DECISION DOCUMENT

351 Franklin Street Site
Brownfield Cleanup Program
Olean, Cattaraugus County
Site No. C905047
July 2022

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

DECLARATION STATEMENT - DECISION DOCUMENT

351 Franklin Street Site
Brownfield Cleanup Program
Olean, Cattaraugus County
Site No. C905047
July 2022

Statement of Purpose and Basis

This document presents the remedy for the 351 Franklin Street Site 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 351 Franklin Street 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. Remedial Design

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 principles 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 gases 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the

foundation to improve energy efficiency as an element of construction.

2. Excavation

The existing eastern building (Building 2) will be demolished and materials which cannot be beneficially reused on-site will be taken off-site for proper recycling or disposal in order to implement the remedy. Excavation and off-site disposal of contaminant source areas, including:

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- non-aqueous phase liquid; and
- soil with non-aqueous phase liquid.

Approximately 8,370 cubic yards of soil meeting the above criteria will be excavated from six areas of the site and transported off-site for disposal. The final extent of excavation will be determined during a Pre-Design Investigation. In areas where the above criteria are not met, all soils in the upper foot which exceed the commercial soil cleanup objectives (SCOs) will be excavated and reused on-site as backfill below the cover system described in Remedial Element 5.

On-site soil which does not exceed the above excavation criteria may be used below the cover system described in Remedial Element 5 to backfill the excavation to the extent that a sufficient volume of on-site soil is available and to establish the designed grades at the site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

3. In-Situ Solidification

In-situ solidification (ISS) will be implemented to solidify soil meeting the criteria of Remedial Element 2 that are below the water table and not readily excavated. The treatment zone will extend from the top of the groundwater table, at approximately 13 to 20 feet below grade, to the terminal depth of grossly contaminated material determined by a Pre-Design Investigation. ISS is a process that binds the soil particles in place creating a low permeability mass. The contaminated soil will be mixed in place together with solidifying agents (typically Portland cement) or other binding agents using an excavator or augers. The soil and binding agents are mixed to produce a solidified mass resulting in a low permeability monolith. The resulting solid matrix reduces or eliminates mobility of contamination and reduces or eliminates the matrix as a source of groundwater contamination.

Where soil cover is required over the ISS treatment area, the remedial design will strive to maximize the cover thickness to be at least four feet, except in areas where design grades or access restriction prevent this thickness of soil cover. The soil cover may not be less than one foot in thickness. In all ISS treatment areas the upper one foot of the soil cover must be soil meeting the SCOs for commercial use, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. For areas where solidified material underlies the cover, the solidified material itself will serve as the demarcation layer due to the nature of the material.

Groundwater monitoring will be required around the solidified areas to confirm that the treatment has sufficiently addressed the source areas. Additional ISS or source removal may be required if the treatment is not effective removing the source of groundwater contamination.

4. Product Recovery

Installation and operation of petroleum recovery wells to remove potentially mobile petroleum from the subsurface. The number, depth, type, and spacing of the recovery wells will be determined during the design phase of the remedy. Petroleum will be collected periodically from each well to the extent practicable, however, if wells are determined by the Department to accumulate large quantities of petroleum over extended time periods, they can be converted to automated collection.

5. Site Cover

A site cover will be required to allow for commercial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable SCOs. Where a soil cover is to be used it will be a minimum of one foot 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.

6. Environmental Easement

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 commercial use or industrial 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 Cattaraugus County DOH; and
- require compliance with the Department approved Site Management Plan.

7. Site Management Plan

A Site Management Plan is required, which includes the following:

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

Institutional Controls: The Environmental Easement discussed in Remedial Element 6, above.

Engineering Controls: The solidified soil areas discussed in Remedial Element 3, the soil cover discussed in Remedial Element 5.

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 for evaluation of the potential for soil vapor intrusion in Building 1, including provision for implementing actions recommended to address exposures related to soil vapor intrusion, if the use of the building change from its current use as a vehicle maintenance facility;
- a provision that should a building foundation, building slab, or other hardscape be removed in the future, a cover system consistent with that described in Remedial Element 5, above, will be placed in any areas where the upper one foot of exposed surface soil exceeds the applicable 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.

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; and
- monitoring for vapor intrusion for any buildings 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.

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Date: 2022.07.14 15:12:49 -04'00'

Date

Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

351 Franklin Street Site
Olean, Cattaraugus County
Site No. C905047
July 2022

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, where a contaminant is present at levels exceeding the soil cleanup objectives or other health-based or environmental standards, criteria or guidance, based on the reasonably anticipated use of the property.

