ANALYSIS OF BROWNFIELDS CLEANUP ALTERNATIVES (ABCA)

Location:

24 and 32 York Street
Rochester, NY 14611
NYSDEC Spill #1901036

Prepared for:

United States Environmental Protection Agency
Region 2 Office
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**Text based on Draft ABCA by DAY Environmental, Inc. dated November 25, 2019*

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EXECUTIVE SUMMARY

LaBella Associates, DPC (LaBella) is pleased to submit this Analysis of Brownfields Cleanup Alternatives (ABCA) on behalf of the City of Rochester, New York (City). This ABCA was generated for the remediation of petroleum impacts identified on two City-owned adjoining parcels with a combined area of approximately 0.27 acres located at 24 and 32 York Street, City of Rochester, Monroe County, New York, herein after referred to as the "Site." A project locus map is included as Figure A. It should be noted that DAY Environmental, Inc. (DAY) prepared a draft of this ABCA on behalf of the City, dated November 25, 2019, which was provided to LaBella by the City for development of this Final ABCA. This final report is based on DAY's draft report.

The New York State Department of Environmental Conservation (NYSDEC) assigned Spill No.1901036 to the Site, which is currently listed as an active spill ("Unknown Petroleum").

Three remediation alternatives were retained following preliminary screening of applicable remedial methods and technologies.

- **Alternative #1 (No Action)** is the "No Action" alternative, which presumes no cleanup or remediation, and no monitoring will be conducted at the Site.

- **Alternative #2 (Limited Source Removal)** includes the excavation and off-Site disposal of petroleum-impacted soil and groundwater, preparation of a NYSDEC Region 8 Soil and Groundwater Management Plan (SGMP) and flagging the Site in the City's building information system (BIS) as institutional controls to ensure disturbed or displaced residual contamination are properly addressed, and five years of bi-annual post-excavation groundwater monitoring.

- **Alternative #3 (Comprehensive Source Removal and In-Situ Treatment)** includes the excavation and off-Site disposal of petroleum-impacted soil, upper one-foot of fractured bedrock and groundwater, the direct application of a bioremediation additive to the open excavation, the installation of in-situ bioremediation delivery hardware in the excavation, a second application of chemical additive through the in-situ remediation delivery system, preparation of a NYSDEC Region 8 SGMP and flagging the Site in the City's BIS as environmental institutional controls to ensure disturbed or displaced residual contamination are properly addressed, and one year of quarterly post-remediation groundwater monitoring.

Based on the extent of the impacted areas, the contaminants of concerns, and the affected media, the recommended remedial approach is **Alternative #3**. This alternative provides the most: comprehensive cleanup; long-term effectiveness; and reduction on toxicity, mobility, and volume (mass) of contamination. This alternative also better prepares the Site for various future land uses, including multi-family residential and mixed use (commercial and multi- family residential).

1.0 INTRODUCTION AND BACKROUND

1.1 Site Description and History

The Site consists of two contiguous parcels located at 24 and 32 York Street in the City of Rochester, Monroe County, New York (Site). As of the date of this report, the Site is owned by the City, and the Monroe County Tax ID numbers for the 24 and 32 York Street parcels are 120.42-2-70 and 120.42-2-71, respectively. The Site parcels are zoned C-2 (Community Center District) which allows a variety of residential and commercial uses, include mixed use. The Site is currently vacant. The former structure including the foundation and footers was demolished by the City in 2020.

Historical uses of the 24 York Street portion of the Site included a blacksmith shop and a wood working shop in at least 1892; a blacksmith shop, wagon shop, and painting and harness shop in at least 1912; an auto repair facility in at least 1924; a gasoline station (with at least eight underground tanks and at least six pump dispensers) from at least 1925 through at least 1954; an auto repair facility and blacksmith shop in at least 1929-30; a blacksmith shop in at least 1935 and 1950; an auto repair facility from at least 1941 to at least 1973; and an auto sales facility in at least 1978, and vacant land and/or a parking lot from about 1981 to the present.

Historical uses of the 32 York Street portion of the Site included residential from at least 1888 to about 1935, a post office from about 1935 to at least 1997, and a church from about 2001 to 2020.

The Site is bounded to the north and east by commercial property, to the west by York Street with residential and commercial property beyond, and to the south by Ruby Place with commercial property beyond.

The Site is located within the City of Rochester Bull's Head Brownfield Opportunity Area (BOA). The City of Rochester has plans to redevelop the portion of the Bull's Head BOA that includes the Site.

1.2 ABCA Objective

The objective of the ABCA is to identify, evaluate and select a remedy to remediate the petroleum contamination at the Site that results in obtaining closure of active NYSDEC Spill #1901036 and allows redevelopment of the Site for mixed use.

1.3 Summary of Prior Investigations

Previous environmental studies that have been completed for the 24 and 32 York Street Site and/or surrounding area that were utilized in the development of this ABCA include:

- A December 20, 2017 (revised January 3, 2018) Phase I Environmental Site Assessment (Phase I ESA) report completed by DAY for the 24 York Street parcel;
- A December 20, 2017 (revised January 3, 2018) Phase I ESA report completed by DAY for the 32 York Street parcel;
- A July 19, 2019 Preliminary Phase II Environmental Site Assessment (Preliminary Phase II ESA) report completed by DAY for the 24 York Street parcel;

- A July 19, 2019 Preliminary Phase II ESA report completed by DAY for the 32 York Street parcel;

- A July 2019 Pre-Development Phase II Environmental Site Assessment and Geotechnical Study Report completed by DAY for 15 adjoining/nearby City-owned parcels, including investigation work in the public right-of-ways of York Street and Ruby Place that bound the Site; and,

- A November 2019 Phase II ESA Report completed by DAY for the 24 and 32 York Street parcels.

1.3.1 January 3, 2018 Phase I ESAs – 24 and 32 York Street

The Phase I ESA identified historical uses of the 24 York Street parcel as an on-site environmental concern that could impact environmental conditions at the Site. These historical uses included a blacksmith shop and a wood working shop in at least 1892; a blacksmith shop, wagon shop, and painting and harness shop in at least 1912; an auto repair facility in at least 1924; a gasoline station (with at least eight underground tanks [USTs] and at least six pump dispensers) from at least 1925 through at least 1954; an auto repair facility and blacksmith shop in at least 1929-30; a blacksmith shop in at least 1935 and 1950; an auto repair facility from at least 1941 to at least 1973; and an auto sales facility in at least 1978.

In addition, historical uses and regulatory listings of adjoining/nearby properties were identified as an off-site concern that had the potential to impact environmental conditions at the Site. These adjoining/nearby sites included a former dry cleaner, automobile sales and service facilities, a coal company, tailors, a milliner, a sewing machine company, a sheet metal worker, heating contractors, and a locksmith. Documented spill files exist for adjoining/nearby properties.

1.3.2 January 19, 2019 Preliminary Phase II ESAs – 24 and 32 York Street

The Preliminary Phase II ESAs included: a geophysical survey to look for anomalies that could suggest the presence of abandoned underground storage tanks; the advancement of 12 test borings; the installation of ten temporary monitoring wells within ten of these test borings; and the collection and laboratory analysis of soil and groundwater samples. Appendix A contains Figure 2 and select data tables from both of the Preliminary Phase II ESA reports, as well as figures and tables from other previous on-site and adjacent/nearby investigations. The results of the Preliminary Phase II ESA work are summarized below.

- The geophysical survey conducted at the Site did not detect the presence of USTs within the study area at the Site, which suggests any previous tanks have been removed.

- Field evidence of potential petroleum-type impact [e.g., photoionization detector (PID) readings up to 1,067 parts per million (ppm), petroleum-type odors and sheen] was documented at six of the test borings located in the general area of former pump islands, USTs and auto repair buildings. Petroleum sheen and/or light non-aqueous phase liquid (LNAPL) were also detected on groundwater at several of the temporary monitoring wells. Analytical laboratory testing indicates that volatile organic compounds (VOCs) and/or semi-volatile organic compounds (SVOCs) associated with this petroleum impact exceeded some NYSDEC Part 375 Unrestricted Use soil cleanup objectives (SCOs) and/or NYSDEC CP-51 soil cleanup levels (SCLs), but did not exceed the NYSDEC Part 375 Restricted Residential Use

SCOs or Commercial Use SCOs. One or more VOC concentrations detected in some of the groundwater samples exceeded NYSDEC groundwater standards or guidance values referenced in the document titled "Division of Water Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (TOGS 1.1.1). Based on the evidence of petroleum impact encountered during the Preliminary Phase II ESAs, a spill was reported to the NSYDEC on April 30, 2019. The NYSDEC opened Spill File #1901036, which currently has an active status.

- Fill material that contained trace to layers of ash, coal, brick, concrete, and/or cinders was observed in fill material. Analytical laboratory testing indicates the some SVOCs and metals in this fill material exceeds some NYSDEC Part 375 Unrestricted Use SCOs, Restricted Residential Use SCOs, and/or Commercial Use SCOs.

- PCBs were not detected at concentrations above the laboratory method detection limits.

