DECISION DOCUMENT

South Salina Street Parcels
Brownfield Cleanup Program
Syracuse, Onondaga County
Site No. C734140
August 2020

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

DECLARATION STATEMENT - DECISION DOCUMENT

South Salina Street Parcels
Brownfield Cleanup Program
Syracuse, Onondaga County
Site No. C734140
August 2020

Statement of Purpose and Basis

This document presents the remedy for the South Salina Street Parcels 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 South Salina Street Parcels 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. Excavation

Excavation and off-site disposal of contaminant source areas, including soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards. Contaminated groundwater encountered during excavation of soil will be removed from the excavation and disposed off-site. Approximately 5000 cubic yards of contaminated soil will be removed from the site.

2. Site Cover

A site cover will be required to allow for restricted residential and/or commercial use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

3. Monitored Natural Attenuation

Groundwater will be monitored for site related contamination and also for MNA indicators which will provide an understanding of the (biological activity) breaking down the contamination. Reports of the attenuation will be provided at yearly intervals, and active remediation will be proposed after 5 years if it appears that natural processes alone will not address the contamination. The contingent remedial action will be In-Situ Chemical Oxidation, unless information available at the time indicates this is not the appropriate remedial action.

4. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require 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);
- allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- require compliance with the Department approved Site Management Plan.

5. Site Management Plan is required, which includes the following:

An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The Environmental Easement discussed in remedial element 4 above.

Engineering Controls: The soil cover discussed in remedial element 2.

This plan includes, but may not be limited to:

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

- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;

- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to

address exposures related to soil vapor intrusion;

- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in remedial element 2 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);

- 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.

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; and

- monitoring for vapor intrusion for any new buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

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.

8/31/2020
Date

Susan Edwards
Susan Edwards, Director
Remedial Bureau D

DECISION DOCUMENT

South Salina Street Parcels
Syracuse, Onondaga County
Site No. C734140
August 2020

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:

DEC Info Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C734140

Syracuse Industrial Development Agency
Attn: Honora Spillane
City Commons Hall, 201 E. Washington St, 7th Fl.
Syracuse, NY 13202
Phone: (315) 473-3275

NYS DEC - Region 7 Office
Attn: Christopher F. Mannes, P.E.
615 Erie Blvd. West
Syracuse, NY 13204
Phone: 315-426-7515

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 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 1.89 acres and is bordered on the west by South Salina Street, across the street from the former Coyne Textile Services Brownfield Cleanup Program site (ref. Site No. C734144); on the south by a church; to the north by a small glass and mirror shop; and to the east by a community center along Montgomery Street.

Site Features:

Currently, the site is undeveloped with no structures on the property. The site is a relatively flat lot with broken pavement along with grassed-vegetated areas and some mature trees across the property.

Current Zoning and Land Use:

The site property is zoned as BA District, which permits the intensive development of land for mixed residential, retail, service and certain industrial uses. Adjacent parcels are zoned for commercial (CA) to the north, west, and southwest, BA to the north and south, and residential (RB) to the east. Other nearby parcels are a mix of industrial, commercial, business, and residential land uses.

Past Use of the Site:

Previously, the site was used as an above-ground storage tank facility for manufactured gas generated from coal or oil. The approximately 125-foot diameter tank, called a gasometer, stored gas for distribution for city and private lighting, cooking, and heating.

The facility operated in the late 1890s until taken out of service sometime before 1951. Thereafter, various uses of the site included a rug cleaner, bottling operation, laundry/dry cleaner, automobile repair, refrigerator repair shop, tailor, plumbing shop, paint shop, and a glass warehouse. The buildings were demolished in the late 1970s and early 1980s and then the site was used as a parking lot.

Site Geology and Hydrogeology:

The greater portion of the site is underlain with a mix of sand, silt, and clay soils that contain historic fill to a depth of approximately 20 feet. The historic fill contains clay tile, ash, coal and brick. Native soil is located below the fill and consists of peat and marl. The depth to water is approximately 7 to 10 feet below grade with groundwater flow direction to the north-west.

