO and the RSL are now covered with the Cobalt building associated support features for such as concrete sidewalks, asphalt parking lot, or asphalt roadway.

Project Cobalt Building Soil Excavation Interim Remedial Measure:
Investigation activities completed within the building construction area indicated six (6) areas where concentrations of SVOCs and metals in soils that exceeded the Part 375 Industrial SCOs. Arsenic concentrations ranged from non-detect to 46.5 ppm (Industrial SCO 16 ppm). Lead concentrations ranged from non-detect to 4,300 ppm (Industrial SCO 3,900 ppm). Mercury concentrations ranged from non-detect to 264 ppm (Industrial SCO 5.7 ppm). SVOC concentrations, mainly PAHs, were detected above the Part 375 Industrial SCO. Benzo(a)pyrene concentrations ranged from non-detect to 7.3 ppm (Industrial SCO 1.1 ppm) and dibenzo(a,h)anthracene concentrations ranged from non-detect to 2.4 ppm (Industrial SCO 1.1 ppm).

Post-Remediation Project Cobalt Building Excavation Interim Remedial Measure:
The excavation of the SVOC and metal contaminated soils within the six (6) was completed in July 2013. Confirmatory sampling from the excavation areas indicated that 4 of the 6 areas had exceedances for arsenic at 2.5 and 6.6 below ground surface (bgs), mercury at 6.6 ft. bgs, benzo(a)pyrene at 7 ft. bgs, benzo(b)fluoranthene at 7 ft. bgs, and dibenzo(a,h)anthracene at 7 ft. bgs. As part of the Cobalt building construction activities, soil/fill material within the confirmatory sampling areas that exceeded the SCOs was excavated to a depth of 7 ft. to 27 ft. bgs and those areas are now covered by the Cobalt building and associated support features such as concrete sidewalks, asphalt parking lot, or asphalt roadway.

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*.

Measures are in place to control the potential for workers from coming in contact with subsurface soil and groundwater contamination remaining at the site. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move

into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. An evaluation of the new on-site building has demonstrated that soil vapor intrusion is not a concern. However, the potential exists for people to inhale site contaminants in indoor air due to soil vapor intrusion in any additional on-site building development and occupancy.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.
- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Cover System and Site Management remedy.

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

1. Green Remediation: A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation 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;
- 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. Cover System: A site cover system will be required to allow for industrial use of the site. The cover system will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil/fill material cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the cover system is required it will be a minimum of one foot of soil/fill material, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for industrial use. If a vegetation layer is needed the upper six inches of the soil of the cover system will be of sufficient quality to maintain the vegetation layer. Any soil/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. Institutional Control: Imposition of an institutional control in the form of an environmental easement for the controlled property that:

- Requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- Allows the use and development of the controlled property for 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;
- Requires compliance with the Department approved Site Management Plan.

4. Site Management Plan: A Site Management Plan is required, which includes the following:
A. An Institutional and Engineering Control Plan (IC/EC 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, site use restrictions, and groundwater use restriction as presented in Item#2.
- Engineering Controls: Cover system as presented in Item #3.

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

- An Excavation Plan which details the provisions for management of future excavations at the site;
- Descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;
- A provision for evaluation of the potential for soil vapor intrusion for any current buildings which become occupied and/or future buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- 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.