It was concluded that the former uses of the Site (e.g., gasoline station, auto repair, etc.) have impacted soil/fill and groundwater at the Site, primarily with petroleum-related constituents. Petroleum-impacted soil/fill that exhibited nuisance characteristics (e.g., odors) at some of the test boring locations was encountered initially at depths ranging between 0.5 and 8.5 feet below the ground surface (bgs). As a result, it is possible that petroleum-impacted soil/fill could be encountered during future subsurface work (e.g., utility work, redevelopment activities, etc.). A recommendation in the Preliminary Phase II ESAs was to complete additional investigation and remediation in relation to the on-site petroleum impacts associated with Spill File #1901036.

1.3.3 July 2019 Pre-Development Phase II ESA and Geotechnical Study for Bull's Head Sub-Area North

The Pre-Development Phase II ESA and Geotechnical study included evaluation of subsurface environmental conditions on properties and public right-of-ways that adjoining the 24 and 32 York Street Site. This completion field screening and laboratory analysis of soil and groundwater samples from test pits, test borings and/or monitoring wells. Appendix A contains Figure 3 and select data tables from this report, as well as select figures and tables from other previous on-site investigations. Field and laboratory evidence of petroleum impact was encountered at off-site test location MW-08 to the south, but not off-site test location TB-15 that is also located to the south. No field or laboratory evidence of petroleum impact was encountered at off-site test locations to the west (TB-19 and MW-07), to the north (TP-13), and to the east (TB-04, MW-01, TB18, TB-05, TB-06 and TB-24). Petroleum impact at MW-08 exceeded NYSDEC TOGS 1.1.1 groundwater standards or guidance values, but did not exceed applicable NYSDEC Part 375 SCOs or NYSDEC CP-51 SCLs.

1.3.4 November 19, 2019 Phase II ESA – 24 and 32 York Street

The Phase II ESA at the Site included: the advancement of 8 test borings; the installation of five temporary monitoring wells within five of these test borings; and the collection and laboratory analysis of soil samples, groundwater samples and a post-purge water sample from the basement sump inside the former building. Appendix A contains Figure 2 through Figure 7 and Table 3 through Table 6 from this report, as well as select figures and tables from other previous on-site and adjoining/nearby investigations. The results of the Phase II ESA work are summarized below.

- Field evidence of potential petroleum-type impact (e.g., PID readings up to 165.3 ppm, petroleum-type odors and sheen) was documented at six of the test borings. Petroleum odors and sheen was also detected on groundwater at three of the five temporary monitoring wells.

- Soil samples contained some VOCs, but not at concentrations above their respective NYSDEC Part 375 Unrestricted Use SCOs, Restricted Residential Use SCOs, Commercial Use SCOs and/or NYSDEC CP-51 SCLs. Soil samples also contained SVOCs. The concentrations of SVOCs in one soil sample exceeded some NYSDEC Part 375 Unrestricted Use SCOs, Restricted Residential Use SCOs, Commercial Use SCOs and/or NYSDEC CP-51 SCLs.

- The basement sump post-purge water sample contained one VOC, but at a concentration below its TOGS 1.1.1 groundwater guidance value. SVOCs were not detected in this water sample.

- One or more VOC and SVOC concentrations detected in some of the groundwater samples exceeded their respective NYSDEC TOGS 1.1.1 groundwater standards or guidance values.

It was concluded that the cumulative environmental studies were successful in defining the extent of on-site petroleum contamination associated with NYSDEC Spill #1901036. Petroleum-impacted media are primarily located on the 24 York Street parcel (in areas of suspected former USTs, pump islands and auto repair buildings) and the southeast portion of the 32 York Street parcel that comprise the Site. Petroleum impact has migrated off-site tothe south and likely also to some extent to the east and west. Petroleum impact exceeding NYSDEC soil and/or groundwater criteria has been documented on-site and also off-site to the south.

Gravel and fractured rock were encountered prior to drilling equipment refusal at many of the test locations. This fractured rock layer was typically wet, and field evidence of petroleum impact in this layer tended to be less significant in comparison to overlying finer-grained soils. Based on these observations, and given the top of the water table was observed in the overburden on the Site and adjoining properties, it is expected that only the upper one or two feet of fractured/weathered bedrock may be impacted with petroleum.

The Site is located within the City of Rochester Bull's Head Brownfield Opportunity Area (BOA). The City of Rochester has plans to redevelop the portion of the Bull's Head BOA that includes the Site. It is possible that petroleum-impacted soil and groundwater could be encountered during future subsurface work (e.g., utility work, redevelopment activities, etc.).

1.4 Proposed Future Use of Site

The Site is part of the City's Bull's Head BOA. The City has indicated that the portion of the Bull's Head BOA where the Site is located is anticipated to be redeveloped for mixed use, but could also include restricted residential or commercial use. This future use is also consistent with the City's Bull's Head Revitalization Project plans and current C-2 zoning for the Site.

1.5 Potentially Exposed Population and Exposure Routes

Considering that: 1) Restricted Residential and/or Commercial redevelopment activities at the Site are anticipated; 2) remedial excavation work is anticipated on-site; and 3) residential buildings are located near the Site, the construction worker/trespasser, occupational worker and local resident have been identified as the most appropriate potential human receptors.

Exposures to the construction worker may occur during remediation, construction and other activities that involve excavation on the Site or at its periphery. Exposures to occupational workers at future Site facilities could occur during normal facility operations due to potential vapor intrusion into buildings, by way of exposure to soil vapor and groundwater during remediation within a building, or during any excavation activity that may take place on or around the Site if remediation does not occur prior to Site redevelopment. Exposure to residents of nearby properties could potentially occur during excavation work at the Site through dispersion of particulates and volatilization of contaminants. Potential routes of exposure include:

- Inhalation of vapors released from volatile substances present in subsurface soils (potential future occupational worker and construction worker/trespasser, and local residents during construction);
- Ingestion and dermal contact of substances in subsurface soils (potential future occupational worker and construction worker/trespasser); and
- Ingestion, inhalation and dermal contact with substances present in groundwater (potential future occupational worker and construction worker/trespasser).

Potential exposure during the remedial work will be managed with a Health and Safety Plan (HASP) and Community Air Monitoring Plan (CAMP) designed to protect Site workers and the public. Potential future exposures to residual contamination, if any, will be mitigated by way of institutional and engineering controls and an SGMP.

2.0 APPLICABLLE REGULATIONS AND CLEANUIP STANDARDS

New York State, County of Monroe and City laws and regulations apply to this cleanup. Federal, state, and local laws regarding procurement of contractors to conduct the cleanup will be followed.

2.1 Applicable or Relevant and Appropriate Requirements (ARARS)

ARARs define the minimum level of protection that must be provided by a remedy.

2.1.1 Standards, Criteria, and Guidance (SCG)

SCG values to allow for a mixed residential and commercial use are considered in this ABCA. The SCGs assist in defining the extent of contamination requiring remediation, and also are used to evaluate the effectiveness of the remedy. The SCGs for soil, groundwater and soil vapor intrusion to be used for this project are provided below.

Soil:

- Analytical laboratory results for soil will be compared to SCOs referenced in the 6 New York Codes, Rules and Regulations (NYCRR) NYSDEC document titled "Part 375, Environmental Remediation Programs" dated December 14, 2006. Specific SCOs to be considered will include Unrestricted Use SCOs, Restricted Residential Use SCOs, Commercial Use SCOs, and Protection of Groundwater SCOs.

- Analytical laboratory results for soil will also be compared to SCLs referenced in the NYSDEC document titled "CP-51 / Soil Cleanup Guidance" dated October 21, 2010. SCLs to be considered are included in Table 2 and Table 3 of the referenced document.

Groundwater:

- Analytical laboratory results for groundwater will be compared to groundwater standards and guidance values referenced in the NYSDEC document titled "Division of Technical and Operational Guidance Series, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations" (TOGS 1.1.1) dated June 1998 as amended by April 2000 and June 2004 Addendums. Chapter 59 (Health and Sanitation), Article III (Nuisances and Sanitation) § 59-27 (Water Supply) of the current Charter and Code of the City of Rochester, New York implies that groundwater cannot be used as a source of potable water within the city limits.

Soil Vapor:

- There are currently no structures on the Site; therefore, no SCGs for soil vapor are applicable. If buildings are constructed in the future, a soil vapor intrusion evaluation may be completed to determine if a sub-slab depressurization system (SSDS) is warranted. Alternatively, a SSDS may be installed proactively without testing. Future soil vapor intrusion evaluations will be completed in accordance with the "NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York" dated October 2006 and subsequent updates.

Impacted soil, fill or groundwater containing contaminants above SCGs that are left in-place will be managed with environmental engineering and institutional controls such as:

- A SGMP that provides guidance on management of disturbed or displaced impacted media during future Site activities, such as redevelopment, installation or repair of buried

utilities, etc.,

- Flagging the Site in the City's BIS.
- Evaluating the potential for soil vapor intrusion into new structures, and installing soil vapor mitigation systems on new building if warranted, in accordance with guidelines outlined in the New York State Department of Health (NYSDOH) document "*Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York*" dated October 2006, as amended.

2.1.2 Remedial Action Objectives (RAOs)

RAOs are medium-specific objectives for the protection of human health and the environment. RAOs for this project are as follows:

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

Soil

RAOs for Public Health Protection

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

RAOs for Environmental Protection

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

Soil Vapor

RAOs for Public Health Protection

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

2.2 Cleanup Oversight Responsibility

The City executed a Stipulation Agreement with the NYSDEC dated February 11, 2022 for the cleanup of the Site. Through the Petroleum Spill Cleanup Program, representatives of the NYSDEC Region 8 office will approve project work plans, oversee the cleanup, and approve project reports.