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 restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site or leaving the site. The

RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings, or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- soil

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

benzene
toluene
ethylbenzene
xylene (mixed)
styrene
benzo(a)anthracene
benzo(b)fluoranthene
benzo(a)pyrene
benzo(k)fluoranthene
chrysene
dibenzo (a,h)anthracene
indeno(1,2,3-cd) pyrene
mercury
lead
copper
barium

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

- soil
- groundwater

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.

A remedial investigation was conducted to assess the nature and extent of contamination at the site. The remedial investigation consisted of the following elements: the evaluation of buried utilities; collection and analysis of eight surface soil samples; the installation of 33 soil borings which included the collection and analysis of 18 subsurface soil samples; the excavation of six test pits with the analysis of one soil sample; and the installation of five groundwater monitoring wells which included two rounds of groundwater monitoring.

Soil and groundwater samples were analyzed for a combination of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, herbicides, PCBs, metals (including mercury, cyanide, and hexavalent chromium), 1,4-dioxane, and PFOS/PFOA.

Soils:

Contaminants of concern have been identified at concentrations that exceed the Restricted-Residential (RR) Soil Cleanup Objectives (SCOs). The contamination of the soils is generally associated within the historical fill material (HFM) at the site. HFM was observed at varying depths from the surface to approximately 20 feet below grade. SVOCs are present in surface soil samples across the site at concentrations that exceed Restricted-Residential Use SCOs. SVOCs and metals are also present in the sub-surface soils within the HFM at concentrations above Restricted Residential Use SCOs. The types and concentrations of SVOCs and metals that have been identified are consistent with those typically found in historically industrialized urban areas. Native soils sampled from beneath the HFM do not exceed RR SCOs for any analytes. These results suggest that the contaminants of concern are contained within the observed on-site HFM.

Surface Soil:
Sampling depth: 0 to 2 inches

A total of eight surface samples were obtained across the site. Laboratory results indicate several SVOCs are above Restricted Residential (RR) use SCOs including, benzo(a)anthracene with concentrations ranging from 1.7 to 5.5 parts per million (ppm) compared to the RR Use SCO value of 1 ppm; benzo(a)pyrene with concentrations ranging from 1.6 to 4.8 ppm compared to the RR Use SCO value of 1 ppm; benzo(b)fluoranthene with concentrations ranging from 2.3 to 6.6 ppm compared to the RR Use SCO value of 1 ppm; chrysene with concentrations ranging 1.7 to 5.2 ppm compared to the RR Use SCO value of 3.9 ppm; dibenzo(a,h)anthracene with concentrations ranging from 0.37 to 0.7 ppm compared to the RR Use SCO value of 0.33 ppm, and indeno (1,2,3-cd)pyrene with concentrations ranging from 1.1 to 2.8 ppm compared to the RR Use SCO value of 0.5 ppm.

Sub-Surface Soils:

A total of 18 subsurface samples were collected from across the site. Laboratory results of the soils samples obtained from areas containing HFM indicate SVOCs are present at concentrations above Protection of Groundwater SCOs and Restricted-Residential Use SCOs and, to a lesser degree, metals are present at concentrations above Residential-Restricted Use SCOs

Laboratory results indicate several SVOCs are above Restricted Residential Use SCOs including, benzo(a)anthracene with concentrations ranging from 1.6 to 51 parts per million (ppm) compared to the RR Use SCO value of 1 ppm; benzo(a)pyrene with concentrations ranging from 1.2 to 39 ppm compared to the RR Use SCO value of 1 ppm; benzo(b)fluoranthene with concentrations ranging from 1.6 to 49 ppm compared to the RR Use SCO value of 1 ppm; benzo(k)fluoranthene with concentrations ranging from 8.2 to 18 ppm compared to the RR Use SCO value of 3.9 ppm; chrysene with concentrations ranging 3.9 to 40 ppm compared to the RR Use SCO value of 3.9 ppm; dibenzo(a,h)anthracene with concentrations ranging from 0.38 to 5.3 ppm compared to the RR Use SCO value of 0.33 ppm; indeno(1,2,3-cd) pyrene with concentrations ranging from 0.72 to 24 ppm compared to the RR Use SCO value of 0.5 ppm, and phenanthrene with a concentration of 100 ppm compared to the RR Use SCO value of 100 ppm.