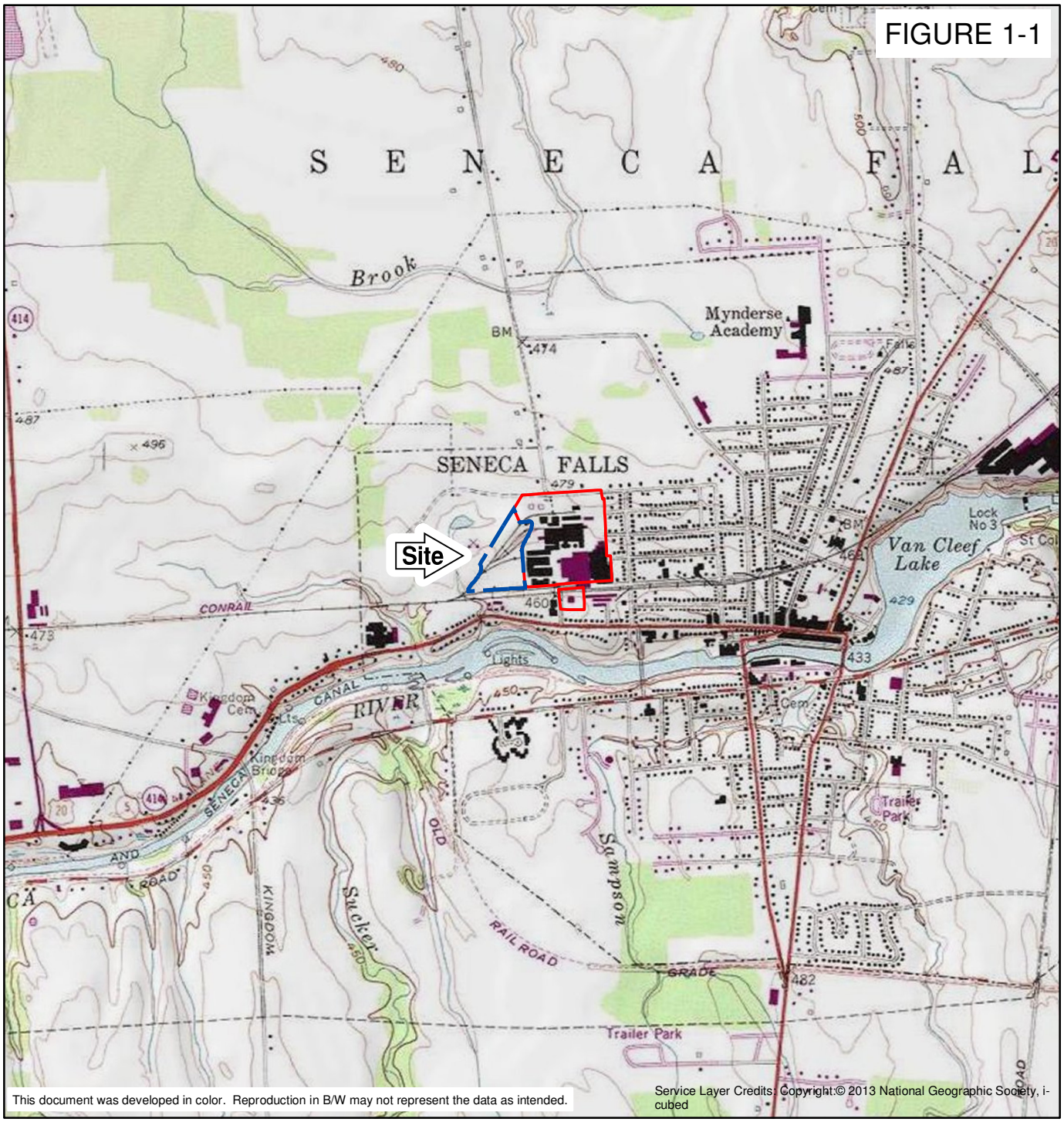
B. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- Monitoring of groundwater to assess the performance and effectiveness of the remedy;
- A schedule of monitoring and frequency of submittals to the Department;
- Monitoring for vapor intrusion for any current buildings which become occupied and/or future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed in Item #4A.

C. An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes but not limited to:

- Compliance monitoring of treatment systems to ensure proper O&M as well as providing data for any necessary permit or permit equivalent reporting;
- Maintaining site access controls and Department notification; and
- Providing the Department access to the site and O&M records.

FIGURE 1-1



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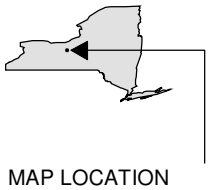
PLOTDATE: 7/2/2014 12:52:30 PM NewtonJM