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:

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C905047

Olean Public Library
Attn: Kim Mahar
134 North 2nd Street
Olean, NY 14760
Phone: (716) 372-0200

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 approximately 6.26-acre 351 Franklin Street Site is located at the corner of Franklin and Johnson Streets in a highly developed commercial and industrial area in the City of Olean, Cattaraugus County. The site is bordered by Franklin Street to the northwest, industrial properties to the north/northeast, railroad lines to the south/east, and industrial properties to the west/southwest. The site is approximately 450 feet southeast of Two Mile Creek, a tributary to the Allegheny River.

Site Features: The site is developed with two structures. The westernmost structure is occupied by First Transit, Inc., and the other structure is vacant, having previously been occupied by Southern Tier Moving & Storage, LLC. The structures are surrounded and separated by paved or gravel parking areas and access roads. The remaining area is covered with vegetation.

Current Zoning and Land Use: The current use of the site is commercial. According to the City of Olean Zoning Map, the project area is classified as "I - Industrial", which allows for commercial and industrial use. The surrounding land uses are a mix of commercial, industrial, railroads, and vacant industrial properties. The nearest residential areas are approximately 1000 feet northwest and southeast of the site.

Past Use of Site: The site was part of a larger petroleum refining facility from 1876-1954. From 1876 to 1902, two separate oil refineries operated at and around the site, Vacuum Oil Company (Vacuum) and Acme Oil Company (Acme). Vacuum and Acme merged in 1902 under the name Vacuum Oil Company. Vacuum and Standard Oil Company of New York (Socony) merged in 1931 and became Socony-Vacuum Oil Company, Inc. (Socony-Vacuum). Through a series of subsequent mergers, Socony-Vacuum eventually became ExxonMobil Corporation.

The Socony-Vacuum refinery consisted of three primary operational area. The #1 Works area included administration, research, central powerhouse and central shops buildings. The #2 Works area consisted of bulk oil loading, treating and storage. The #3 Works area included primary distillation/refining operations and crude oil storage. The site is located in the area of the former #3 Works area.

The oil refinery shut down in 1954 and Swan Finch Oil Company Olean Industries, Inc. (Swan Finch) purchased the refinery property to store corn and wheat in the existing refinery tanks and buildings. Swan Finch sold the property to the Felmont Oil Corporation (Felmont) and Agway,

Inc. (Agway) in 1964, and the tanks and buildings associated with the former petroleum refinery were removed and replaced with an anhydrous ammonia operation run by Felmont and an associated fertilizer plant run by Agway in the former #1 and #2 Works areas. The #3 Works area remained vacant during this time. Blue Bird Industrial Park, Inc. purchased the site in 1989 for commercial/industrial use.

Limited investigation and remedial actions at the site were completed under the Petroleum Spill Response program (Spill #1300859) between 2013 and 2017.

Site Geology and Hydrogeology: Fill consisting of fine sand with silt and gravel mixed with brick, metal, wood, concrete, coal, cinders, and ash was observed from 1 to 17 feet below ground surface (fbgs). Native soil directly underlies the fill, consists of a mix of sand with silt and gravel or sand and clayey sand. In some areas clay layers were observed from 2 to 8 fbgs and 18 to 30 fbgs. Bedrock was not encountered during the investigation.

Groundwater is encountered between 13 and 20 fbgs in the fill and/or native soil. A groundwater divide appears to exist in the central portion of the site, with flow towards either the northwest or southeast.

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

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

SECTION 5: ENFORCEMENT STATUS

The Applicant(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.

Any off-site contamination related to the former refinery operations will be addressed under the Department's Petroleum Spill Response program.

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:

- air
- groundwater
- soil
- soil vapor
- indoor air
- sub-slab vapor

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:

petroleum products
arsenic
benzo(a)anthracene
benzo(a)pyrene
benzo(b)fluoranthene
dibenz[a,h]anthracene
indeno(1,2,3-cd)pyrene

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

- groundwater
- soil
- soil vapor intrusion

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.

The RI sampled surface and subsurface soils, groundwater, soil vapor, sub-slab soil vapor, and indoor air. The primary contaminants of concern are petroleum related volatile organic compounds (VOCs), separate phase petroleum products, and arsenic. Several semi-volatile organic compounds (SVOCs) are also present in surface soils exceeding standards. Data from past investigations completed under the Petroleum Spill Response program have also been utilized to determine the nature and extent of contamination at the site.

Surface Soil: eighteen samples were collected prior to the RI from 0 to 2 inches below the vegetative cover across the entire site and analyzed for VOCs, SVOCs, metals, and polychlorinated biphenyls (PCBs). During the RI, nine samples were collected from 0 to 2 inches below the vegetative cover and analyzed for pesticides, herbicides, and per- and polyfluorinated substances (PFAS). No VOCs, pesticides, herbicides, or PCBs were detected at levels exceeding commercial use soil cleanup objectives (CSCOs). No PFAS were detected at levels exceeding current guidance values.