3.0 DEVELOPMENT OF CLEANUP ALTERNATIVES

3.1 Threshold Criteria

In order to evaluate the effectiveness of remedial alternatives for this Site, nine general and site-specific remediation criteria (i.e., threshold criteria) were reviewed in accordance with the provisions set forth in DER-10. These criteria are presented below.

- Protection of Human Health and the Environment: This criterion is an evaluation of the remedy's ability to protect public health and the environment, and assesses how risks posed through each existing or potential pathway of exposure are eliminated, reduced or controlled through removal, treatment, engineering controls or institutional controls. The remedy's ability to achieve each of the RAOs is evaluated.

- Compliance with Standards, Criteria and Guidance Values: Compliance with SCG values addresses whether or not a remedy will meet applicable environmental laws, regulations, standards, and guidance.

- Long-Term Effectiveness and Permanence: This criterion evaluates the long-term effectiveness of the remedy after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated:
    - Whether residual contamination will pose significant threats, exposure pathways, or risks to the community and environment;
    - The adequacy of the engineering and institutional controls intended to limit the risk;
    - The reliability of these controls; and,
    - The ability of the remedy to continue to meet RAOs in the future.

- Reduction of Toxicity, Mobility and Volume: The remedy's ability to reduce the toxicity, mobility or volume of site contamination is evaluated. Preference is given to remedies that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the Site.

- Short-Term Impacts and Effectiveness: The potential short-term adverse impacts and risks of the remedy upon the community, the workers and the environment during its construction and/or its implementation are evaluated. This includes identification of short- term adverse impacts and health risks, the effectiveness of any engineering controls, and the length of time needed to achieve the remedial objectives.

- Implementability: The technical and administrative feasibility of implementing the remedy is evaluated. Technical feasibility includes the difficulties associated with the construction and the ability to monitor the effectiveness of the remedy. Administrative feasibility includes the availability of the necessary personnel and material, the evaluation of potential difficulties in obtaining specific operating approvals, access for construction, etc.

- Land Use: This criterion is intended to evaluate the remedial alternatives in relation to the planned future use of the Site.

- Community Acceptance. This criterion is intended to select a remedial alternative that is acceptable to the community.

- Cost: Capital, operation, maintenance and monitoring costs are estimated for the remedy.

3.2 General Response Actions

Estimated areas and volumes of contaminated media to be addressed are summarized below.

Petroleum-Impacted Soil: As shown on Figure B and Figure C, soil with evidence of petroleum impact covers an approximate 6,856 square-foot on-site and off-site area that is primarily situated on-site. Figure B and Figure C also shows an approximate 6,405 square- foot on-site removal area. Assuming an average 3.5-foot thickness for petroleum-impacted soil within the on-site removal area, it is estimated that approximately 830 cubic yards (CY), or 1,370 tons (using conversion of 1.65 Ton/CY), of petroleum-impacted soil is on- site.

Petroleum-Impacted Bedrock: It is anticipated that petroleum-impacted bedrock covers the same 6,856 square-foot on-site and off-site area as petroleum-impacted soil that is shown on Figure B and Figure C. Assuming the upper 1.0 foot of bedrock is petroleum-impacted over the 6,405 square-foot on-site removal area shown on Figure 2, it is estimated that approximately 237 CY, or 474 tons (using conversion of 2 Ton/CY) of petroleum-impacted bedrock is on-site.

Petroleum-Impacted Groundwater: It is anticipated that petroleum-impacted groundwater covers the same 6,856 square-foot on-site and off-site area as petroleum-impacted soil that is shown on Figure B and Figure C.

General response actions to address the identified contamination in soil or fill can include one or more of the following:

- in-situ treatment,
- containment,
- excavation and disposal,
- extraction and treatment and/or disposal,
- environmental engineering controls, and
- environmental institutional controls.

The response actions are evaluated for application in addressing soil or fill contamination that exceeds applicable NYSDEC SCOs and SCLs.

General response actions to address the identified contamination in groundwater can include one or more of the following:

- in-situ treatment,
- containment,
- extraction and treatment and/or disposal,

- environmental engineering controls,
- environmental institutional controls, and
- monitored natural attenuation.

The response actions are primarily evaluated for application in addressing groundwater contamination that exceeds NYSDEC TOGS 1.1.1 groundwater standards or guidance values.

3.3 Development of Alternatives

The alternatives considered for this Site are directed at addressing contamination in soil, fill and groundwater, and these alternatives are presented below. It is understood that the building on 32 York Street was demolished in December of 2020; as such, the cost to demolish the 32 York Street building has not been included in the cost of the remedial alternatives. The alternatives consider that the Site will be used for a mixed use (residential and commercial purposes).

- **Alternative #1 (No Action)** is the "No Action" alternative, which presumes no cleanup or remediation, and no monitoring will be conducted at the Site.

- **Alternative #2 (Limited Source Removal)** includes the excavation and off-site disposal of petroleum-impacted soil and groundwater, preparation of a NYSDEC Region 8 SGMP and flagging the Site in the City's BIS as institutional controls to ensure disturbed or displaced residual contamination are properly addressed, and five years of bi-annual post-excavation groundwater monitoring.

- **Alternative #3 (Comprehensive Source Removal and In-Situ Treatment)** includes the excavation and off-site disposal of petroleum-impacted soil, upper one-foot of fractured bedrock and groundwater, the direct application of a bioremediation additive to the open excavation, the installation of in-situ bioremediation delivery hardware in the excavation, a second application of chemical additive through the in-situ remediation delivery system, preparation of a NYSDEC Region 8 SGMP and flagging the Site in the City's BIS as environmental institutional controls to ensure disturbed or displaced residual contamination are properly addressed, and one year of quarterly post-remediation groundwater monitoring.

4.0 DETAILED EVALUATION OF CLEANUP ALTERNATIVES

The selected alternatives for addressing Site contamination are further evaluated in this section. These alternatives are evaluated relative to the criteria presented in Section 3.0, including the future planned use of the Site. Table A compares the assessments of each alternative in relation to the remediation goals and compares the opinion of costs to implement each alternative.

4.1 Individual Evaluation of Alternatives

Each of the alternatives identified in Section 3.3 are further evaluated in detail in this section of the report. Remedial Alternatives #2 and #3 will include the development and implementation of a Remedial Work Plan, a HASP with CAMP, and a USEPA Brownfield Quality Assurance Quality Project Plan (QAPP).

4.1.1 Alternative #1 – No Action

This alternative presumes no remediation and no monitoring will be conducted at the Site.

4.1.1.1 Alternative #1 Assessment

Protection of Human Health and the Environment: This alternative may not be protective of human health and the environment. Risks associated with potential human health exposure pathways would not be eliminated, reduced or controlled. RAOs for public health protection and environmental protection are not adequately addressed by this alternative.

Compliance with SCG Values: Alternative #1 does not provide adequate monitoring to evaluate compliance with chemical-specific SCG values. Location-specific SCG values are not met since the Site is located within an urban area and could adversely impact human health. Action-specific SCG values are not applicable under the no action alternative.

Long-Term Effectiveness and Permanence: Long-term effectiveness and permanence would not be adequately monitored. Potential exposure pathways identified as part of this project could occur under the No Action alternative.

Reduction of Toxicity, Mobility and Volume: It is likely that natural attenuation and other factors such as advection, dispersion, sorption, diffusion, etc. are occurring at this Site that would result in reduction of contaminant toxicity, mobility or volume over long periods of time (e.g., decades). However, this alternative would require a longer period of time than the more aggressive alternatives being evaluated.

Short-Term Impacts and Effectiveness: There would be no increased short-term impacts or risks associated with Alternative #1 since remedial activities are not implemented.
Implementability: Of the alternatives being considered, Alternative #1 is easiest to technically and administratively implement since remedial, institutional, monitoring, etc. activities are not required. In addition, there are no labor, material, permitting or accessibility requirements for this alternative

Planned Future Use of the Site: It is anticipated that this alternative would not be acceptable in relation to the planned future use of the Site.

Community Acceptance: It is anticipated that this alternative would not be acceptable to the community in relation to the planned future use of the Site.

Cost: There are no capitol/initial costs or Operation, Maintenance, and Monitoring (OM&M)/Annual/Closeout costs associated with the No Action alternative. As shown on Table A, the costs for this alternative are $0.00.

4.1.2 Alternative #2 – Limited Source Removal

Alternative #2 consists of various technical and administrative actions that are intended to perform remediation of the highest concentrations of soil and groundwater contamination on the Site, reduce exposure to Site contaminants, and provide long-term monitoring of groundwater to document the effectiveness of the remediation completed and to ensure that the contamination is not migrating. The approximate area to be actively remediated under Alternative #2 is shown on Figure B.

To prepare the Site for remediation work, temporary chain link fencing and a gate would be installed to control access, and the existing asphalt pavement would be removed and recycled.

Under this alternative, approximately 1,370 tons of petroleum-impacted soil would be removed and disposed off-site at an appropriate regulated landfill facility. This alternative assumes that infiltrating petroleum-impacted groundwater and storm water would be pumped into one frac tank and that up to 20,000 gallons of water would be collected and disposed of off-site. It is anticipated that excavation dewatering would only be required during the soil and bedrock removal. The water would be pre-treated if necessary, and discharged to a publicly owned treatment works (POTW) under a Specialty Short Term Discharge permit.