ADAPTED FROM: SENECA FALLS USGS QUADRANGLE

LEGEND

GOULDS PUMPS COBALT SITE BOUNDARY

GOULDS PUMPS FACILITY SITE BOUNDARY



MAP LOCATION

GOULDS PUMPS COBALT SITE
240 FALL STREET
SENECA FALLS, NEW YORK
SITE NO. C850012

SITE LOCATION

N

0 1,000 2,000 4,000 6,000 8,000

Feet

JUNE 2014
3356.50706

1:24,000

O'BRIEN & GERE

PLOTDATE: 07/02/14 12:51:33 PM Newton.JM

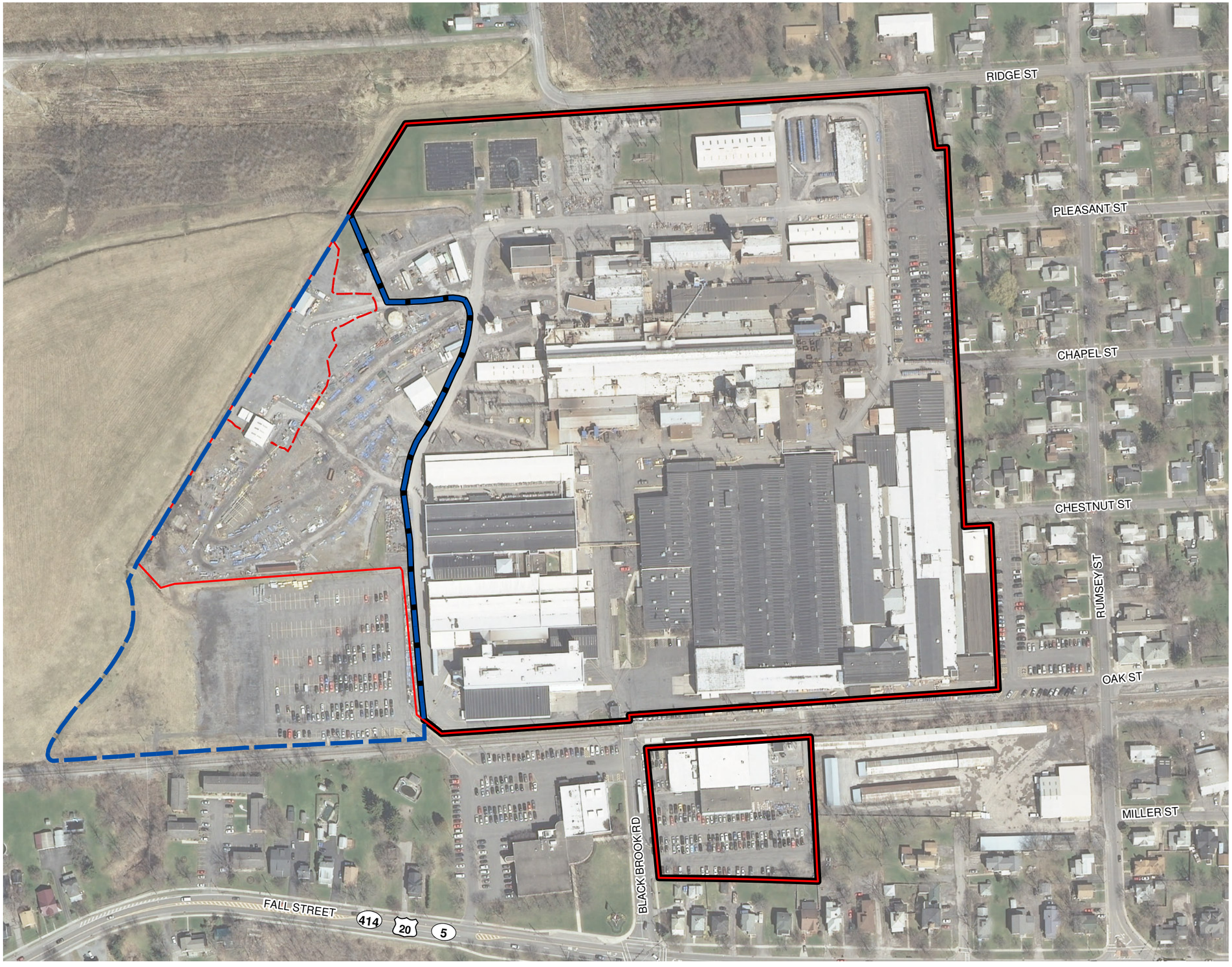


FIGURE 1-2

N

LEGEND

- NWSA BOUNDARY
- GOULDS PUMPS COBALT SITE BOUNDARY
- GOULDS PUMPS FACILITY SITE BOUNDARY
- GOULDS PUMPS ADMINISTRATION INC. SITE BOUNDARY