Laboratory results indicate several metals above Restricted Residential Use SCOs including, total copper with a concentration of 495 ppm compared to the RR Use SCO value of 270 ppm; lead with a concentration of 415 ppm compared to the RR Use SCO value of 400 ppm; and total mercury with concentrations ranging from 0.88 to 1.2 ppm compared to the RR Use SCO value of 0.81 ppm.

Five test pits were advanced at areas identified as anomalies during a previous geophysical study. At each location, the subsurface contained construction and demolition (C&D) debris, including wood, concrete, brick, asphalt, as well as HFM. Similar observations of fill were made in borings advanced within a large anomaly that coincided with the footprint of the former gasometer. No tanks, vaults, or other subsurface structures were identified while excavating the test pits. In addition, no visual evidence of contamination (e.g., stains or odors) was observed.

Due to the presence of ash at test pit TP-4, a sample was collected. Laboratory results indicate no analytes were above Restricted-Residential Use SCOs.

Groundwater:

Groundwater samples were collected twice, once in October 2019 and again in January 2020, from five groundwater monitoring wells across the site. The depth to groundwater is approximately seven to ten feet below grade with a groundwater flow direction to the northwest.

The results of the laboratory analysis indicate the principal groundwater contaminants are volatile organic compounds (VOCs). A number of VOCs were observed above the NYSDEC Technical and Operational Guidance Series (TOGS) groundwater protection standards. The groundwater contamination is primarily located in the central portion of the site in monitoring wells MW-1 and MW-2. Benzene is present at monitoring wells MW-1 and MW-2 with a concentration range from 58 to 190 ppb, compared to the TOGS standard of 1 ppb. Toluene is present in MW-2 with a concentration range from 11 to 40 ppb, compared to the TOGS standard of 5 ppb. Ethylbenzene is present in MW-2 with a concentration range from ND to 19 ppb, compared to the TOGS standard of 5 ppb. P/M xylene is present in MW-2 with a concentration range from ND to 20 ppb, compared to the TOGS standard of 5 ppb. O-xylene is present in MW-2 with a concentration range from ND to 12 ppb, compared to the TOGS standard of 5 ppb. Styrene is present in MW-2 with a concentration range from ND to 8.8 ppb, compared to the TOGS standard of 5 ppb. No other VOCs exceeded NYSDEC TOGS values at the site.

There are several semi-volatile organic compounds (SVOCs) that are slightly above NYSDEC TOGS groundwater protection values, with no single compound concentration greater than 0.12 parts per billion (ppb). Laboratory results identified the following compounds above the NYSDEC TOGS value of 0.002 ppb: benzo(a) anthracene ranging from 0.02 to 0.12 ppb; benzo(a)pyrene ranging from 0.02 to 0.09 ppb; benzo(b)fluoranthene ranging from 0.01 to 0.11 ppb; benzo (k)fluoranthene ranging from 0.01 to 0.05 ppb; chrysene ranging from 0.01 to 0.07 ppb; and indeno (1,2,3-cd) pyrene ranging from 0.02 to 0.07 ppb.

Laboratory analysis of the groundwater for pesticides, herbicides and PCBs are non-detect at concentrations greater than the laboratory detection limits.

Laboratory analysis of the groundwater for PFOA and PFOS indicate concentrations that are below NYS DEC/DOH threshold values. Laboratory analysis results for 1,4 dioxane are non-detect.

Metals commonly associated with hard water (e.g., iron, magnesium, manganese, sodium) are present at concentrations above the TOGs values in each well. These metals are likely naturally occurring and in this setting are unrelated to the site's past activities. However, in monitoring well MW-1 barium slightly exceeds the TOGS value of 1,000 ppb, with a concentration value of 1,002 ppb. In addition, the general region of central New York has been known for elevated saline (sodium) concentrations in the groundwater. Laboratory analysis of the groundwater from this site supports this with dissolved sodium concentrations range from 35,200 up to 181,000 parts per billion in comparison to the TOGS value of 20,000 parts per billion.

