NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau E
625 Broadway, 12th Floor, Albany, NY 12233-7017
P: (518) 402-9813 I F: (518) 402-9819
www.dec.ny.gov

August 3, 2017

Mr. Peter L. Krog, Sr.
847 Main Street, LLC
4 Centre Drive
Orchard Park, New York 14127

Mr. Paul Neureuter
791 Washington Street, LLC
4 Centre Drive
Orchard Park, New York 14127

RE: Former Trico Plant, Site ID No. C915281, Buffalo, Erie County
Remedial Investigation/Alternatives Analysis & Decision Document

Dear Messrs. Krog and Neureuter:

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health (NYSDOH) have reviewed the Remedial Investigation/Alternatives Analysis Report (RI/AAR) for the Former Trico Plant site dated January 2017 and prepared by Benchmark Environmental Engineering and Science, PLLC on behalf of the 847 Main Street, LLC and 791 Washington Street, LLC. The RI/AAR is hereby approved. Please ensure that a copy of the approved RI/AAR is placed in the document repository. The draft report should be removed.

Enclosed is a copy of the Department's Decision Document for the site. The remedy is to be implemented in accordance with this Decision Document. Please ensure that a copy of the Decision Document is placed in the document repository.

Please contact the Department's Project Manager, Jaspal S. Walia, at 716-851-7220 or jaspal.walia@dec.ny.gov at your earliest convenience to discuss next steps. Please recall the Department requires seven (7) days' notice prior to the start of field work.

Sincerely,

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

Enclosure – Former Trico Plant Site Decision Document, NYSDEC July 2017

ec: R. Schick - NYSDEC
M. Ryan - NYSDEC
C. Staniszewski - NYSDEC
J. Walia - NYSDEC
J. Dougherty - NYSDEC
K. Anders – NYSDOH
C. Bethoney - NYSDOH
I. Ushe - NYSDOH
M. Lesakowski – Benchmark Engineering and Consulting
C. Slater – The Slater Law Firm

DECISION DOCUMENT

Former Trico Plant
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915281
July 2017

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

DECLARATION STATEMENT - DECISION DOCUMENT

Former Trico Plant
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915281
July 2017

Statement of Purpose and Basis

This document presents the remedy for the Former Trico Plant site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Former Trico Plant 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; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Enhanced Bioremediation: In-situ enhanced bioremediation will be employed to treat chlorinated volatile organic compounds (cVOCs) in groundwater within the building (Site) in the

area depicted on Figure 2. The biological breakdown of contaminants will occur through anaerobic reductive dechlorination. The in-situ treatment mixture will consist of hydrogen release compounds, in the form of lactates, enriched natural microbial consortium to increase microbial populations for anaerobic biodegradation, and an iron-based chemical reducing solution. The mixture will be injected under pressure into the ground via direct push probes at depths from 2 to 12 feet below grade.

Several groundwater monitoring wells will be sampled regularly to evaluate progress of the in-situ treatment. The operation of the components of the remedy will continue until the remedial objectives have been achieved, or until the Department, in consultation with NYSDOH, determines that continued operation is technically impracticable or not feasible.

3. Soil/fill Removal: Six hydraulic lifts, associated infrastructure, and associated impacted soil/fill in the loading dock area along Washington Street above the restricted residential soil cleanup objectives (RRSCOs) will be removed from the site. The contaminated soil/fill will be disposed of at a permitted landfill facility. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site.

4. Utility and Sewer Cleaning: Impacted utilities and sewers which consist of floor drains, sumps, trenches, and holding tanks will be cleaned by using the combination of a pressure washer and drum vacuum. Inflatable pigs will be placed into the structures to prevent the contents/wash water from migrating away from the structures. Wash water and spoils will be containerized and disposed off-site.

5. Basement Water Removal: The standing water in the basement (approx. 144,000 gallons) will be discharged to Buffalo Sewer Authority sewer under a permit.

6. Cover System: A site cover currently exists in the buildings and Burton Street Road areas. The cover will be maintained to allow for restricted residential use of the site. Any site redevelopment will maintain the existing site cover. The cover system will consist of maintenance of the existing concrete slabs within the building and maintenance of the existing asphalt on former Burton Street. Building foundations removed for future development will be replaced by a minimum of six inches of concrete and associated sub-base or six inches of asphalt and associated sub-base material. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d). In areas where existing building foundations or building slabs preclude contact with the soil, the requirements for a site cover will be deferred until such time that they are removed.