Post-excavation soil samples would be collected and analyzed to establish baseline conditions. Guidance in NYSDEC DER-10 and input from the NYSDEC Project Manager would be used to determine the actual locations and numbers of post-excavation samples to be collected and analyzed from the removal area.

Subsequent to the removal work, the excavation would be backfilled with site soils deemed re-usable, and also with clean imported select geotechnical fill (e.g., crushed stone, Bank Run, etc.) that meets NYSDEC requirements set forth in DER-10. It is anticipated that four new monitoring wells would be installed after the removal and backfilling work was completed.

As part of Alternative #2, it is anticipated that a SGMP would be prepared to 1) address characterization, handling, disposal or re-use of environmental impacts that may remain at the Site subsequent to the soil removal work, 2) require evaluating the potential for vapor intrusion into any future buildings to be constructed on the Site, including requirements to mitigate such potential vapor intrusions through use of environmental engineering controls or through other means associated with construction of the buildings in a manner that preclude soil vapor intrusion (SVI) exposure, and 3) include a HASP to assist in reducing potential exposures to Site contaminants. In addition, the City of Rochester would flag the parcels in its BIS to ensure the SGMP is implemented for applicable new building permits and related projects at the Site that have the potential to disturb or displace impacted media and to address potential soil vapor intrusion into any new enclosed structures that are planned.

Up to four on-site monitoring wells would be installed. A groundwater monitoring program would be implemented to evaluate the effectiveness of the remedy. For each monitoring event, static water level measurements would be collected from the four new on-site wells and three existing off-site monitoring wells, a potentiometric groundwater contour map would be prepared, groundwater samples would be collected from the seven monitoring wells, portions of the samples would be monitored for water quality parameters (e.g., dissolved oxygen, oxidation-reduction potential, conductivity, temperature, turbidity and pH), and other portions of the samples would undergo analytical laboratory testing for target compound list (TCL) VOCs (United States Environmental Protection Agency, or USEPA, Method 8260) and CP-51 SVOCs(USEPA Method 8270). This alternative presumes that groundwater monitoring would be performed on a bi-annual basis for a period of five years.

4.1.2.1 Alternative #2 Assessment

Protection of Human Health and the Environment: It is anticipated that Alternative #2 would be protective of human health and the environment under current site conditions, and future use of the Site. Risks associated with potential human health exposure pathways would be eliminated or adequately controlled/mitigated. With the exception of not restoring the groundwater aquifer to pre-disposal/pre-release conditions, RAOs for soil and groundwater would be adequately addressed by this alternative in relation to protection of on-site public health and the environment. The tasks associated with addressing the RAOs could readily be completed.

Compliance with SCG Values: Alternative #2 would meet SCG values for soil, but may not meet SCG values for groundwater. Residual contamination would be managed in accordance with the SGMP and the City's BIS flagging system. Alternative #2 provides adequate monitoring to evaluate compliance trends in relation to chemical-specific SCG values for soil and groundwater. This alternative would meet location-specific SCG values for protection of on-site human health and the environment. Action-specific SCG values would also be adequately addressed for this alternative.

Long-Term Effectiveness and Permanence: The long-term risk associated with the contamination would be reduced by: 1) the soil removal; and 2) the SGMP. The remedial components of this alternative permanently remove petroleum impacts in the soil, removes and treats some of the impacted groundwater, and controls residual contamination at the Site. However, the effectiveness of this alternative may be limited since it is possible that remaining petroleum-impacted groundwater and bedrock could contaminate backfill and also be encountered during future intrusive work (e.g., Site redevelopment, etc.). As such, this alternative may not have the ability to continue to meet RAOs in the future, especially RAOs for groundwater. The long-term effectiveness and permanence of this alternative in relation to residual contaminants would be monitored.

Reduction of Toxicity, Mobility and Volume: The soil removal and disposal, groundwater removal and treatment, natural attenuation, and other factors such as advection, dispersion, sorption, diffusion, etc. would result in reduction of contaminant toxicity, mobility or volume.

Short-Term Impacts and Effectiveness: This alternative would likely result in a slight risk in regard to short-term impacts. It is anticipated that Site workers and the community would have increased risk at exposure to site contamination (i.e., nuisance odors, inhalation and contact with site contaminants, etc.) during soil removal work. However, implementation of a HASP and CAMP that include dust and vapor control contingencies, and also the SGMP, would protect site workers and the nearby community from these short-term risks. It is anticipated that active on-site remediation activities could take a total of four to six weeks to implement. The removal and disposal of impacted soil, and the removal and off-site treatment of impacted groundwater from the resulting excavation, would result in significant reduction of potential impacts to workers during subsequent redevelopment activities. Physical hazard risks would also likely increase during excavation and backfill activities (e.g., excavation wall stability issues, dewatering issues, etc.).

Implementability: This alternative can be implemented easily in relation to the anticipated future use of the Site. Spatial requirements can be accommodated, and would not impede completion of this alternative.

Planned Future Use of the Site: This alternative would be acceptable in relation to the planned future use of the Site.

Community Acceptance: The project will include citizen participation, and public comments and questions will be addressed and taken into consideration. It is anticipated that this alternative would be acceptable to the community in relation to the planned future use of the Site.

Cost: Alternative #2 costs are less than Alternative #3 costs. As shown on Table A and Table B, the opinion of probable cost for this alternative including a 10% contingency is $315,735.20

4.1.3 Alternative #3 – Comprehensive Source Removal and In-Situ Treatment

Alternative #3 consists of various technical and administrative actions that are intended to perform remediation of soil and groundwater contamination on the Site, reduce exposure to Site contaminants, and provide long-term monitoring of groundwater to document the effectiveness of the remediation completed and to ensure that the contamination is not migrating. The approximate area to be actively remediated under Alternative #3 is shown on Figure C.

To prepare the Site for remediation work, temporary chain link fencing and a gate would be installed to control access, and the existing asphalt pavement would be removed and recycled.

Under this alternative, approximately 1,370 tons of petroleum-impacted soil and approximately 474 tons of petroleum-impacted bedrock would be removed and disposed of off- Site at an appropriate regulated landfill facility. Alternative 3 is depicted on Figure C. It should be noted the excavation area shown is approximate and may change based on field conditions during excavation. In addition, the excavation may extend off-Site to the adjacent City-owned parcel addressed as 42 York Street if impacts from the Site are observed off-Site during the excavation. This alternative assumes that infiltrating petroleum-impacted groundwater and storm water would be pumped into two frac tanks and that up to 40,000 gallons of water would be collected and disposed of off-Site. It is anticipated that excavation dewatering would only be required during the soil and bedrock removal. The water would be pre-treated if necessary, and discharged to a POTW under a Specialty Short Term Discharge permit.

Post-excavation soil samples would be collected and analyzed to establish baseline conditions. Guidance in NYSDEC DER-10 and input from the NYSDEC Project Manager would be used to determine the actual locations and numbers of post-excavation samples to be collected and analyzed from the removal area.

Prior to backfilling, up to 1,000 pounds of Regenesis ORC-Advanced (or similar product) will be placed in the excavation to enhance bioremediation of residual petroleum impacts within and around the excavation. In addition, a delivery system (e.g., porous backfill, perforated horizontal or vertical subsurface piping connected to vertical solid riser piping) would be installed within the excavation prior to backfilling to assist in future remediation of residual impact within groundwater, if deemed necessary The remainder of the excavation would be backfilled with Site soils deemed re-usable, and also with clean imported select geotechnical fill (e.g., crushed stone, Bank Run, etc.) that meets NYSDEC requirements set forth in DER- 10.

As part of Alternative #3, it is anticipated that a SGMP would be prepared to 1) address characterization, handling, disposal or re-use of environmental impacts that may remain at the Site subsequent to the soil removal work, 2) require evaluating the potential for vapor intrusion into any future buildings to be constructed on the Site, including requirements to mitigate such potential vapor intrusions through use of environmental engineering controls or through other means associated with construction of the buildings in a manner that preclude SVI exposure, and 3) include a HASP to assist in reducing potential exposures to Site contaminants. In addition, the City of Rochester would flag the parcels in its BIS to ensure the SGMP is implemented for applicable new building permits and related projects at the Site that have the potential to disturb or displace impacted media and to address potential soil vapor intrusion into any new enclosed structures that are planned.

Up to four on-Site monitoring wells would be installed. A groundwater monitoring program would be implemented to evaluate the effectiveness of the remedy. For each monitoring event, static water level measurements would be collected from the four new on-Site wells and three existing off-Site monitoring wells, a potentiometric groundwater contour map would be prepared, groundwater samples would be collected from the seven monitoring wells, portions of the samples would be monitored for water quality parameters (e.g., dissolved oxygen, oxidation-reduction potential, conductivity, temperature, turbidity and pH), and other portions of the samples would undergo analytical laboratory testing for TCL VOCs (USEPA Method 8260) and CP-51 SVOCs (USEPA Method 8270). This alternative presumes that groundwater monitoring would be performed quarterly for one year.