Off-site impacts in soil and groundwater are expected to be minimal based on the level and pattern of on-site contamination. SVOCs are present in surface soil and sub-surface soil across the site at concentrations that exceed Restricted-Residential Use SCOs and Protection of Groundwater SCOs. However, the types and concentrations of SVOCs and metals that have been identified in the soil are typically found at historically industrialized urban areas as in this instance. There are moderate levels of VOCs in site groundwater that are primarily located within the central portion of the site. Concentrations of SVOCs in site groundwater are slightly above groundwater protection values, but SVOCs do not readily migrate. Given the moderate concentrations of the contaminants of concern in the soil and groundwater it is anticipated the contaminants concentrations will decrease over time due to adsorption and natural attenuation. As a result, it is expected that off-site impacts from on-site contamination to neighboring properties is minimal.

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.*

People who enter the site may come into contact with site-related soil and groundwater contamination if they dig below the surface. Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in soil vapor (air spaces within the soil) may move into 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. The site is vacant so inhalation of site contaminants in indoor air via soil vapor intrusion is not a current concern. However, the potential exists for inhalation of site contaminants due to soil vapor intrusion for any future on-site development. Environmental sampling indicates that soil vapor intrusion is not a concern for off-site buildings.

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.
- 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.

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 remedy for this site is to meet the Track 4: Restricted-Residential Use criteria

The selected remedy is referred to as Excavation, Cover System and Monitored Natural Attenuation with Site Management.

The elements of the selected remedy, as shown in Figures 4 and 5, are as follows:

1. Excavation

Excavation and off-site disposal of contaminant source areas, including soils which exceed the protection of groundwater soil cleanup objectives (PGWSCOs), as defined by 6 NYCRR Part 375-6.8 for those contaminants found in site groundwater above standards. Contaminated groundwater encountered during excavation of soil will be removed from the excavation and disposed off-site. Approximately 5000 cubic yards of contaminated soil will be removed from the site.

2. Site Cover

A site cover will be required to allow for restricted residential and/or commercial use of the site in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where a soil cover is to be used it will be a minimum of two feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

3. Monitored Natural Attenuation

Groundwater will be monitored for site related contamination and also for MNA indicators which will provide an understanding of the (biological activity) breaking down the contamination. Reports of the attenuation will be provided at yearly intervals, and active remediation will be proposed after 5 years if it appears that natural processes alone will not address the contamination. The contingent remedial action will be In-Situ Chemical Oxidation, unless information available at the time indicates this is not the appropriate remedial action.

4. Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require 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);
- allow the use and development of the controlled property for restricted residential use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- require compliance with the Department approved Site Management Plan.