The SVOCs benzo(a)anthracene (up to 19.6 parts per million (ppm), CSCO 5.6 ppm), benzo(a)pyrene (up to 17 ppm, CSCO 1 ppm), benzo(b)fluoranthene (up to 19.6 ppm, CSCO 5.6 ppm), dibenz[a,h]anthracene (up to 2.46 ppm, CSCO 0.56 ppm), and indeno(1,2,3-cd)pyrene (up

to 10 ppm, CSCO 5.6 ppm) were detected in at least two surface soil locations exceeding CSCOs. The metal arsenic (up to 30.9 ppm, CSCO 16 ppm) was detected at five surface soil locations exceeding its CSCO.

Investigation results do not indicate that site contaminants have migrated off-site in surface soil.

Subsurface Soil: Thirty-one samples were collected from 4 to 21 fbgs during previous investigations and analyzed for VOCs, SVOCs, and metals. During the RI, thirteen samples were collected from 10 to 22 fbgs and analyzed for VOCs, SVOCs, metals, pesticides, herbicides, PCBs, and PFAS. No VOCs, pesticides, herbicides, or PCBs were detected at levels exceeding CSCOs. No PFAS were detected at levels exceeding current guidance values. The SVOC benzo(a)pyrene (up to 1.08 ppm, CSCO 1 ppm) was detected at one subsurface soil location exceeding its CSCO. The metal arsenic (up to 63.3 ppm, CSCO 16 ppm) was detected at eleven subsurface soil locations exceeding its CSCO.

The petroleum related VOCs 1,2,4-trimethylbenzene (up to 21 ppm, PGWSCO 3.6 ppm) and n-propylbenzene (up to 4.5 ppm, PGWSCO 3.9 ppm) were detected in at least one location exceeding their protection of groundwater soil cleanup objective (PGWSCO). It should be noted that at multiple well locations some petroleum related VOCs were â€˜non-detect' at levels above regulatory standards.

Fifty-two subsurface soil locations were completed to depths of 11 to 30 fbgs during the RI to assess the level of petroleum impacts. Petroleum related impacts determined to represent grossly contaminated material were observed at twenty-one locations at depths ranging from 5 to 26 fbgs. Soils containing grossly contaminated material are considered source material.

Investigation results indicate that site contaminants, in the form of LNAPL, have the potential to migrate off-site in subsurface soil. Subsurface source material is contributing to on-site groundwater contamination.

Groundwater: Samples were collected from nine monitoring wells generally screened at depths between 8 and 29 fbgs. All wells were analyzed for VOCs, SVOCs, total/dissolved metals, pesticides, herbicides, PCBs, and PFAS. There were no herbicides or PCBs detected above groundwater quality standards (GWQS). No PFAS were detected at levels exceeding current drinking water standards.

The petroleum related VOCs isopropyl benzene (up to 50 parts per billion (ppb), GWQS 5 ppb), n-propylbenzene (up to 52 parts per billion (ppb), GWQS 5 ppb), n-butylbenzene (up to 45 ppb, GWQS 5 ppb), tert-butylbenzene (up to 8.2 ppb, GWQS 5 ppb) were each detected in at least one monitoring well exceeding GWQS. Cyclohexane (up to 370 ppb), methylcyclohexane (up to 1,900 ppb), and tentatively identified VOCs (up to 9,270 ppb) were detected in multiple monitoring wells but do not currently have GWQS.

The SVOCs bis(2-chloroethyl) ether (up to 73 ppb, GWQS 1 ppb) and bis(2-ethylhexyl) phthalate (up to 32 ppb, GWQS 5 ppb) were detected exceeding their GWQS in one and two monitoring wells, respectively. These detections are not widespread and are not readily attributed to soil

sources of contamination. Tentatively identified SVOCs were detected in all groundwater samples ranging from 154 ppb to 1,710 ppb.

The naturally occurring metals iron, magnesium, manganese, and sodium were the only metals detected exceeding GWQS in filtered samples.

The pesticides 4,4'-DDT (up to 0.34 parts per billion (ppb), GWQS 0.2 ppb) and alpha-benzenehexachloride (up to 0.02 parts per billion (ppb), GWQS 0.01 ppb) were each detected at one location exceeding their GWQS. These detections are not widespread, were generally marginal exceedances, and are not readily attributed to soil sources of contamination.

Light non-aqueous phase liquid (LNAPL) has been measured in three of the nine wells installed at the site. LNAPL thicknesses have ranged from 0.25 feet to 0.36 feet. LNAPL has also been observed on groundwater infiltrating into test pits or test trenches.

