DECISION DOCUMENT

Pierce Arrow Business Center
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915312
December 2017

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

DECLARATION STATEMENT - DECISION DOCUMENT

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Brownfield Cleanup Program
Buffalo, Erie County
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Statement of Purpose and Basis

This document presents the remedy for the Pierce Arrow Business Center 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 Pierce Arrow Business Center site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

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

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

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

Michael J Cruden

Digitally signed by Michael J Cruden
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Michael Cruden, Director
Remedial Bureau E

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SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site resulted in threats to public health and the environment that were addressed by actions known as interim remedial measures (IRMs), which were undertaken at the site. An IRM is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before completion of the remedial investigation (RI) or alternative analysis (AA). The IRM undertaken at this site are discussed in Section 6.2.

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

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repository:

North Park Library
975 Hertel Ave.
Buffalo, NY 14216
Phone: 716-875-3748

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 2.37 acre site consists of two contiguous parcels (155-157 Chandler Street) in the City of Buffalo. The site is bound to the north by Chandler Street, to the west by Manton Place, to the south by Grote Street and to the east by residential properties. The property is located within a mixed industrial, commercial, and residential area.

Site Features: The 155 Chandler parcel is improved with one 65,000 square foot building which surrounds a large 22,000 square foot brick and gravel courtyard. The 157 Chandler parcel is a vacant gravel lot.

Current Zoning and Land Use: The site properties are currently zoned light industrial and they are vacant.

Past Uses of the Site: The site has been used for operations such as machining, gas manufacturing and other manufacturing since the early 1900s. The structure was originally constructed in 1907 and utilized as a factory occupied by Linde Air Products until the early 1950s. Bell Aircraft Corporation was located at the site in the early/mid 1950s. In 1958, the building was purchased by Donald Rosen and utilized for G & R Machinery (machine shop) from approximately 1959 through at least the 1990s. The property was owned by Donald Rosen from 1958 through 1990, and by Irving Rosen from 1990 through 2005. The site was purchased by Ontario Equipment Co. in 2005 and R& M Leasing, LLC in 2017.

Site Geology and Hydrogeology: The overburden soils encountered at the site consist of approximately 2 to 4 feet of granular and cohesive fill material. Silty clay lies below the fill material. A perched groundwater condition is present at the fill/native interceptor at three to four feet below ground surface. Groundwater was not encountered within the silty clay. The shallow regional groundwater flows in a southwesterly direction toward Scajaquada Creek located approximately 0.35 miles south and toward the Niagara River located approximately 1.25 miles

west of the Site.

The site location maps are attached as Figures 1 and 2.

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, an alternative that restricts 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) was evaluated in addition to an alternative which would allow for unrestricted use of the site.

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

SECTION 5: ENFORCEMENT STATUS

The Applicant(s) under the Brownfield Cleanup Agreement is a 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
- indoor air
-outdoor 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 contaminants of concern identified at this site are:

cadmium	mercury
chromium	polycyclic aromatic hydrocarbons (PAHs)
copper	polychlorinated biphenyls (PCBs)
lead	trichloroethene (TCE)

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

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

The following IRMs have been completed at this site between April 2017 and October 2017 based on conditions observed during the RI and earlier site investigations.

IRM – Soil Removal

Excavation and off-site disposal of contaminant source areas, including:
• grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
• soils which exceeded the restricted residential soil cleanup objectives (RRSCOs) for all contaminants including polychlorinated bi-phenyls (PCBs), metals and polycyclic aromatic hydrocarbons (PAHs); and
• soils that created a nuisance condition, as defined in Commissioner Policy CP-51 Section G.

Removal of PCB Contaminated Soil and other Materials from 155 Chandler Street Parcel: Contaminated soils from the courtyard area were excavated and disposed off-site at permitted facilities. The excavations varied from 1.5 to 2 feet below grade. Cleanup was confirmed by collecting confirmatory samples after completion of excavation of contaminated soil/fill. Approximately 275 cubic yards of soils and fill piles contaminated with PCBs greater than 50 parts per million (ppm) were disposed of as hazardous waste at a Waste Management Facility in Alabama. Approximately 600 tons of contaminated bricks and concrete and 740 cubic yards of non-hazardous soils from the courtyard and within buildings were taken to the Waste Management Facility in Chaffee, New York for disposal. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) for restricted residential use was brought in to complete the backfilling of the excavation and establish the designed grades at the site.