5. Site Management Plan is required, which includes the following:

An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

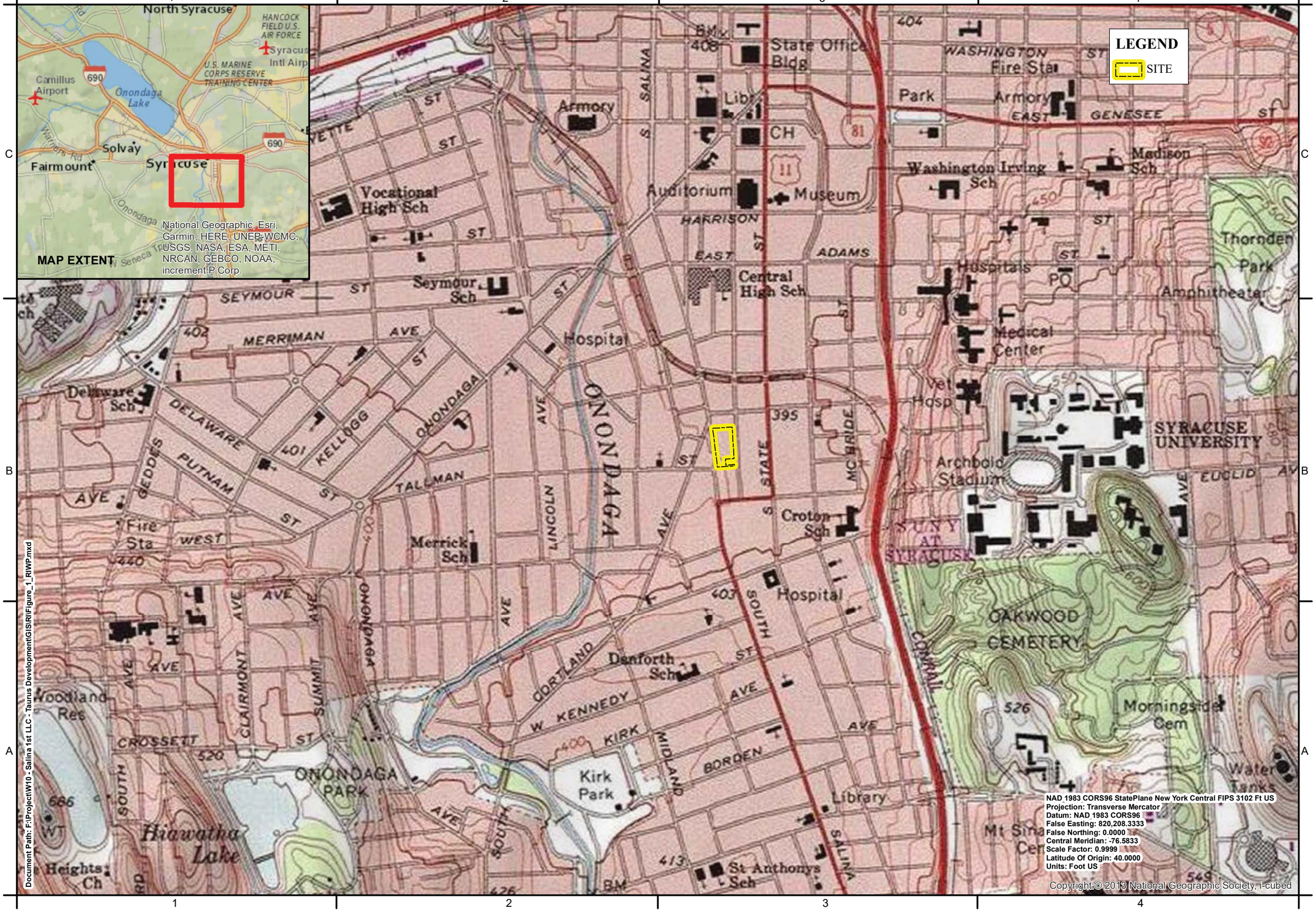
Institutional Controls: The Environmental Easement discussed in remedial element 4 above.

Engineering Controls: The soil cover discussed in remedial element 2.
This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easement including any land use, and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described in remedial element 2 above will be placed in any areas where the upper two feet of exposed surface soil exceed the applicable soil cleanup objectives (SCOs);
- 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.

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; and
- monitoring for vapor intrusion for any new buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