4.1.3.1 Alternative #3 Assessment

Protection of Human Health and the Environment: It is anticipated that Alternative #3 would be the most protective of human health and the environment under current Site conditions, and future use of the Site. Risks associated with potential human health exposure pathways would be eliminated or adequately controlled/mitigated. RAOs for soil and groundwater would be adequately addressed by this alternative in relation to protection of on-Site public health and the environment. The tasks associated with addressing the RAOs could readily be completed.

Compliance with SCG Values: Alternative #3 would meet SCG values for soil, and would also likely meet SCG values for groundwater. Residual contamination would be managed in accordance with the SGMP and the City's BIS flagging system. Alternative #3 provides adequate monitoring to evaluate compliance trends in relation to chemical-specific SCG values for soil and groundwater. This alternative would meet location-specific SCG values for protection of on-Site human health and the environment. Action-specific SCG values would also be adequately addressed for this alternative.

Long-Term Effectiveness and Permanence: The long-term risk associated with the contamination would be effectively reduced by: 1) the soil, bedrock and groundwater removal;
2) the in-situ bioremediation; and 3) the SGMP. It is anticipated that the components of this alternative would prove to be reliable, and would have the ability to continue to meet RAOs in the future. The remedial components of this alternative are effective in the long term, permanently remove petroleum impact in the soil, bedrock and groundwater, and controls residual contamination at the Site. The long-term effectiveness and permanence of this alternative would be monitored.

Reduction of Toxicity, Mobility and Volume: The soil and bedrock removal and disposal, groundwater removal and treatment, in-situ bioremediation, natural attenuation, and other factors such as advection, dispersion, sorption, diffusion, etc. would result in reduction of contaminant toxicity, mobility or volume.

Short-Term Impacts and Effectiveness: This alternative would likely result in a slight risk in regard to short-term impacts. It is anticipated that Site workers and the community would have increased risk at exposure to Site contamination (i.e., nuisance odors, inhalation and contact with Site contaminants, etc.) during soil and bedrock removal work and placement of ORC- Advanced additive for bioremediation. However, implementation of a HASP and CAMP that include dust and vapor control contingencies, and also the SGMP, would protect Site workers and the nearby community from these short-term risks. It is anticipated that active on-Site remediation activities could take a total of six to eight weeks to implement. The removal and disposal of impacted soil and bedrock, and the removal and off-site treatment of impacted groundwater from the resulting excavation, would result in significant reduction of potential impacts to workers during subsequent redevelopment activities. Physical hazard risks would also likely increase during excavation and backfill activities (e.g., excavation wall stability issues, dewatering issues, etc.).

Implementability: This alternative can be implemented easily in relation to the anticipated future use of the Site. Spatial requirements can be accommodated, and would not impede completion of this alternative.

Planned Future Use of the Site: This alternative would be acceptable in relation to the planned future use of the Site.

Community Acceptance: The project will include citizen participation, and public comments and questions will be addressed and taken into consideration. It is anticipated that this alternative would be acceptable to the community in relation to the planned future use of the Site.

Cost: Costs for implementing Alternative #3 are higher than costs of Alternative #2. As shown on Table A and Table C, the opinion of probable cost for this alternative including a 10% contingency is $388,100.90

4.2 Comparative Evaluation and Recommended Alternative

This section of the report compares the remedial alternatives proposed for this Site. For reference, the alternatives are reiterated as follows:

Alternative #1 No Action

Alternative #2 Limited Source Removal

Alternative #3 Comprehensive Source Removal and In-Situ Treatment

As previously indicated, Table A compares the assessments of each alternative in relation to the remediation goals, and compares the opinion of probable costs to implement each alternative. Breakdowns of opinions or probable costs for Alternative #2 and Alternative #3 are found in Table B and Table C, respectively.

Comparative Analysis of Alternatives

- Alternative #3 satisfies the threshold criteria (protection of human health and the environment; and compliance SCG values) and provides the best balance of the primary criteria described in Section 3.1. Alternative #1 does not satisfy the threshold criteria and is not considered viable alternative; as such, Alternative #1 is not further discussed in this comparison. Alternative #2 satisfies the threshold criteria, but does not provide the best balance of the primary criteria.

- The long-term effectiveness and permanence of Alternative #3 exceeds that of Alternative #2.

- Alternative #3 would have a greater reduction in toxicity, mobility and volume of contamination at the Site than Alternative #2.

- Alternative #3 would likely result in a faster cleanup than Alternative #2. Short term impacts and risk to the community and workers during implementation of Alternative #3 and Alternative #2 are similar. For either alternative, implementation of a HASP and CAMP would protect Site workers and the nearby community from these short-term risks.

- Alternative #2 and Alternative #3 can easily be implemented at the Site.

- Alternative #2 and #3 would be acceptable for the planned future use of the Site.

- It is anticipated that Alternative #2 and #3 would be acceptable to the community.

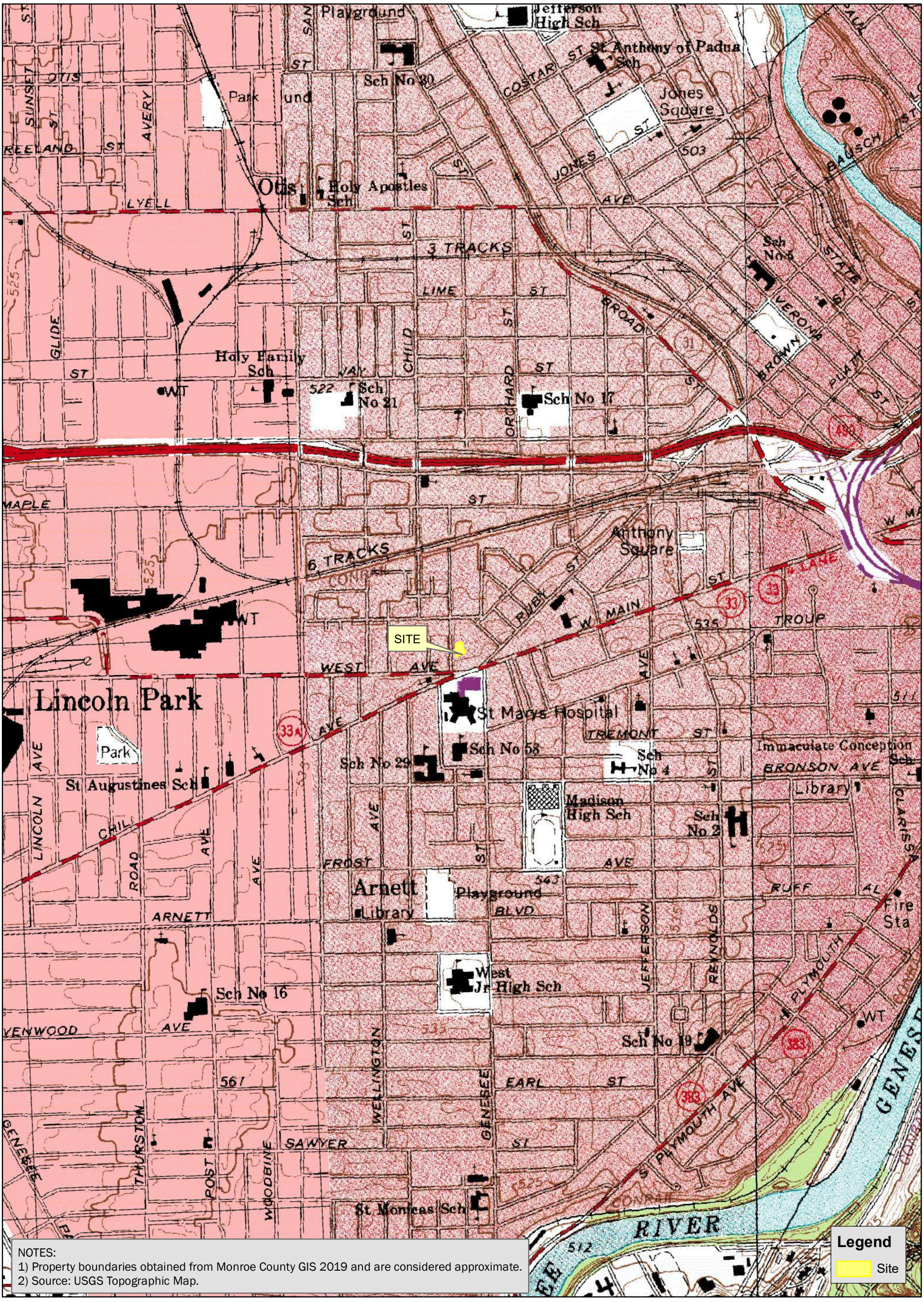
- Alternative #3 costs are anticipated to be higher than Alternative #2 costs, but result in a greater level of remediation of the petroleum contamination at the Site, reduced long-term monitoring and reduced reliance on institutional and engineering controls in comparison to the other alternatives.

Alternative #3 (Comprehensive Source Removal and In-Situ Treatment) is recommended for the Site. Alternative #3 would achieve the remediation goals for the Site by: removing contaminated soil, bedrock and ground; bioremediating contaminated groundwater; controlling exposure to residual contamination through the use of institutional controls and engineering controls; creating conditions that restore groundwater quality to the extent practicable; and monitoring of groundwater to evaluate the effectiveness of the remedy. Alternative 3 is depicted on Figure C. It should be noted the excavation area shown is approximate and may change based on field conditions during excavation. In addition, the excavation may extend off-Site to the adjacent City-owned parcel addressed as 42 York Street if impacts from the Site are observed off-Site during the excavation.