Removal of Contaminated Soil/Fill from Parking Lot (157 Chandler Street parcel):
Approximately 1,470 cubic yards of soil/fill primarily contaminated with lead were excavated and disposed off-site at the Waste Management Facility in Chaffee, New York. The excavations were 3 to 4 feet below grade. Cleanup was confirmed by collecting confirmatory samples after completion of excavation of contaminated soil/fill. The levels of all test parameters were below RRSCOs. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) for restricted residential use was brought in to complete the backfilling of the excavation and establish the designed grades at the site.

IRM – Tank/Sewer Drain Removal

Excavation and off-site disposal of 2,000-gallon underground storage tank (UST):
The UST, associated piping, and 64 cubic yards of petroleum contaminated soil were excavated and disposed off-site.

Cleanup of 10,000-gallon above ground storage tank vault:
The concrete floor of the vault and approximately 18-inches underlying soil contaminated with fuel oil were removed and disposed off-site.

Sewer Drain and Pit Areas: The concrete sewer drain, pit areas and impacted soil in the courtyard were excavated to an approximate 4 foot depth and disposed off-site.

Post-excavation confirmatory soil samples confirmed RRSCOs were achieved in all three locations.

IRM - Interior Activities

Building sub-floor removal: Soils contaminated with metals, PAHs and PCBs above the RRSCOs below the building's subfloor were excavated and disposed off-site. The total area of excavation was approximately 1,175 square feet. The depths of excavations ranged from 2.5 to 4 feet.

Concrete floors removal: Approximately 7,956 square feet of concrete floor in the building, showing PCBs greater than 1 ppm, were removed and disposed off-site.

Disposal of Drums and Containers: Drums and containers containing materials such as lacquer thinner, petroleum based oil, petroleum products, non-PCB transformer oil, contaminated water, empty propane cylinders, lab chemicals, etc. were removed from the site and disposed off-site.

Disposal of Radium Dial Gages: The radium dial gages from the site were collected and sent off-site for disposal. Following removal of dial gages, a radiation survey was conducted. No additional radiological contamination was identified when compared to background.

Installation of Vapor Mitigation System: A sub-slab depressurization system has been installed in a portion of the building which showed elevated concentrations of chlorinated volatile organic compounds (VOCs) in indoor air and sub-slab samples. Effectiveness of the system will be evaluated by the planned testing once the new concrete floors are poured. Indoor air monitoring will be completed in accordance with the Site Management Plan to determine whether additional mitigative actions are warranted.

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 October 2017. The soil/fill and groundwater samples were analyzed for Target Compound List (TCL) VOCs, semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, herbicides, and Target Analyte List (TAL) metals. Soil vapor and indoor air samples were analyzed for VOCs during the RI.

Sub-slab Vapor, Indoor Air, and Outdoor Air: A soil vapor intrusion investigation was conducted prior to removing building floors. The investigation included collection of sub-slab, ambient indoor air, and ambient outdoor air samples. The samples were analyzed for VOCs.

The concentrations of VOCs in sub-slab vapor samples were up to 3,500 microgram per cubic meter (ug/m^3) of trichloroethene (TCE), 340 ug/m^3 of tetrachloroethene (PCE), 41 ug/m^3 of carbon tetrachloride, 2.6 ug/m^3 of methylene chloride, 390 ug/m^3 of acetone, and 62 $ug/m^3$of 1,1,1-trichloroethane.

The contaminants detected in indoor air were: acetone at 290 ug/m^3, methylene chloride at 150 ug/m^3, TCE at 1.7 ug/m^3, and tetrachlorethene at 1.2 ug/m^3.

The concentration of hexane was found at 6.8 ug/m^3 in the outdoor air sample.