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C&S COMPANIES®

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

N

0 1,000 Feet

1 inch = 1,000 feet

South Salina St. Parcels
Syracuse, Onondaga County, New York

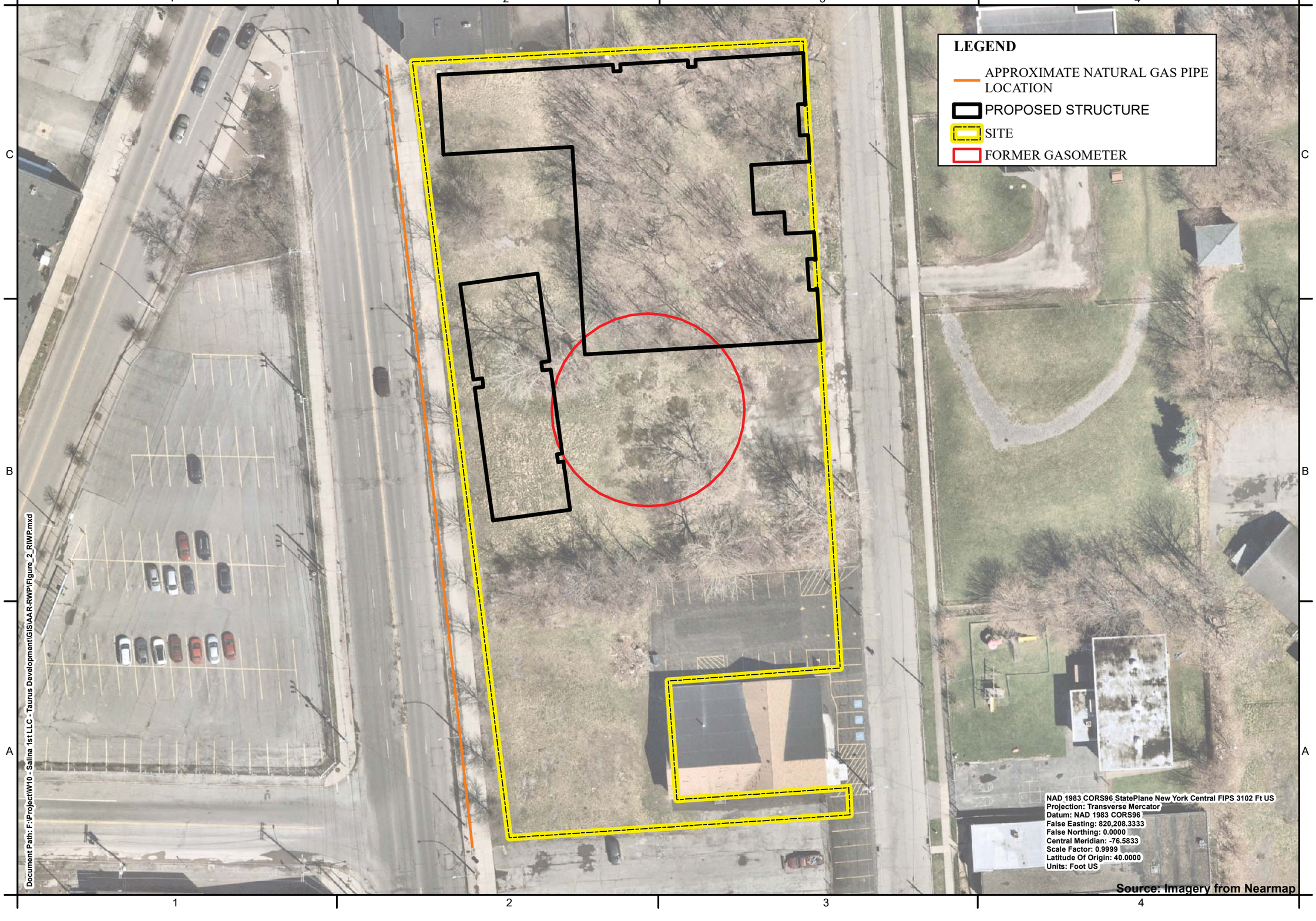
Brownfield Cleanup Program
Site No. C734140