GOULDS PUMPS COBALT SITE
240 FALL STREET
SENECA FALLS, NEW YORK
SITE NO. C850012

COBALT BCP BOUNDARY

0 100 200 400
Feet

JUNE 2014
3356.50706

O'BRIEN & GERE

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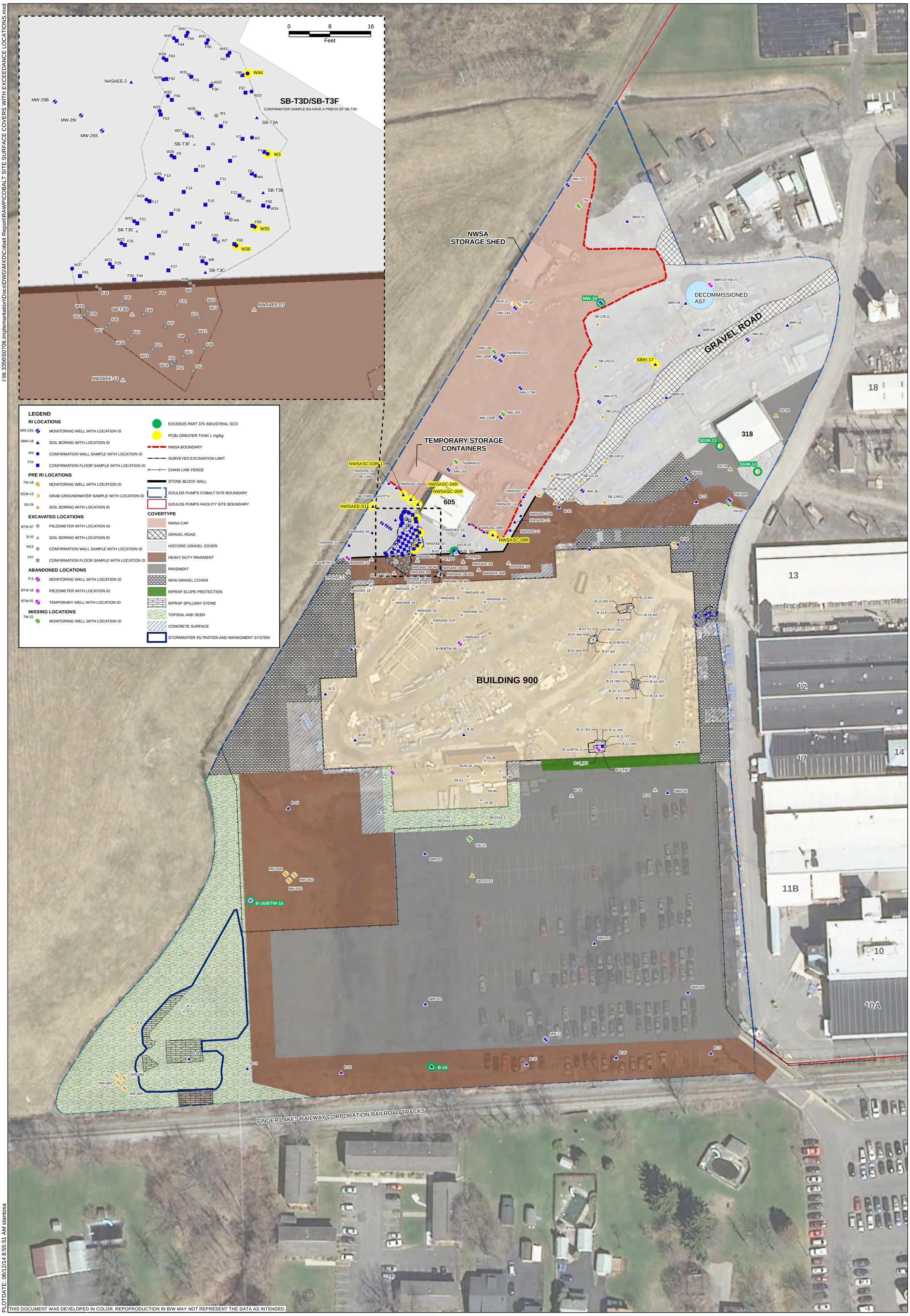

PLOTDATE: 08/12/14 8:55:51 AM stantosa

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COBALT SITE SURFACE COVERS WITH EXCEEDANCE LOCATIONS

GOULDS PUMPS COBALT SITE
240 FALL STREET
SENECA FALLS, NEW YORK
SITE NO. C850012

0 45 90 135 180
Feet

N

FIGURE 2

AUGUST 2014
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