7. Soil Vapor Intrusion Mitigation
Any on-site buildings will be required to have a sub-slab depressurization system, or other acceptable measures, to mitigate the migration of vapors into the building.

8. Engineering and Institutional Controls:
Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 4,

restricted residential cleanup at a minimum and will include maintenance of a site cover, an environmental easement, and site management plan as described below.

9. 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 restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
• restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
• requires compliance with the Department approved Site Management Plan.

10. 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:

Engineering Controls: The cover system discussed in Paragraph 6 and soil vapor intrusion mitigation discussed in Paragraph 7 above.

Institutional Controls: The Environmental Easement discussed in Paragraph 9 above.

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 that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 6 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.

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; and
• a schedule of monitoring and frequency of submittals to the Department.

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 is not limited to:

- procedures for operating and maintaining the remedy;
- compliance monitoring of treatment systems to ensure proper O&M as well as providing the 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 with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

Michael J Cruden

Digitally signed by Michael J Cruden
DN: cn=Michael J Cruden, o=DER, ou=RBE, email=mjcruden@gw.dec.state.ny.us, c=US
Date: 2017.07.24 09:30:56 -04'00'

Date

Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

Former Trico Plant
Buffalo, Erie County
Site No. C915281
July 2017

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:

Buffalo and Erie County Public Library
Attn: Mary Jean Jakubowski
1 Lafayette Square
Buffalo, NY 14203
Phone: 716-858-8900

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 in the densely developed urban center of downtown Buffalo. The property is immediately bounded by commercial and residential properties to the north; Ellicott Street and a parking lot to the east; Goodell Street and Eastman Machine Company to the south; and Washington Street and commercial and residential properties to the west.

Site Features: The site consists of a complex of five industrial buildings totaling 617,627 square feet and a small portion of former Burton Street. The buildings are currently vacant.

Current Zoning and Land Use: The site is zoned CM (General Commercial).

Past Use of the Site: The oldest of the five buildings was constructed circa 1890 as a portion of the Christian Weyand Brewery which operated at the site until the enactment of prohibition. The building was purchased in 1920 by Trico Products Corporation for the manufacturing of windshield wipers for the automotive industry. The remaining buildings were constructed from 1920 to 1954. The Trico Products Corporation operated at the site until circa 1990. Operations included electroplating, smelting, die-casting, rubber extrusion and metal fabrication.

Site Geology and Hydrogeology: The site primarily consists of a building. Below the concrete building slab, there is a thin veneer (2 to 3 inches) of fill material consisting of black fine to course sand with ash. This is underlain with native soils generally consisting of a varying thickness and alternating layers of reddish-brown sandy lean clays and sandy silts to depths of 40 feet below the building floor. The bedrock consists of Onondaga Formation which has an approximate thickness of 110 to 160 feet. The depth to groundwater below the building basement floor is approximately 1.65 feet. Regional groundwater flow is estimated west toward Lake Erie.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (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 Applicants under the Brownfield Cleanup Agreement are Volunteers. The Applicants do not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

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

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

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

The analytical data collected on this site includes data for:

- groundwater
- standing water
- soil
- sediment
- 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:

trichloroethene (TCE)
tetrachloroethene (PCE)
vinyl chloride
polycyclic aromatic hydrocarbons (PAHs)
polychlorinated biphenyls (PCBs)
arsenic
barium
mercury
dichloroethene (cis-1,2-)
dichloroethene (trans-1,2-)

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

- soil
- groundwater
- standing water
- soil vapor intrusion
- indoor air

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 (RI) was completed in December 2016. The soil/fill and groundwater samples were analyzed for Target Compound List (TCL) volatiles organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated bi-phenyls (PCBs), pesticides,

herbicides, Target Analyte List (TAL) metals, and cyanide,. Based upon the RI, groundwater is the prime medium of contamination at the site.

Groundwater: Groundwater at the site is contaminated with chlorinated volatile organic compounds (cVOCs) [tetrachloroethene (PCE), trichloroethene (TCE), cis-dichloroethene (cis-DCE), trans-dichloroethene (trans-DCE), and vinyl chloride] related to the solvents used at the site during plant operations. The highest concentrations of cVOCs in groundwater were: PCE-4.9 parts per billion (ppb) (std. - 5 ppb), TCE - 89 ppb (std. - 5 ppb), cis-DCE -140 ppb (std. - 5 ppb), trans-DCE -200 ppb (std. -5 ppb), and vinyl chloride - 2.1 ppb (std. - 2 ppb).