PROJECT NO:	W10001002
DATE:	October 2019
SCALE:	AS SHOWN
DRAWN BY:	JTB
DESIGNED BY:	WNR
CHECKED BY:	MLW

Modified: 10/14/2019 @ 2:00:02 PM

SITE LOCATION MAP

Figure 1



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N

0 50 Feet

1 inch = 50 feet

South Salina St. Parcels
Syracuse, Onondaga County, New York

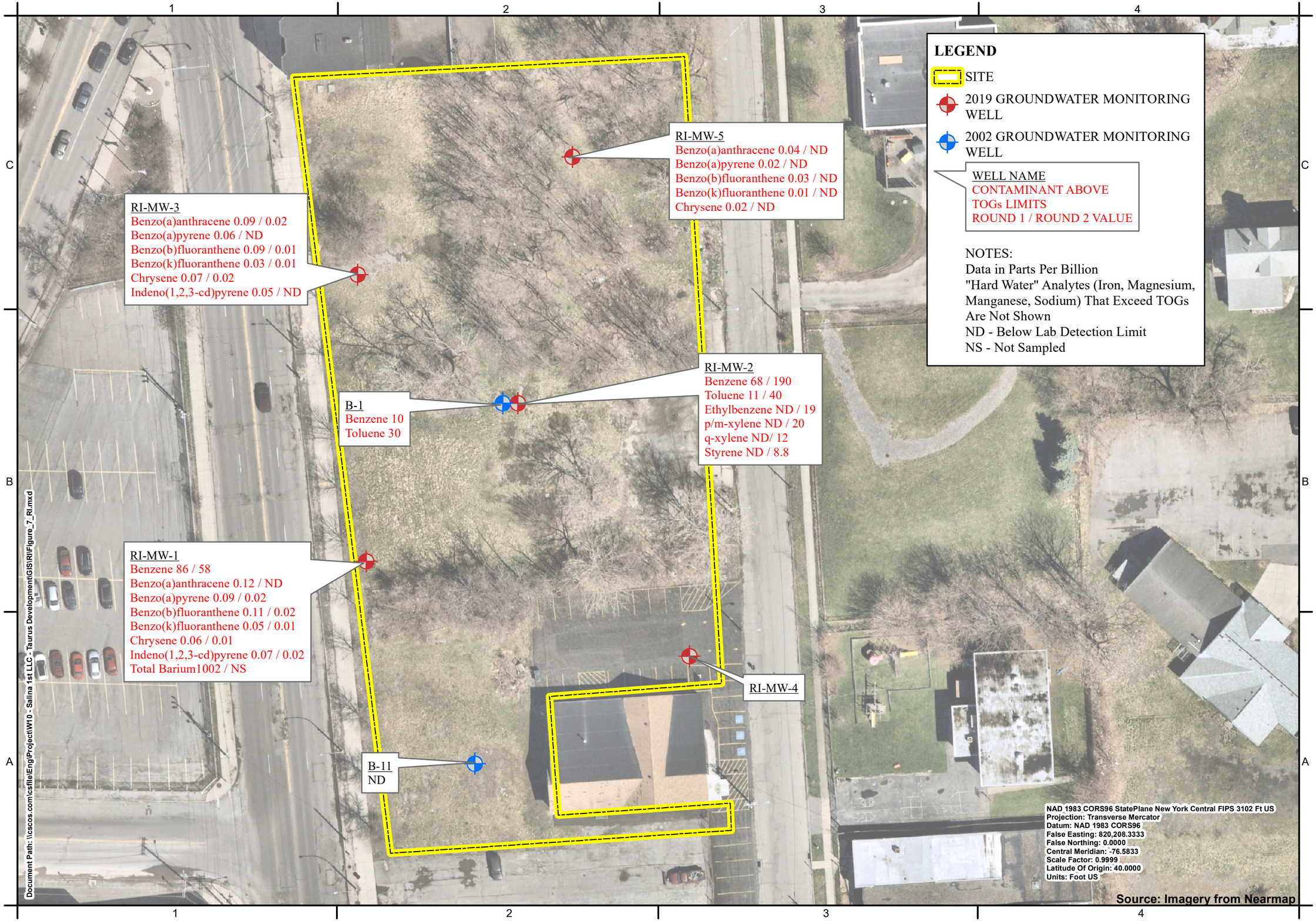
Brownfield Cleanup Program
Site No. C734140

PROJECT NO:	W10001002
DATE:	March 2020
SCALE:	AS SHOWN
DRAWN BY:	JTB
DESIGNED BY:	WNR
CHECKED BY:	MLW

Modified: 3/10/2020 @ 10:23:28 AM

SITE MAP

Figure 2



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Syracuse, New York 13212
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N

0 50 Feet

1 inch = 50 feet

South Salina St. Parcels
Syracuse, Onondaga County, New York

Brownfield Cleanup Program
Site No. C734140

PROJECT NO:	W10001002
DATE:	March 2020
SCALE:	AS SHOWN
DRAWN BY:	JTB
DESIGNED BY:	WNR
CHECKED BY:	MLW

Modified: 3/10/2020 @ 10:38:40 AM

GROUNDWATER MONITORING WELLS

Figure 3

Track 4 Level Cleanup

- Engineering Controls (EC) consist of a cover system, and a potential Sub-Slab Depressurization System (SSDS) for the proposed buildings.