5.0 ABBREVIATIONS AND ACRONYMS

ABCA	Analysis of Brownfields Cleanup Alternatives
Bgs	Below the Ground Surface
BIS	Building Information System
BOA	Brownfield Opportunity Area
CAMP	Community Air Monitoring Plan
City	City of Rochester
CY	Cubic Yard
DAY	Day Environmental, Inc.
HASP	Health And Safety Plan
LNAPL	Light Non-Aqueous Phase Liquid
NYCRR	New York Codes, Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
Phase I ESA	Phase I Environmental Site Assessment
Phase II ESA	Phase II Environmental Site Assessment
PID	Photoionization Detector
POTW	Publicly Owned Treatment Works
PPM	Parts Per Million
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
SCG	Standard, Criteria and Guidance
SCL	Soil Cleanup Level
SCO	Soil Cleanup Objective
SGMP	Soil and Groundwater Management Plan SVI Soil Vapor Intrusion
SVOC	Semi-Volatile Organic Compound
TCL	Target Compound List
TOGS	Technical and Operational Guidance Series
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank
VOC	Volatile Organic Compound

FIGURES



NOTES:
1) Property boundaries obtained from Monroe County GIS 2019 and are considered approximate.
2) Source: USGS Topographic Map.

PROJECT #/DRAWING #/ DATE	DRAWING NAME:	CLIENT:	
2220406 FIGURE A 1/19/2022	PROJECT LOCUS MAP	CITY OF ROCHESTER PROJECT: ABCA 24 & 32 YORK STREET ROCHESTER, NY	N W E S 0 1,000 Feet 1 inch = 1,000 feet INTENDED TO PRINT AS: 11" X 17"

LaBella Powered by partnership.

Path: \\Projects2\ProjectsNZ-2\Rochester, City\2220406 - 24 & 32 York St Env. Cleanup\Drawings\ABCA\Figure A.mxd

NOTES:
1) Property boundaries obtained from Monroe County GIS 2019 and are considered approximate.
2) 2021 aerial image from Pictometry International.
3) All remedial action features will be located using a global positioning system (GPS).
4) Overburden groundwater flow direction based on modeling completed by Day Environmental as part of the Phase II ESA dated November 19, 2019.
5) Previous testing locations and excavation limits georeferenced from reports by Day Environmental and are approximate.

PROJECT #/DRAWING #/ DATE	DRAWING NAME:	CLIENT:	
2220406 FIGURE B 3/8/2022	APPROXIMATE AREA OF PETROLEUM IMPACT WITH ALTERNATIVE #2 REMOVAL AREA	CITY OF ROCHESTER PROJECT: ABCA 24 & 32 YORK STREET ROCHESTER, NY	N W E S 0 10 20 Feet 1 inch = 20 feet INTENDED TO PRINT AS: 11" X 17"

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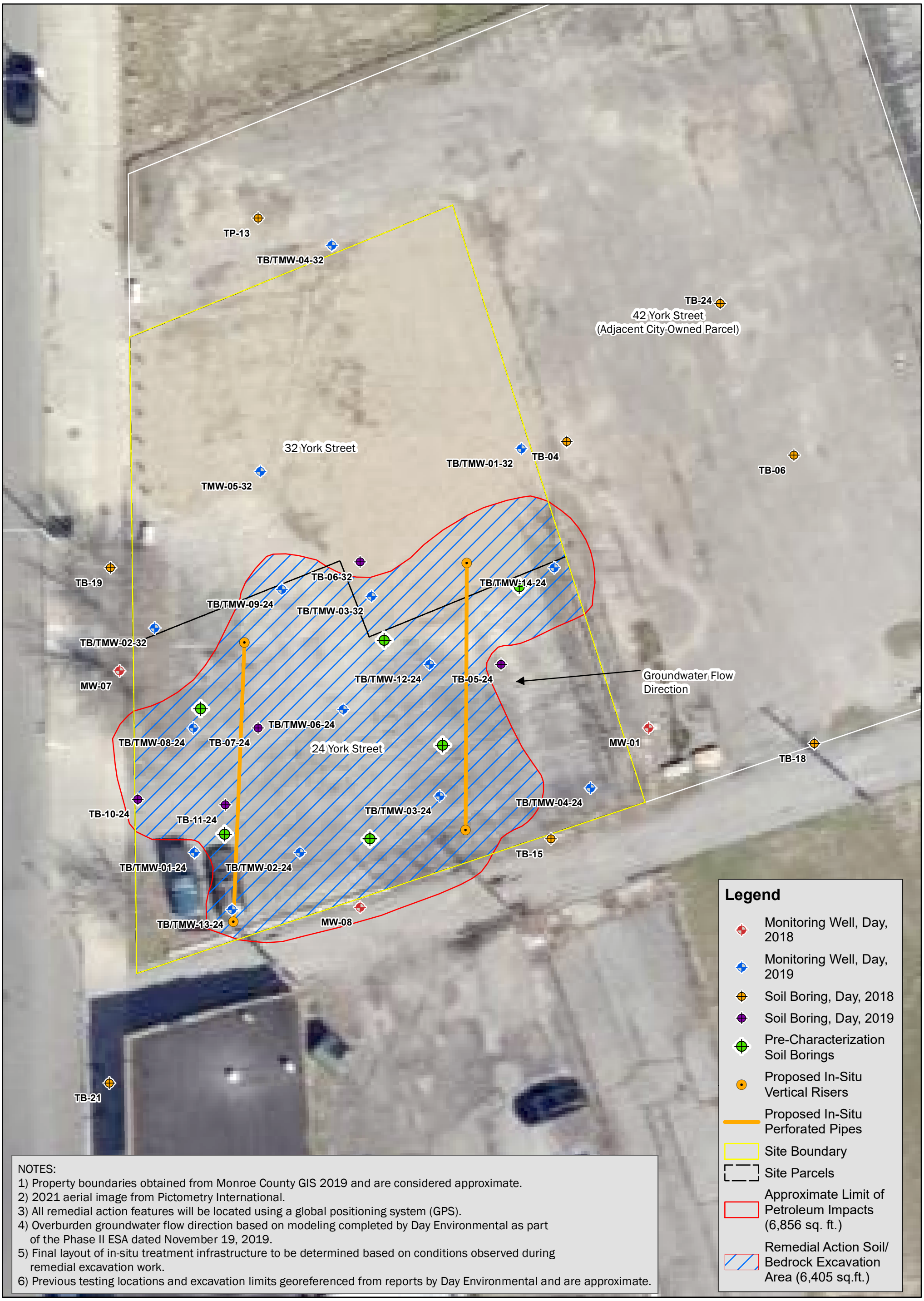
Path: \\Projects2\ProjectsNZ-2\Rochester, City\2220406 - 24 & 32 York St Env. Cleanup\Drawings\ABCA\Figure B.mxd



NOTES:
1) Property boundaries obtained from Monroe County GIS 2019 and are considered approximate.
2) 2021 aerial image from Pictometry International.
3) All remedial action features will be located using a global positioning system (GPS).
4) Overburden groundwater flow direction based on modeling completed by Day Environmental as part of the Phase II ESA dated November 19, 2019.
5) Final layout of in-situ treatment infrastructure to be determined based on conditions observed during remedial excavation work.
6) Previous testing locations and excavation limits georeferenced from reports by Day Environmental and are approximate.

PROJECT #/DRAWING #/ DATE

2220406

FIGURE C

3/8/2022

DRAWING NAME:

APPROXIMATE AREA OF PETROLEUM IMPACT WITH ALTERNATIVE #3 REMOVAL AREA & IN-SITU TREATMENT AREA

CLIENT:

CITY OF ROCHESTER

PROJECT:

ABCA
24 & 32 YORK STREET
ROCHESTER, NY

N
W E
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0 10 20
Feet

1 inch = 20 feet

INTENDED TO PRINT AS: 11" X 17"

LaBella
Powered by partnership.

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TABLES

Table A

Analysis of Brownfield Cleanup Alternatives
24 and 32 York Street, Rochester, New York

Comparison of Cleanup Alternatives

Remediation Criteria	Remedial Alternative #1	Remedial Alternative #2	Remedial Alternative #3
Protection of Human Health and Environment	NO	YES	YES
Compliance with SCGs	NO	YES - Soil No - Groundwater	YES - Soil YES - Groundwater
Long-Term Effectiveness and Permanence	NO	YES -Soil No - Groundwater	YES - Soil YES - Groundwater
Reduction of Toxicity, Mobility, and Volume	Little	YES (moderately high)	YES (very high)
Short-Term Impacts and Effectiveness	Impacts - NO Effectiveness - NO	Impacts - YES Effectiveness - YES	Impacts - YES Effectiveness - YES
Implementability	Easy	Moderate	Moderate
Acceptable for Planned Future Use	NO	YES	YES
Community Acceptance	NO	YES	YES
Total Cost*	$0.00	$315,735.20	$388,100.90

* The Opinion of Probable Costs listed above do not include City of Rochester direct costs associated with programmatic management of the grant, such as required performance reporting, cleanup oversight, and environmental monitoring of cleanup work.