Investigation results indicate that site contaminants, in the form of LNAPL and VOC contaminated groundwater, have the potential to migrate off-site in some areas of the site.

Soil Vapor: Nine soil vapor probes were installed across the site and analyzed for VOCs. Probes were installed to 7 fbgs. Many VOCs were detected at every location, including acetone (up to 170 micrograms per cubic meter (ug/m3)), benzene (up to 3 ug/m3), ethylbenzene (up to 0.67 ug/m3), toluene (up to 6.1 ug/m3), xylenes (mixed) (up to 2.74 ug/m3), and n-heptane (up to 11 ug/m3). There are currently no standards for soil vapor.

Investigation results indicate that site contaminants have the potential to migrate off-site in soil vapor.

Sub-Slab Soil Vapor and Indoor Air: three sub-slab soil vapor/indoor air sampling point pairs were installed in Building 1 and analyzed for VOCs. Many VOCs were detected at each sub-slab soil vapor location, including acetone (up to 2,300 ug/m3), benzene (up to 8.8 ug/m3), ethylbenzene (up to 3.7 ug/m3), toluene (up to 110 ug/m3), xylenes (mixed) (up to 20.1 ug/m3), and n-heptane (up to 620 ug/m3). Many VOCs were detected at each indoor air location, including acetone (up to 6,100 ug/m3), benzene (up to 3.3 ug/m3), ethylbenzene (up to 2.3 ug/m3), toluene (up to 200 ug/m3), xylenes (mixed) (up to 12.2 ug/m3), and n-heptane (up to 890 ug/m3). Building 1 is currently used for vehicle maintenance and the type and concentration of VOCs detected are not unexpected considering the use of petroleum products within the building.

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*.

Persons who enter the site could contact contaminants in the soil by walking on the site, digging, or otherwise disturbing the soil. 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 the soil or 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. As Building 2 is currently vacant, soil vapor intrusion is not a current concern. The evaluation of soil vapor impacts to indoor air in Building 1 is complicated by current vehicle maintenance activities using similar chemicals. However, the potential does exist for people to inhale site contaminants in indoor air due to soil vapor intrusion in Building 1 or any future on-site building. The potential does exist for off-site impacts to indoor air from soil vapor intrusion.

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 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 Source Excavation and Stabilization with Site Management remedy.

The elements of the selected remedy, as shown in Figures 2A and 2B, are as follows:

1. Remedial Design

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 principles 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 gases 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;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

The existing eastern building (Building 2) will be demolished and materials which cannot be beneficially reused on-site will be taken off-site for proper recycling or disposal in order to implement the remedy. Excavation and off-site disposal of contaminant source areas, including:

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- non-aqueous phase liquid; and
- soil with non-aqueous phase liquid.

Approximately 8,370 cubic yards of soil meeting the above criteria will be excavated from six areas of the site and transported off-site for disposal. The final extent of excavation will be

determined during a Pre-Design Investigation. In areas where the above criteria are not met, all soils in the upper foot which exceed the commercial soil cleanup objectives (SCOs) will be excavated and reused on-site as backfill below the cover system described in Remedial Element 5.

On-site soil which does not exceed the above excavation criteria may be used below the cover system described in Remedial Element 5 to backfill the excavation to the extent that a sufficient volume of on-site soil is available and to establish the designed grades at the site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete the backfilling of the excavation and establish the designed grades at the site.

3. In-Situ Solidification

In-situ solidification (ISS) will be implemented to solidify soil meeting the criteria of Remedial Element 2 that are below the water table and not readily excavated. The treatment zone will extend from the top of the groundwater table, at approximately 13 to 20 feet below grade, to the terminal depth of grossly contaminated material determined by a Pre-Design Investigation. ISS is a process that binds the soil particles in place creating a low permeability mass. The contaminated soil will be mixed in place together with solidifying agents (typically Portland cement) or other binding agents using an excavator or augers. The soil and binding agents are mixed to produce a solidified mass resulting in a low permeability monolith. The resulting solid matrix reduces or eliminates mobility of contamination and reduces or eliminates the matrix as a source of groundwater contamination.

Where soil cover is required over the ISS treatment area, the remedial design will strive to maximize the cover thickness to be at least four feet, except in areas where design grades or access restriction prevent this thickness of soil cover. The soil cover may not be less than one foot in thickness. In all ISS treatment areas the upper one foot of the soil cover must be soil meeting the SCOs for commercial use, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. For areas where solidified material underlies the cover, the solidified material itself will serve as the demarcation layer due to the nature of the material.

Groundwater monitoring will be required around the solidified areas to confirm that the treatment has sufficiently addressed the source areas. Additional ISS or source removal may be required if the treatment is not effective removing the source of groundwater contamination.