The levels of TCE and PCE in sub-slab samples and of methylene chloride in the indoor air samples exceeded the NYSDOH Air Guideline Values. The level of hexane in the outdoor sample exceeded the Outdoor Air Guidance Value.

The sub-slab and indoor air results indicate actions are warranted to address soil vapor intrusion in the on-site building.

Post IRM:

The level of contamination remaining at the site after IRM activities is as follows:

Soil:

155 Chandler Street Parcel: The concentrations of VOCs and metals in post excavation confirmatory samples were below the RRSCOs and for SVOCs, PCBs, pesticides, and herbicides the concentrations were below the Unrestricted SCOs.

157 Chandler Street Parcel: The concentrations of VOCs, SVOCs, PCBs, pesticides, and herbicides were below Unrestricted SCOs and the concentrations for metals were below the RRSCOs.

Excavations of contaminated soil/fill at 157 Street Chandler Street were up to the property boundaries along the east and south sides of the parcel. The concentrations of post excavation soil samples along the eastern and southern property boundary were below RRSCOs. No off-site soil impacts from site contaminants is suspected.

Groundwater: Groundwater Quality Standards (GWQS) exceeded for acetone (88 ppb; GWQS - 50 ppb), 2-butanone (130 ppb; GWQS - 50 ppb), benzene (1.2 ppb; GWQS - 1 ppb), and TCE (11 ppb; GWQS - 5 ppb) in only one monitoring well. Acetone, 2-butanone, and TCE were not detected during first round of sampling. Acetone is a common laboratory contaminant.

On-site groundwater data suggest that GWQS for the above noted VOCs, PAHs and metals may be exceeded off-site, however, potable groundwater use in the City of Buffalo is prohibit and groundwater concentrations are expected to attenuate over time due to remedial actions taken.

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 the soil is unlikely because contaminated soil was excavated and disposed of off-site. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. A sub-slab depressurization system (systems that ventilate/remove the air beneath the building) has been installed beneath a portion of the on-site building to prevent the indoor air quality from being affected by the contamination in the soil vapor beneath the building. However, additional evaluations are necessary to determine if there is a potential for soil vapor intrusion within the remaining portions of the building. Sampling indicates 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.

Soil

RAOs for Public Health Protection

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

Based on the results of the investigations at the site, the interim remedial measure (IRM) that has been performed, and the evaluation presented here, the Department has selected No Further Action as the remedy for the site. This No Further Action remedy includes continued operation of the vapor mitigation system (Figure 3) and the implementation of ICs/ECs as the selected remedy for the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.

The selected remedy is referred to as the Restricted Residential Use (Track 2) remedy.

In addition to the IRMs that have been performed, the elements of the selected remedy are as follows:

1. 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.

2. 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:

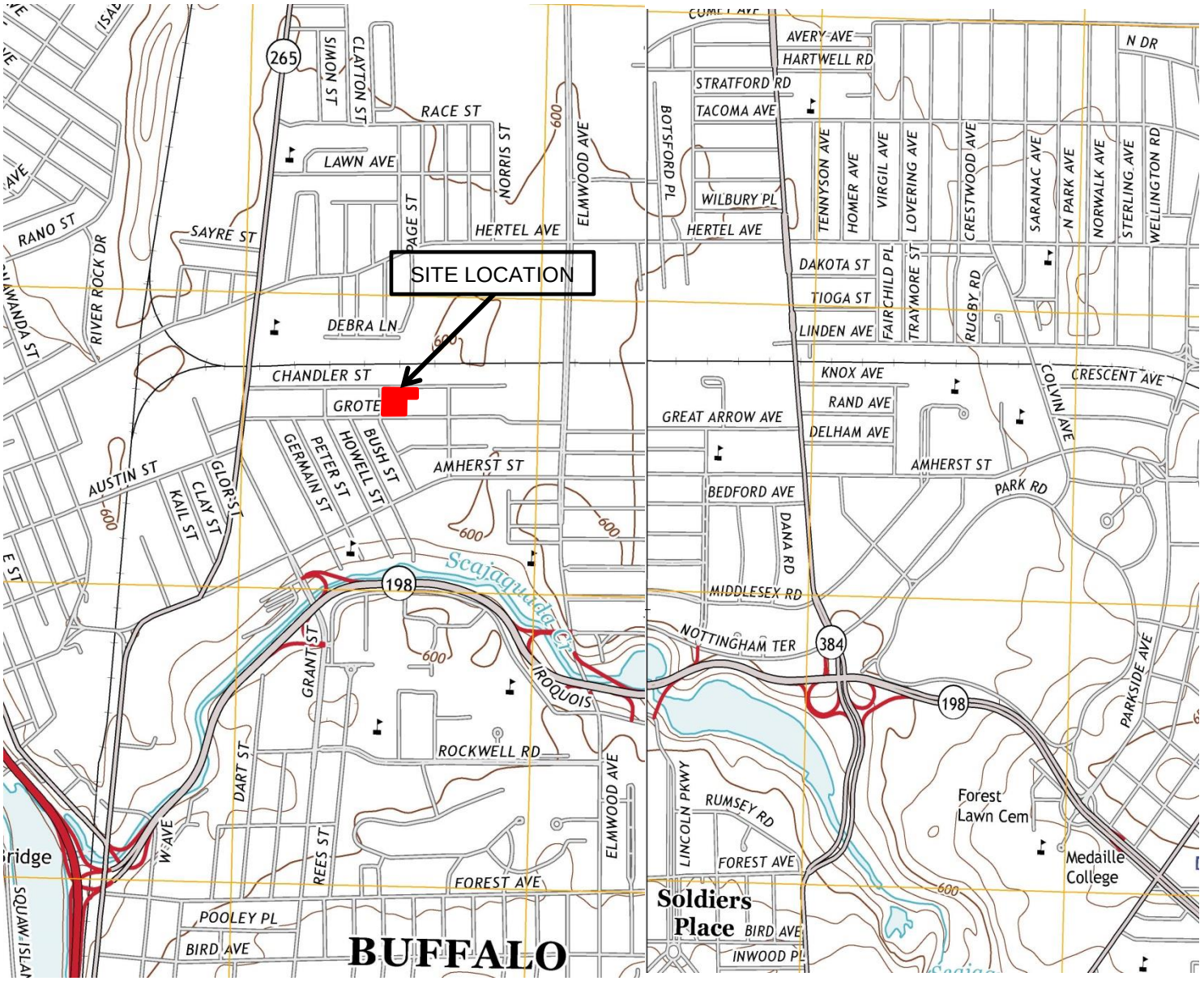
   Engineering Controls: The vapor mitigation system discussed in Section 6.2.
   Institutional Controls: The Environmental Easement discussed in Paragraph 1 above.

   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 restrictions;
   - a provision for evaluation of the potential for soil vapor intrusion for any existing or future buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;

- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and 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 indoor air to determine whether additional mitigation actions are warranted for the on-site building;
   - 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.

c) an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection, and reporting of any mechanical or physical components of the vapor mitigation system. The plan includes, but is not limited to:
   - procedures for operating and maintaining the system; and
   - compliance inspection of the system to ensure proper O&M as well as providing the data for any necessary reporting.



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LOCUS PLAN 155 and 157 CHANDLER STREET BUFFALO, NEW YORK		
R & M LEASING LLC BUFFALO, NEW YORK		
DRAWN BY: LSH	SCALE: NOT TO SCALE	PROJECT: e1601
CHECKED BY: EB	DATE: 10/17	FIGURE NO: 1