Table B

Analysis of Brownfield Cleanup Alternatives
24 and 32 York Street, Rochester, New York

Alternative #2 Opinion of Probable Cost

	Professional Services				
1.0	**Finalize ABCA**				**$1,175.00**
2.0	**Remedial Work Plan with HASP, CAMP and QAPP**				**$7,655.00**
3.0	**Remedial Construction Closure Report**				**$7,780.00**
4.0	**Soil and Groundwater Management Plan**				**$2,255.00**
5.0	**USEPA ACRES Database and GIS File Management**				**$1,175.00**
6.0	**Meetings**				**$2,330.00**
7.0	**Document Remediation, Well Installation, Well Development**				**$21,810.00**
8.0	**Post Excavation Groundwater Monitoring**	**10**	**Events**	**$2,265.00**	**$22,650.00**
EXPENSES					
7.0	**Remediation, Well Installation, Well Development**	**Quantity**	**Unit**	**Rate**	**Total**
	GPS Rental	5	Day	$100.00	$500.00
	PID Meter Rental	15	Day	$50.00	$750.00
	Particulate Meter Rental	12	Day	$75.00	$900.00
	Oil/Water Interface Probe	2	Day	$40.00	$80.00
	Peristaltic Pump	1	Day	$40.00	$40.00
	Water Quality Meter	1	Day	$125.00	$125.00
	Disposable Tubing	100	Ft	$0.50	$50.00
	PODs Rental (mob/demob/1-month rental)	1	Month	$250.00	$250.00
	Portable Restroom Mob/Demob and Rental	1	Month	$250.00	$250.00
	Miscellaneous Supplies	4	unit	$50.00	$200.00
7.0	**Remediation Subtotal**				**$3,145.00**
8.0	**Post Excavation Groundwater Monitoring**	**Quantity**	**Unit**	**Rate**	**Total**
	Oil/Water Interface Probe	1	Day	$40.00	$40.00
	Peristaltic Pump	1	Day	$40.00	$40.00
	Water Quality Meter	1	Day	$125.00	$125.00
	Disposable Tubing	100	Ft	$0.50	$50.00
	Bailers	7	each	$6.00	$42.00
	Miscellaneous Supplies	1	Unit	$50.00	$50.00
	Per Event Subtotal				**$347.00**
8.0	**Post Excavation Groundwater Monitoring Subtotal**	**10**	**Events**	**$347.00**	**$3,470.00**
SUBCONTRACTED SERVICES					
7.0	**Remediation**	**Quantity**	**Unit**	**Rate**	**Total**
	Subcontractor - Mobilize/Demobilize	1	LS	$4,000.00	$4,000.00
	Subcontractor - Remove and Recycle Existing Asphalt Pavement	1	LS	$5,000.00	$5,000.00
	Subcontractor - Install Temporary Chain Link Fence and Gate, Later Uninstall	1	LS	$5,000.00	$5,000.00
	Subcontractor - 20'x30' Decontamination Pad 60 mil Liner, Berms and Sump)	1	LS	$3,500.00	$3,500.00
	Subcontractor - Excavate and Stage Clean Soil	1376	CY	$12.00	$16,512.00
	Subcontractor - Excavate and Direct-Load Contaminated Soil	1370	Tons	$14.00	$19,180.00
	Subcontractor - Frac Tank Rental (1 Tank)	2	Month	$1,500.00	$3,000.00
	Subcontractor - Excavation Dewatering	20000	Gallon	$0.06	$1,200.00
	Subcontractor - Provide and Place Biosolve	4	Day	$200.00	$800.00
	Subcontractor - Prepare Waste Profiles (1 for soil)	1	Profile	$100.00	$100.00
	Subcontractor - Transport and Dispose of Non-Hazardous Soil	1370	Ton	$45.50	$62,335.00
	Subcontractor - Place and Compact Clean Site Soil	1376	CY	$10.00	$13,760.00
	Subcontractor - Provide, Place and Compact Imported Crushed Stone (Dolomite)	1370	Tons	$30.00	$41,100.00
	Subcontractor - Frac Tank Discharge	20000	Gallons	$0.06	$1,200.00
	Subcontractor - Frac Tank Cleaning (1 Tank)	1	LS	$1,500.00	$1,500.00
	Subcontractor - Decontaminate Heavy Equipment/Vehicles	8	Hour	$150.00	$1,200.00
	Subcontractor - Install Four Overburden Monitoring Wells	4	Well	$2,500.00	$10,000.00
	Laboratory (20 TCL and CP-51 VOCs for Soil Samples)	20	Sample	$80.00	$1,600.00
	Laboratory (20 CP-51 SVOCs for Soil Samples)	20	Sample	$105.00	$2,100.00
	Laboratory (2 Samples of Soil for Waste Characterization Parameters)	2	Sample	$800.00	$1,600.00
	Laboratory (1 Sample of Water for Waste Characterization Parameters)	1	Sample	$400.00	$400.00
7.0	**Remediation Subtotal**				**$195,087.00**
8.0	**Post Excavation Groundwater Monitoring**	**Quantity**	**Unit**	**Rate**	**Total**
	Laboratory (10 TCL and CP-51 VOCs for Groundwater Samples)	10	Sample	$80.00	$800.00
	Laboratory (10 CP-51 SVOCs for Groundwater Samples)	10	Sample	$105.00	$1,050.00
	Per Event Subtotal				**$1,850.00**
8.0	**Post Excavation Groundwater Monitoring Subtotal**	**10**	**Events**	**$1,850.00**	**$18,500.00**
	Total Professional Services Cost*				**$66,830.00**
	Total Expenses Cost*				**$6,615.00**
	Total Subcontracted Services Cost*				**$213,587.00**
	TOTAL PROJECT COST*				**$287,032.00**
	10 %CONTINGENCY*				**$28,703.20**
	TOTAL PROJECT COST PLUS 10% CONTINGENCY*				**$315,735.20**

Subcontracted Costs and Outside Expenses include 5% markup, and 8% sales tax where applicable.

* The Opinion of Probable Costs listed above do not include City of Rochester direct costs associated with programmatic management of the grant, such as required performance reporting, cleanup oversight, and environmental monitoring of cleanup work.

Table C

Analysis of Brownfield Cleanup Alternatives
24 and 32 York Street, Rochester, New York