4. Product Recovery

Installation and operation of petroleum recovery wells to remove potentially mobile petroleum from the subsurface. The number, depth, type, and spacing of the recovery wells will be determined during the design phase of the remedy. Petroleum will be collected periodically from each well to the extent practicable, however, if wells are determined by the Department to accumulate large quantities of petroleum over extended time periods, they can be converted to automated collection.

5. Site Cover

A site cover will be required to allow for commercial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable SCOs. Where a soil cover is to be used it will be a minimum of one foot 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.

6. Environmental Easement

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 commercial use or industrial 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 Cattaraugus County DOH; and
- require compliance with the Department approved Site Management Plan.

7. Site Management Plan

A Site Management Plan is required, which includes the following:

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

Institutional Controls: The Environmental Easement discussed in Remedial Element 6, above.

Engineering Controls: The solidified soil areas discussed in Remedial Element 3, the soil cover discussed in Remedial Element 5.

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 for evaluation of the potential for soil vapor intrusion in Building 1, including provision for implementing actions recommended to address exposures related to soil vapor intrusion, if the use of the building change from its current use as a vehicle maintenance facility;
- a provision that should a building foundation, building slab, or other hardscape be

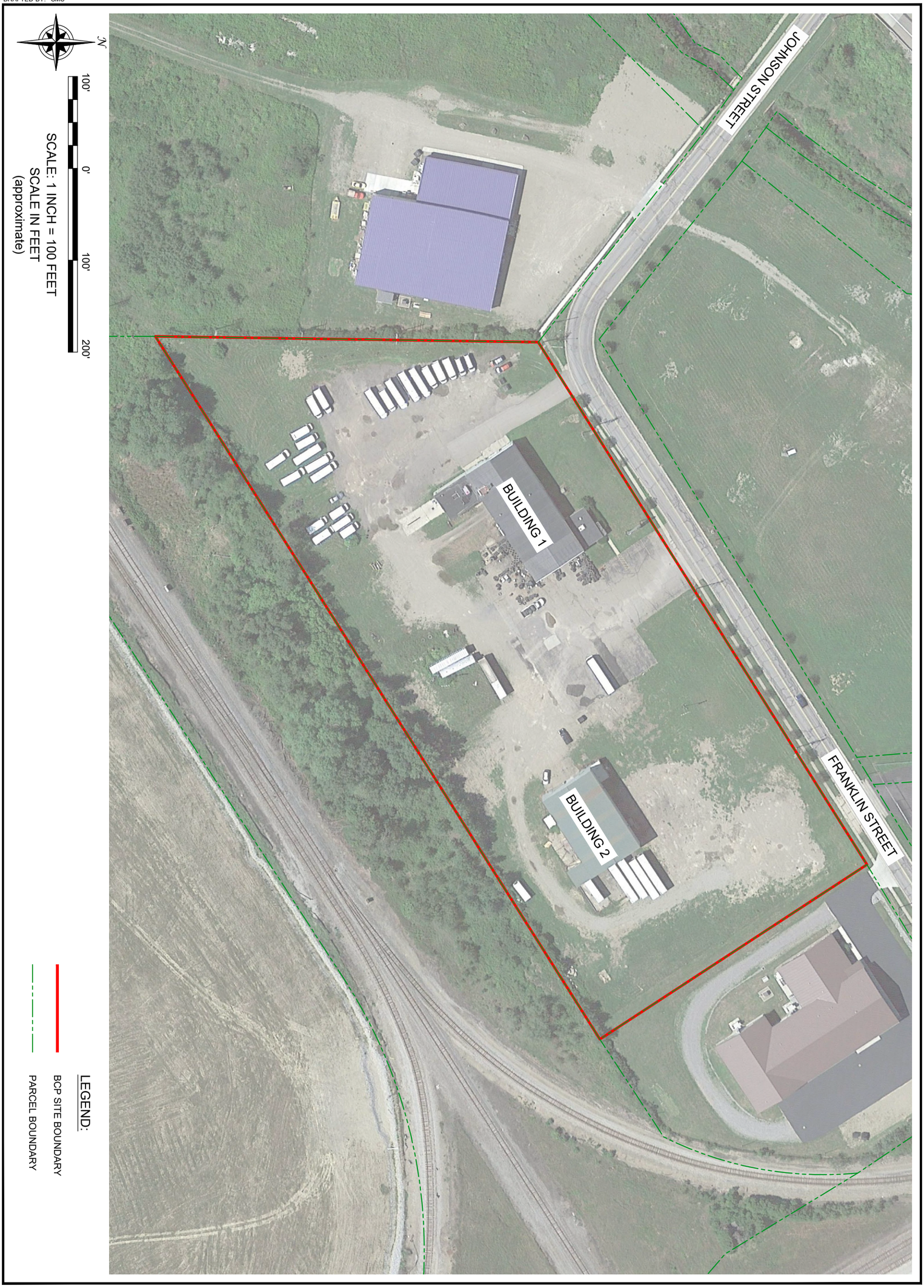
removed in the future, a cover system consistent with that described in Remedial Element 5, above, will be placed in any areas where the upper one foot of exposed surface soil exceeds the applicable SCOs;

- 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.