BCP Boundary Limits

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HAZARD EVALUATIONS, INC.		
Phase I/II Audits – Site Investigations – Facility Inspections		
SITE PLAN 155 and 157 CHANDLER STREET BUFFALO, NEW YORK		
R & M LEASING LLC BUFFALO, NEW YORK		
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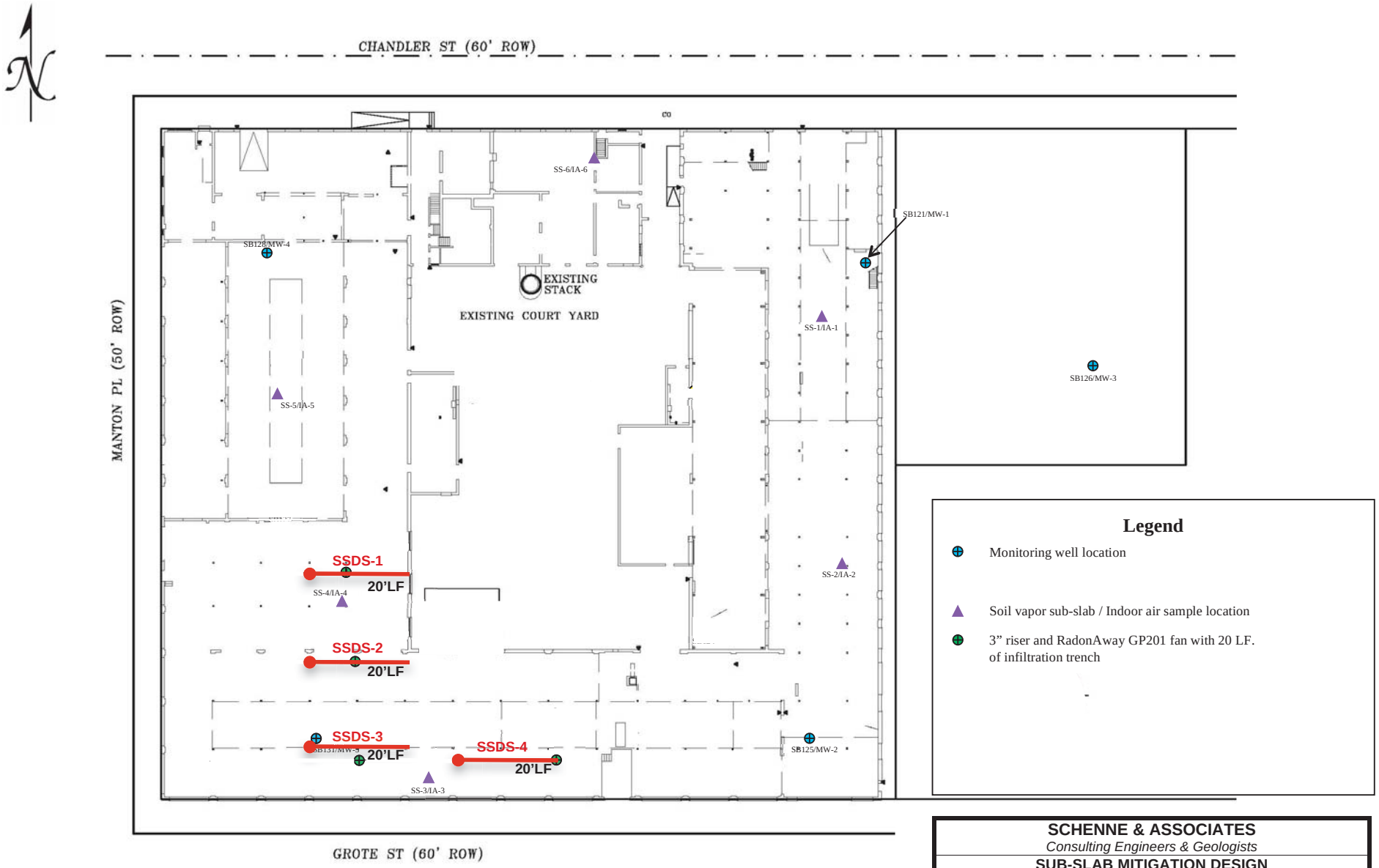

SUB-SLAB MIGRATION SYSTEM

N.T.S.

AS-BUILT

SCHENNE & ASSOCIATES *Consulting Engineers & Geologists*		
SUB-SLAB MITIGATION DESIGN 155 and 157 CHANDLER STREET BUFFALO, NEW YORK		
R & M LEASING LLC BUFFALO, NEW YORK		
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