Other parameters exceeding the Groundwater Quality Standards (GWQS) were: dissolved metals [cobalt - 7.3 ppb (std. -5 ppb), iron - 530 ppb (std. - 300 ppb), and magnesium - 123,000 ppb (std. - 35,000 ppb)] and PAHs [benzo(b)flouranthene - 0.71 ppb (std.- 0.002 ppb) and chrysene - 0.56 ppb (std.- 0.002 ppb)]. Iron and magnesium are natural occurring metals.

Polychlorinated bi-phenyls (PCBs), pesticides, and herbicides were not detected in groundwater.

Off-site Groundwater: Levels of TCE (0.33 ppb) and cis-DCE (2.8 ppb) found in off-site monitoring wells were below their respective groundwater quality standards.

Soil/Fill: All soil that exists on the site is beneath a building or the former Burton Street (asphalt cover), therefore no surface soil exists on site. Levels of metals (arsenic, barium, and mercury), PCBs and PAHs were found above restricted residential soil cleanup objectives (RRSCOs) in soil/fill samples collected from beneath the building during a Limited Sub-surface Investigation in 2013. Total PAHs were below 50 ppm. During the RI, RRSCOs were exceeded only for arsenic (26.9 ppm; RRSCO-16 ppm) at only one sampling location. The levels of PAHs, PCBs, and cVOCs did not exceed RRSCOs in any RI sample. The levels of contamination beneath former Burton Street did not exceed RRSCOs. Samples collected during the limited subsurface investigation in 2013, as well as the RI, were distributed across the building footprint. The variability in data between the investigations is indicative of the heterogeneity of soil/fill contaminant concentrations across the site. Contamination from this site is not suspected to have impacted off-site soils.

Drainage Structures: The material in the drainage structures contained residual oil. The concentrations of volatile organic compounds were below the restricted residential use soil cleanup objectives.

Standing Water in the Basement: One pesticide [4,4'- DDD (0.08 ppb)] was detected in basement water above the GWQS (0.01 ppb). The levels of metals such as barium, manganese, nickel, and zinc were below the GWQS/Guidance Values.

Sub-slab Vapor and Indoor Air: The concentrations of volatile contaminants of concern in sub-slab vapor samples were up to 19,000 microgram per cubic meter (ug/m^3) – TCE; 730 ug/m^3 - cis-dichloroethene; 99 ug/m^3 - trans-dichloroethene; 2.8 ug/m^3 - tetrachloroethene, and 0.51 ug/m^3- vinyl chloride.

The indoor air samples detected TCE at 35 ug/m^3 which exceeds the NYSDOH indoor air guideline of 2 ug/m^3 and the immediate action level of 20 ug/m^3. In addition, the following contaminants were detected in indoor air: cis-dichloroethene at 5.9 ug/m^3, trans-dichloroethene at 0.42 ug/m^3, tetrachloroethene at 0.24 ug/m^3, and vinyl chloride at 0.089 ug/m^3.

Sub-Slab soil vapor concentrations are greatest in the immediate vicinity of the most impacted groundwater monitoring well and significantly decrease as you move away from that well toward the perimeter of the building. In addition, the groundwater contamination is contained to the site. Therefore off-site soil vapor impacts of concern are not anticipated.

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.*

Direct contact with contaminants in soil is unlikely as the site is covered with buildings or pavement. People are not drinking contaminated groundwater as the area is served by a public water supply that is not affected by the site. Contact with sediments and standing water in the basement is possible. Volatile organic compounds in the groundwater or soil 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. Because the building is vacant, inhalation of site-related contaminants due to soil vapor intrusion does not represent a current concern. However, the potential exists for people to inhale site contaminants if the building is reoccupied. Soil vapor intrusion concerns are limited to the on-site building only.

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.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation exposure to contaminants volatilizing from soil.

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 referred to as the Restricted Residential Use (Track 4) remedy.