- The cover system is comprised of the following:

  1. Installation of hard surfaces (concrete building slabs, asphalt pavement, sidewalks, etc.) No.4 Stone will be placed for the prepared subgrade in areas labeled asphalt and concrete.
  2. Installation of a two-foot soil cover (labeled as "landscape" in legend). Clean soil backfill will be placed in areas labeled landscape
  3. Placement of a demarcation layer at the bottom of the new surface installation. The demarcation layer will consist of geotextile fabric.

LEGEND

Site / Engineering Control Boundary (Site boundary and tax parcel boundary are the same)

Cover Type

- Proposed Building
- Pavement
- Concrete
- Landscape

Note: If needed SSDS will be installed to mitigate vapor intrusion within the footprint of the buildings. Historic fill soil remains below the cover system.

NAD 1983 CORS96 StatePlane New York Central FIPS 3102 Ft US
Projection: Transverse Mercator
Datum: NAD 1983 CORS96
False Easting: 820,208.3333
False Northing: 0.0000
Central Meridian: -76.5833
Scale Factor: 0.9999
Latitude Of Origin: 40.0000
Units: Foot US

Source: Imagery from Nearmap

Document Path: F:\Project\W10 - Salina 1st LLC - Taurus Development\GIS\AAR-RWP\Figure_9 - DecisionDoc.mxd

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N

0 40 Feet
1 inch = 40 feet

South Salina St. Parcels
Syracuse, Onondaga County, New York

Brownfield Cleanup Program
Site No. C734140

PROJECT NO:	W10001002
DATE:	April 2020
SCALE:	AS SHOWN
DRAWN BY:	JTB
DESIGNED BY:	WNR
CHECKED BY:	MLW

Modified: 4/27/2020 @ 7:36:01 PM

Engineering Controls

Figure 4

Track 4 Level Cleanup
Institutional Controls (IC) consists of the following:

- The property may be used for: Restricted Residential Use;
- All ECs must be operated and maintained as specified in the SMP;
- All ECs must be inspected at a frequency and in a manner defined in the SMP.
- The use of groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDOH or the Onondaga County Department of Health to render it safe for use as drinking water or for industrial purposes, and the user must first notify and obtain written approval to do so from the Department.
- Environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to site management must be reported at the frequency and in a manner as defined in the SMP;
- All future activities that will disturb remaining contaminated material must be conducted in accordance with the SMP;
- Monitoring to assess the performance and effectiveness of the remedy must be performed as defined in the SMP;
- Operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical component of the remedy shall be performed as defined in the SMP;
- Access to the site must be provided to agents, employees or other representatives of the State of New York with reasonable prior notice to the property owner to assure compliance with the restrictions identified by the Environmental Easement.
- The potential for vapor intrusion must be evaluated for any buildings developed in the area within the IC boundaries, and any potential impacts that are identified must be monitored or mitigated; and
- Vegetable gardens and farming on the site are prohibited.

LEGEND

Site / Institutional Control Boundary
(Site boundary and tax parcel boundary are the same)

NAD 1983 CORS96 StatePlane New York Central FIPS 3102 Ft US
Projection: Transverse Mercator
Datum: NAD 1983 CORS96
False Easting: 820,208.3333
False Northing: 0.0000
Central Meridian: -76.5833
Scale Factor: 0.9999
Latitude Of Origin: 40.0000
Units: Foot US

Source: Imagery from Nearmap

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N

0 50 Feet
1 inch = 50 feet

South Salina St. Parcels
Syracuse, Onondaga County, New York

Brownfield Cleanup Program
Site No. C734140

PROJECT NO:	W10001002
DATE:	April 2020
SCALE:	AS SHOWN
DRAWN BY:	JTB
DESIGNED BY:	WNR
CHECKED BY:	MLW

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Institutional Controls

Figure 5