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

DATE: JULY 2021
DRAFTED BY: CMS



DD Figure 1

SITE PLAN (AERIAL)

REMEDIAL INVESTIGATION/ALTERNATIVES ANALYSIS REPORT

351 FRANKLIN STREET SITE
BCP SITE NO. C905047
OLEAN, NEW YORK

PREPARED FOR

351 FRANKLIN STREET LLC & PSF OR WNY, LLC

BENCHMARK IN ASSOCIATION WITH TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218,
(716) 856-0599

JOB NO.: T0510-019-001

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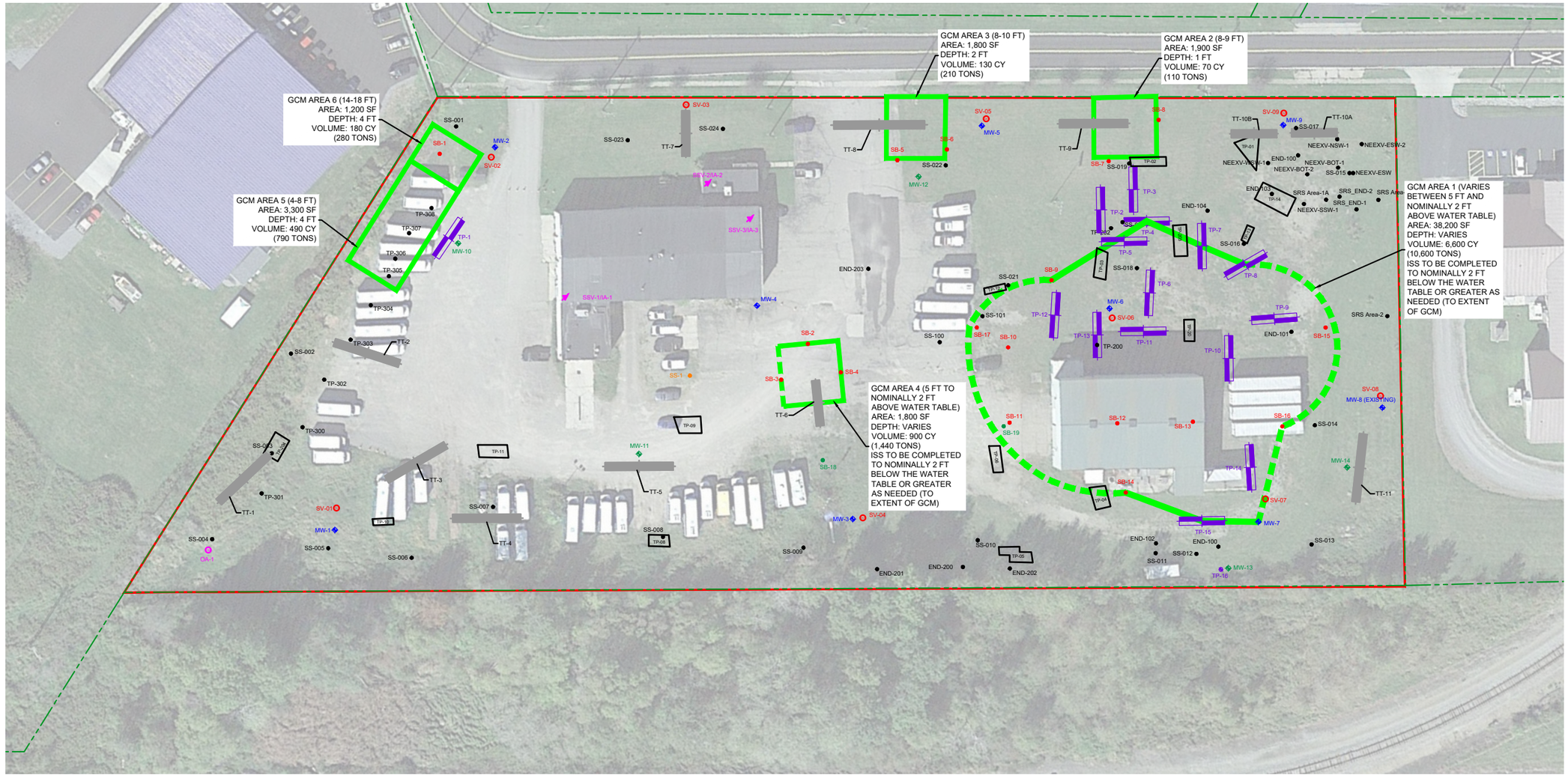
F:\CAD\TurnKey\351 Franklin Street, LLC\RI-AA Report\Figure 7 - Remedial Activities - Track 4 CSCOs_REV3.dwg, 7/1/2022 10:23:42 AM, DWG To PDF.pc3