The elements of the selected remedy, as shown in Figure 2, 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; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Enhanced Bioremediation: In-situ enhanced bioremediation will be employed to treat chlorinated volatile organic compounds (cVOCs) in groundwater within the building (Site) in the area depicted on Figure 2. The biological breakdown of contaminants will occur through anaerobic reductive dechlorination. The in-situ treatment mixture will consist of hydrogen release compounds, in the form of lactates, enriched natural microbial consortium to increase

microbial populations for anaerobic biodegradation, and an iron-based chemical reducing solution. The mixture will be injected under pressure into the ground via direct push probes at depths from 2 to 12 feet below grade.
Several groundwater monitoring wells will be sampled regularly to evaluate progress of the in-situ treatment. The operation of the components of the remedy will continue until the remedial objectives have been achieved, or until the Department, in consultation with NYSDOH, determines that continued operation is technically impracticable or not feasible.

3. Soil/fill Removal: Six hydraulic lifts, associated infrastructure, and associated impacted soil/fill in the loading dock area along Washington Street above the restricted residential soil cleanup objectives (RRSCOs) will be removed from the site. The contaminated soil/fill will be disposed of at a permitted landfill facility. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site.

4. Utility and Sewer Cleaning: Impacted utilities and sewers which consist of floor drains, sumps, trenches, and holding tanks will be cleaned by using the combination of a pressure washer and drum vacuum. Inflatable pigs will be placed into the structures to prevent the contents/wash water from migrating away from the structures. Wash water and spoils will be containerized and disposed off-site.

5. Basement Water Removal: The standing water in the basement (approx. 144,000 gallons) will be discharged to Buffalo Sewer Authority sewer under a permit.

6. Cover System: A site cover currently exists in the buildings and Burton Street Road areas. The cover will be maintained to allow for restricted residential use of the site. Any site redevelopment will maintain the existing site cover. The cover system will consist of maintenance of the existing concrete slabs within the building and maintenance of the existing asphalt on former Burton Street. Building foundations removed for future development will be replaced by a minimum of six inches of concrete and associated sub-base or six inches of asphalt and associated sub-base material. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d). In areas where existing building foundations or building slabs preclude contact with the soil, the requirements for a site cover will be deferred until such time that they are removed.

7. Soil Vapor Intrusion Mitigation
Any on-site buildings will be required to have a sub-slab depressurization system, or other acceptable measures, to mitigate the migration of vapors into the building.

8. Engineering and Institutional Controls:
Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 4, restricted residential cleanup at a minimum and will include maintenance of a site cover, an environmental easement, and site management plan as described below.

9. 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 restricted residential, commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
• restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
• requires compliance with the Department approved Site Management Plan.

10. 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:

Engineering Controls: The cover system discussed in Paragraph 6 and soil vapor intrusion mitigation discussed in Paragraph 7 above.
Institutional Controls: The Environmental Easement discussed in Paragraph 9 above.

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 that should a building foundation or building slab be removed in the future, a cover system consistent with that described in Paragraph 6 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.

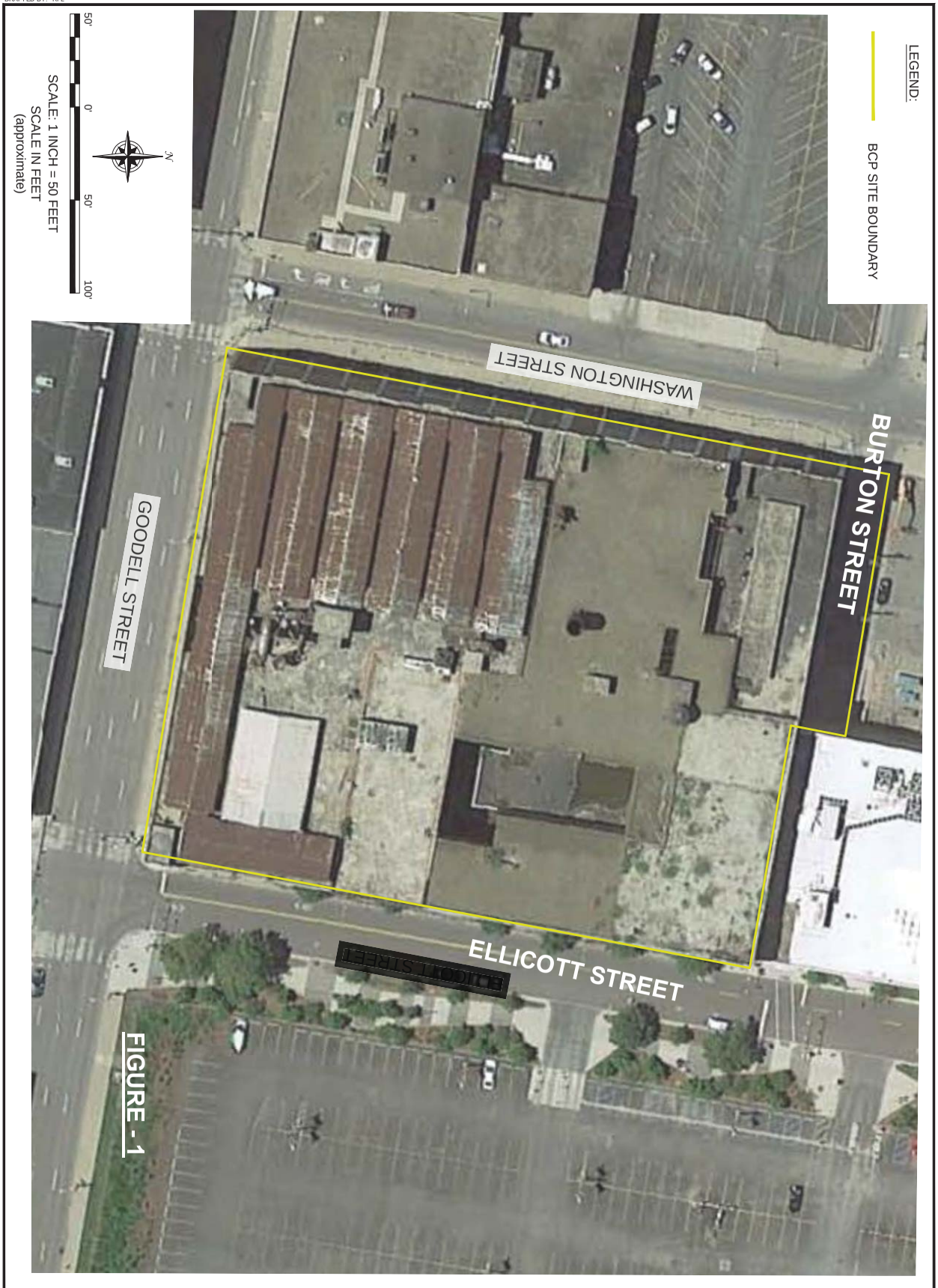
b. A Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
• monitoring of groundwater to assess the performance and effectiveness of the remedy; and
• a schedule of monitoring and frequency of submittals to the Department.

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 is not limited to:

• procedures for operating and maintaining the remedy;
• compliance monitoring of treatment systems to ensure proper O&M as well as providing the 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.

F:\CAD\TurnKey\Krog\Former Trico Building BCP\RI AAR\Figure 2; Site Plan Aerial.dwg

DATE: JULY 2016
DRAFTED BY: RFL



SITE PLAN (AERIAL)