LEGEND:

	BCP SITE BOUNDARY
	PARCEL BOUNDARY
SRS Area-1 ●	PREVIOUS SAMPLE LOCATIONS (BY ROUX, 2015)
END-100 ●	PREVIOUS SAMPLE LOCATION (BY ROUX, 2016)
TP-01	PREVIOUS SHALLOW TEST PIT (BY ROUX, 2016)
TP-302 ●	PREVIOUS SAMPLE LOCATION (BY ROUX, 2017)
SS-005 ●	PREVIOUS SAMPLE LOCATION (BY ROUX, 2017)
TP-1	RI TEST PIT
TT-1	RI TEST TRENCH
MW-1	RI MONITORING WELL/SOIL BORING/SHALLOW SURFACE SAMPLE
SS-1 ●	RI SHALLOW SURFACE SAMPLE
SB-1 ●	RI ADDITIONAL SOIL BORING
SV-01 (SV)	RI SOIL VAPOR SAMPLE
SSV-1/IA-1	RI SUBSLAB SOIL VAPOR/INDOOR AIR SAMPLE
OA-1 (OA)	RI OUTDOOR AIR SAMPLE
	PROPOSED EXCAVATION EXTENT.
	PROPOSED EXCAVATION EXTENT (APPROXIMATE, SEE NOTE 2).
MW-1	PDI MONITORING WELL/SOIL BORING
SB-1 ●	PDI SOIL BORING

80' 0' 80' 160'

SCALE: 1 INCH = 80 FEET
SCALE IN FEET
(approximate)

DATE: JULY 2022
DRAFTED BY: CNK

NOTES:
1. GCM = GROSSLY CONTAMINATED MEDIA
2. DOTTED LINE INDICATES ESTIMATED EDGE THAT MAY BE EXTENDED IF ADDITIONAL GCM IS IDENTIFIED.
3. PDI = PRE-DESIGN INVESTIGATION