RI/AA REPORT

FORMER TRICO PLANT
791 WASHINGTON STREET
BUFFALO, NEW YORK

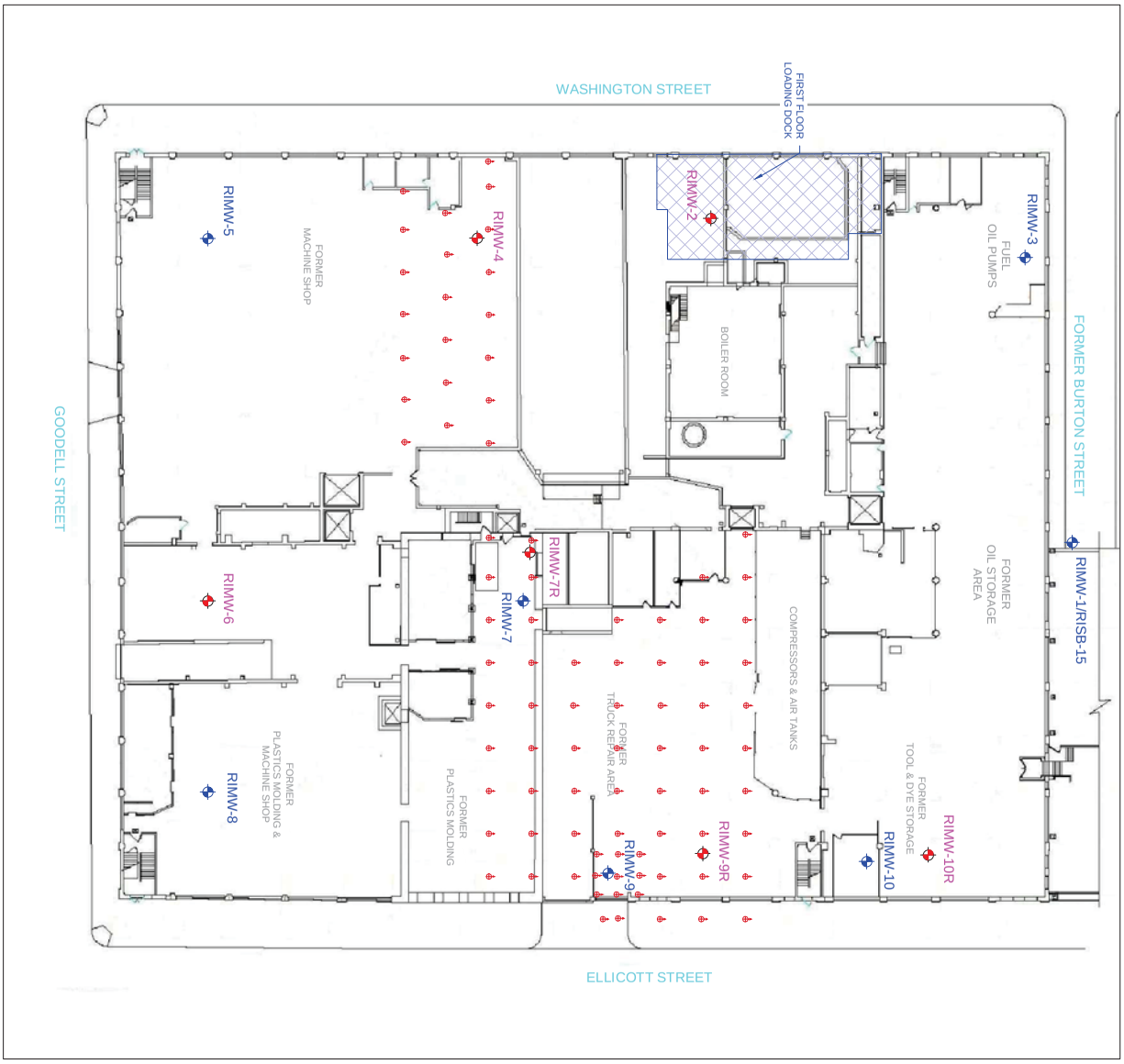
PREPARED FOR
THE KROG GROUP, LLC

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
TURNKEY ENVIRONMENTAL RESTORATION, LLC
2558 HAMBURG TURNPIKE, SUITE 300, BUFFALO, NY 14218, (716) 856-0599

JOB NO.: 0092-016-001

F:\CAD\TurnKey\Krog\Former Trico Building BCP\RAWP\Figure 6; Planned GW Remedial Strategy.dwg

DATE: FEBRUARY 2017
DRAFTED BY: RFL



LEGEND:

- PLANNED AMENDMENT INJECTION LOCATION
- RIMW-3 MONITORING WELL LOCATIONS TO BE DECOMMISSIONED
- RIMW-2 EXISTING POST-INJECTION GROUNDWATER MONITORING LOCATION
- RIMW-7R PLANNED POST-INJECTION GROUNDWATER MONITORING LOCATION

NOTES:
1. DUE TO REDEVELOPMENT PLANS INSIDE BUILDING, THREE (3) POST-INJECTION MONITORING WELL LOCATIONS WILL NEED TO BE DECOMMISSIONED AND RELOCATED: RIMW-7, -9 AND -10. THE PROPOSED LOCATIONS FOR THE REPLACEMENT WELLS ARE SHOWN AS RIMW-7R, -9R, AND -10R.

SCALE: 1 INCH = 40 FEET
SCALE IN FEET
(approximate)
40' 0' 40' 80'
N

FIGURE 2

PLANNED GROUNDWATER REMEDIAL STRATEGY AMENDMENT
INJECTION AND POST-INJECTION GROUNDWATER MONITORING LOCATIONS
REMEDIAL ACTION WORK PLAN

FORMER TRICO PLANT
791 WASHINGTON STREET
BUFFALO, NEW YORK
PREPARED FOR
THE KROG GROUP, LLC

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