TURNKEY ENVIRONMENTAL RESTORATION, LLC
IN ASSOCIATION WITH
BENCHMARK

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218,
(716) 856-0599

JOB NO.: T0510-019-001

REMEDIAL ACTIVITIES - GCM REMOVAL AREAS AND IN-SITU STABILIZATION (ISS) AREAS

REMEDIAL INVESTIGATION/ALTERNATIVES ANALYSIS REPORT

351 FRANKLIN STREET SITE
OLEAN, NEW YORK

PREPARED FOR
351 FRANKLIN STREET LLC & PSF OR WNY, LLC

DD Figure 2A

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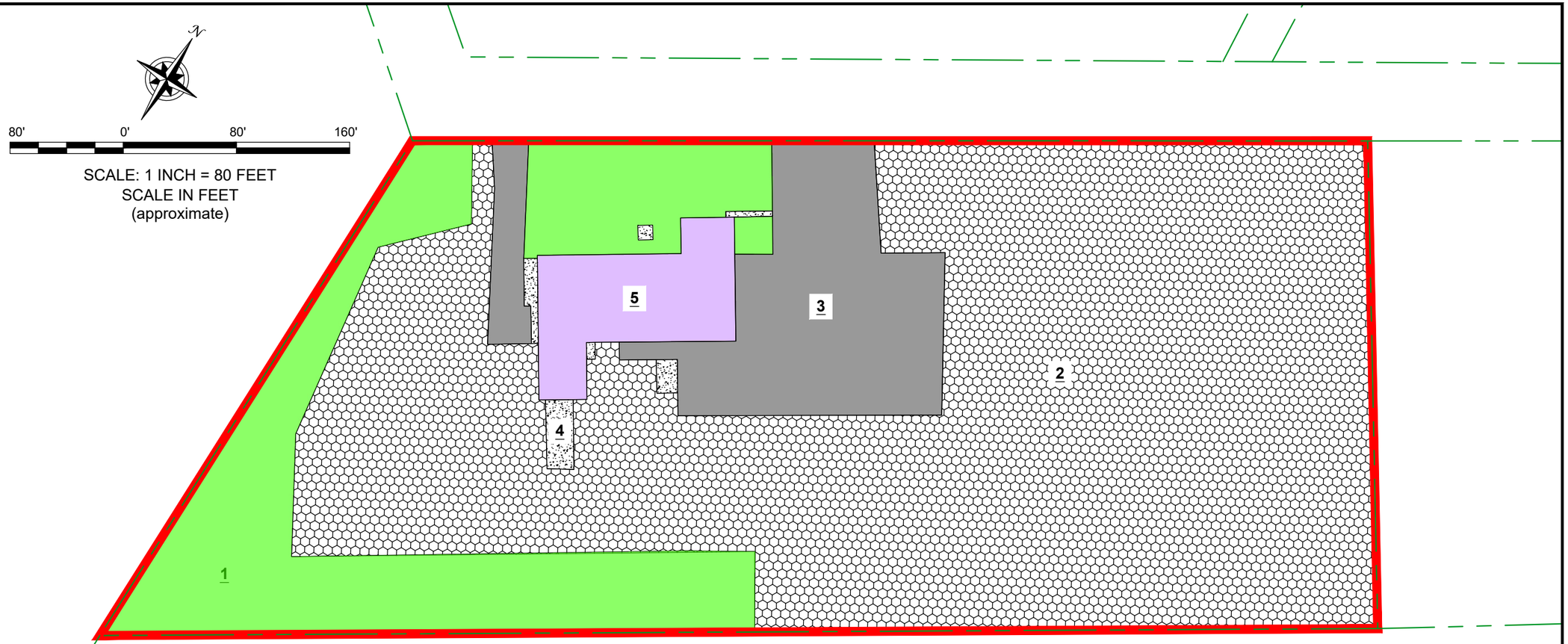
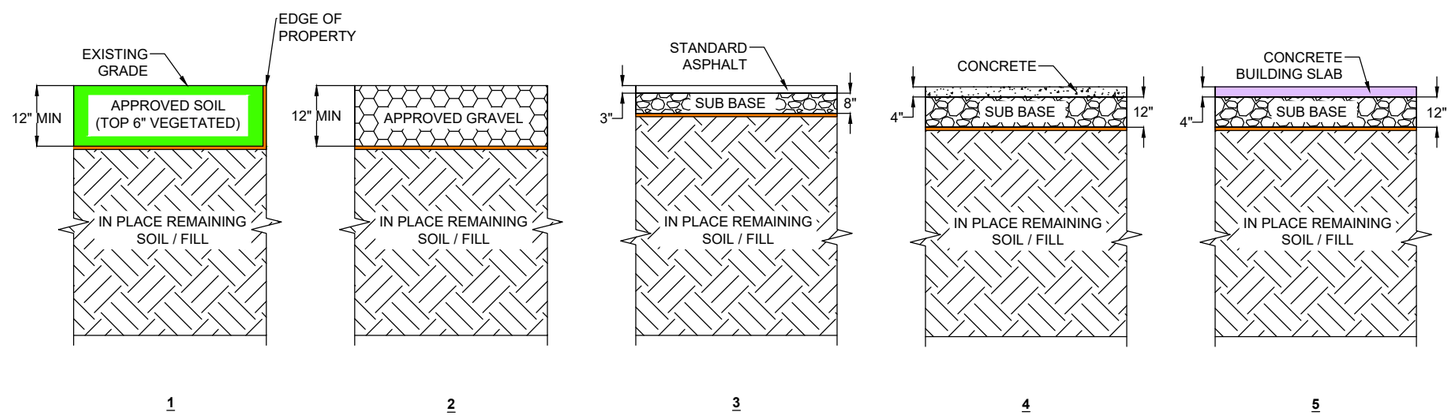
F:\CAD\TurnKey\351 Franklin Street, LLC\RI-AA Report\Figure 9 - Planned Site Cover System_REVJan22.dwg, 1/7/2022 3:07:26 PM, DWG To PDF.pc3





LEGEND:

- BCP SITE BOUNDARY
- PARCEL BOUNDARY
- STANDARD DUTY ASPHALT
- GREEN SPACE
- GRAVEL COVER
- BUILDING
- CONCRETE
- DEMARCATION LAYER

DATE: NOVEMBER 2021
DRAFTED BY: CNK/RFL

PLANNED SITE COVER SYSTEM

REMEDIAL INVESTIGATION/ALTERNATIVES ANALYSIS REPORT

351 FRANKLIN STREET SITE
OLEAN, NEW YORK

PREPARED FOR

351 FRANKLIN STREET LLC & PSF OF WNY, LLC

BENCHMARK IN ASSOCIATION WITH TURNKEY ENVIRONMENTAL RESTORATION, LLC

2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218,
(716) 856-0599

JOB NO.: T0510-019-001

DD Figure 2B

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