Alternative #3 Opinion of Probable Cost

	Professional Services				
1.0	**Finalize ABCA**				**$1,175.00**
2.0	**Remedial Work Plan with HASP, CAMP and QAPP**				**$7,655.00**
3.0	**Remedial Construction Closure Report**				**$7,780.00**
4.0	**Soil and Groundwater Management Plan**				**$2,255.00**
5.0	**USEPA ACRES Database and GIS File Management**				**$1,175.00**
6.0	**Meetings**				**$2,330.00**
7.0	**Document Remediation, Well Installation, Well Development**				**$26,410.00**
8.0	**Post Excavation Groundwater Monitoring**	**4**	**Events**	**$2,265.00**	**$9,060.00**
EXPENSES					
7.0	**Remediation, Well Installation, Well Development**	**Quantity**	**Unit**	**Rate**	**Total**
	GPS Rental	5	Day	$100.00	$500.00
	PID Meter Rental	20	Day	$50.00	$1,000.00
	Particulate Meter Rental	15	Day	$75.00	$1,125.00
	Oil/Water Interface Probe	2	Day	$40.00	$80.00
	Peristaltic Pump	1	Day	$40.00	$40.00
	Water Quality Meter	1	Day	$125.00	$125.00
	Disposable Tubing	100	Ft	$0.50	$50.00
	Purchase Regenesis ORC-Advanced Amendment (Place in Excavation)	1000	Pounds	$12.00	$12,000.00
	Purchase Regenesis ORC-Advanced Amendment (Place in In-Situ System)	500	Pounds	$12.00	$6,000.00
	PODs Rental (mob/demob/2-month rental)	2	Month	$250.00	$500.00
	Portable Restroom Mob/Demob and Rental	2	Month	$250.00	$500.00
	Miscellaneous Supplies	6	unit	$50.00	$300.00
7.0	**Remediation Subtotal**				**$22,220.00**
8.0	**Post Excavation Groundwater Monitoring**	**Quantity**	**Unit**	**Rate**	**Total**
	Oil/Water Interface Probe	1	Day	$40.00	$40.00
	Peristaltic Pump	1	Day	$40.00	$40.00
	Water Quality Meter	1	Day	$125.00	$125.00
	Disposable Tubing	100	Ft	$0.50	$50.00
	Bailers	7	each	$6.00	$42.00
	Miscellaneous Supplies	1	Unit	$50.00	$50.00
	Per Event Subtotal				**$347.00**
8.0	**Post Excavation Groundwater Monitoring Subtotal**	**4**	**Events**	**$347.00**	**$1,388.00**
SUBCONTRACTED SERVICES					
7.0	**Remediation**	**Quantity**	**Unit**	**Rate**	**Total**
	Subcontractor - Mobilize/Demobilize	1	LS	$5,000.00	$5,000.00
	Subcontractor - Remove and Recycle Existing Asphalt Pavement	1	LS	$5,000.00	$5,000.00
	Subcontractor - Install Temporary Chain Link Fence and Gate, Later Uninstall	1	LS	$5,000.00	$5,000.00
	Subcontractor - 20'x30' Decontamination Pad 60 mil Liner, Berms and Sump)	1	LS	$3,500.00	$3,500.00
	Subcontractor - Excavate and Stage Clean Soil	1376	CY	$12.00	$16,512.00
	Subcontractor - Excavate and Direct-Load Contaminated Soil	1370	Tons	$14.00	$19,180.00
	Subcontractor - Excavate and Stage Contaminated Bedrock	474	Tons	$36.00	$17,064.00
	Subcontractor - Frac Tank Rental (2 Tanks)	2	Month	$3,000.00	$6,000.00
	Subcontractor - Excavation Dewatering	40000	Gallon	$0.06	$2,400.00
	Subcontractor - Provide and Place Biosolve	4	Day	$200.00	$800.00
	Subcontractor - Prepare Waste Profiles (1 for soil)	1	Profile	$100.00	$100.00
	Subcontractor - Transport and Dispose of Non-Hazardous Soil	1370	Ton	$45.50	$62,335.00
	Subcontractor - Load, Transport and Dispose of Non-Hazardous Bedrock	474	Ton	$50.00	$23,700.00
	Subcontractor - Provide and Install Hardware in Excavation for Future In-Situ Amendment	1	LS	$1,500.00	$1,500.00
	Subcontractor - Place and Compact Clean Site Soil	1376	CY	$10.00	$13,760.00
	Subcontractor - Provide, Place and Compact Imported Crushed Stone (Dolomite)	1844	Tons	$30.00	$55,320.00
	Subcontractor - Frac Tank Discharge	40000	Gallons	$0.06	$2,400.00
	Subcontractor - Frac Tank Cleaning (2 Tanks)	1	LS	$3,000.00	$3,000.00
	Subcontractor - Provide Water and Mix ORC-Advanced (1,000 lbs ORC-A and 1000 Gallons Water)	1	LS	$1,500.00	$1,500.00
	Subcontractor - Place ORC-Advanced into Excavation	1	LS	$1,000.00	$1,000.00
	Subcontractor - Provide Water and Mix ORC-Advanced (500 lbs ORC-A and 500 Gallons Water)	1	LS	$1,000.00	$1,000.00
	Subcontractor - Inject ORC-Advanced into In-Situ Bioremediation System	1	LS	$1,000.00	$1,000.00
	Subcontractor - Decontaminate Heavy Equipment/Vehicles	8	Hour	$150.00	$1,200.00
	Subcontractor - Install Four Overburden Monitoring Wells	4	Well	$2,500.00	$10,000.00
	Laboratory (20 TCL and CP-51 VOCs for Soil Samples)	20	Sample	$80.00	$1,600.00
	Laboratory (20 CP-51 SVOCs for Soil Samples)	20	Sample	$105.00	$2,100.00
	Laboratory (2 Samples of Soil for Waste Characterization Parameters)	2	Sample	$800.00	$1,600.00
	Laboratory (1 Sample of Water for Waste Characterization Parameters)	1	Sample	$400.00	$400.00
7.0	**Remediation Subtotal**				**$263,971.00**
8.0	**Post Excavation Groundwater Monitoring**	**Quantity**	**Unit**	**Rate**	**Total**
	Laboratory (10 TCL and CP-51 VOCs for Groundwater Samples)	10	Sample	$80.00	$800.00
	Laboratory (10 CP-51 SVOCs for Groundwater Samples)	10	Sample	$105.00	$1,050.00
	Per Event Subtotal				**$1,850.00**
8.0	**Post Excavation Groundwater Monitoring Subtotal**	**4**	**Events**	**$1,850.00**	**$7,400.00**
6.0	**Total Professional Services Cost***				**$57,840.00**
6.1	**Total Expenses Cost***				**$23,608.00**
6.3	**Total Subcontracted Services Cost***				**$271,371.00**
7.0	**TOTAL PROJECT COST***				**$352,819.00**
7.0	**10 %CONTINGENCY***				**$35,281.90**
8.0	**TOTAL PROJECT COST PLUS 10% CONTINGENCY***				**$388,100.90**

Subcontracted Costs and Outside Expenses include 5% markup, and 8% sales tax where applicable.

* The Opinion of Probable Costs listed above do not include City of Rochester direct costs associated with programmatic management of the grant, such as required performance reporting, cleanup oversight, and environmental monitoring of cleanup work.

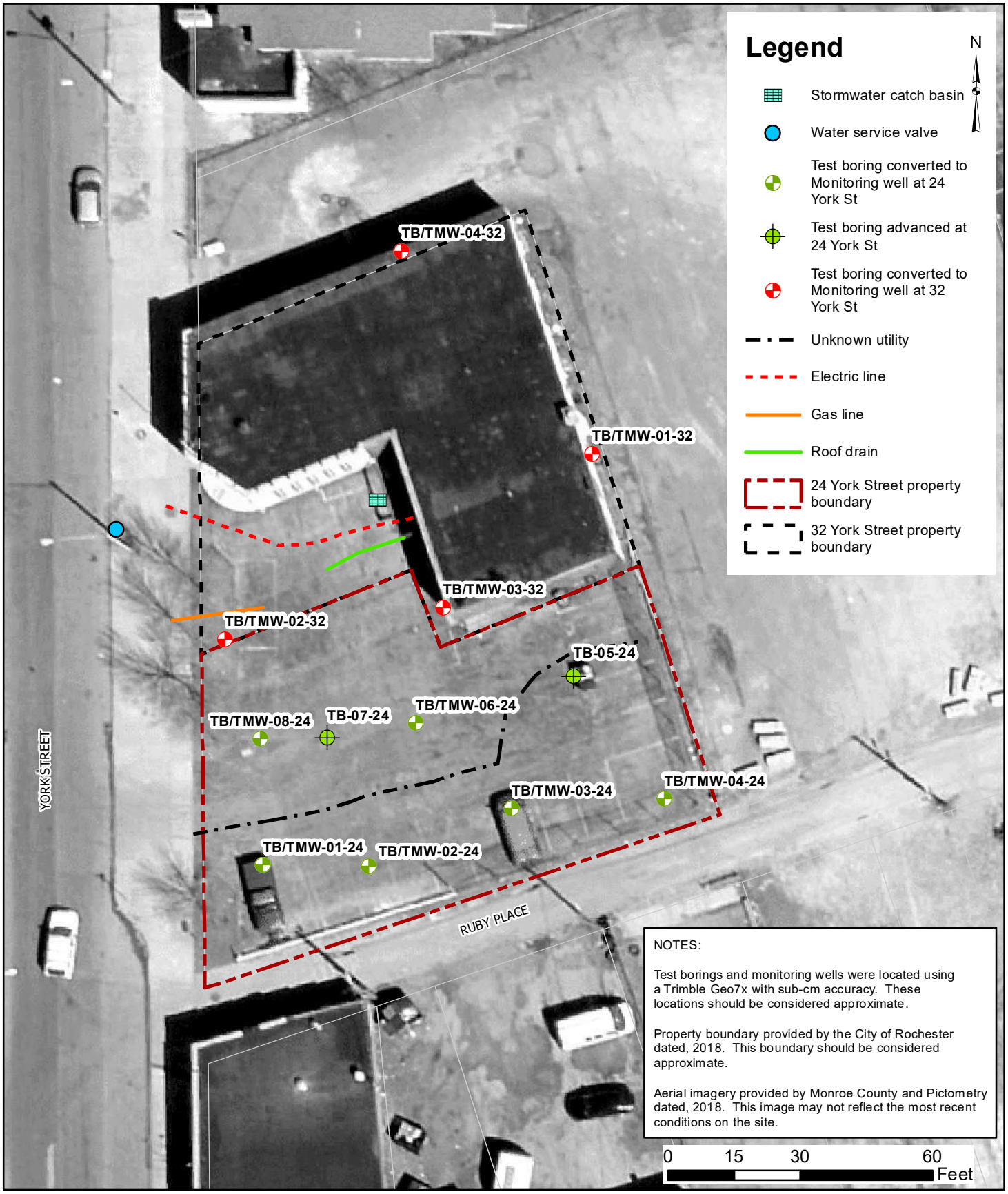
APPENDIX 1

Figures and Analytical Laboratory Summary
Tables from Previous Reports

Day Environmental, Inc.

July 19, 2019 Preliminary Phase II ESAs – 24 & 32 York Street

Figures and Laboratory Data Summary Tables



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Last Date Saved: 11 Jun 2019

Date: 06-11-2019 Drawn By: CPS Scale: AS NOTED	**DAY ENVIRONMENTAL, INC.** Environmental Consultants Rochester, New York 14606 New York, New York 10170	Project Title: 24 YORK STREET AND 32 YORK STREET ROCHESTER, NEW YORK PRELIMINARY PHASE II ENVIRONMENTAL SITE ASSESSMENT Drawing Title: Site Plan with Test Locations	Project No.: 5597S-19 & 5598S-19 FIGURE 2

Table 1

24 York Street
Rochester, New York

Summary of Detected VOC Results in mg/Kg or Parts per Million (ppm)

Soil/Fill Samples

Detected Constituent	A Unrestricted SCO (1)	B Restricted Residential SCO(1)	C Commercial SCO(1)	D CP-51 SCL (2)	R1903954-002 TB-02-24(6-7) 4/30/2019 Fill		R1903954-005 TB-03-24(7-8) 4/30/2019 Fill		R1903954-007 TB-06-24(7-8) 4/30/2019 Fill		R1903954-009 TB-07-24(7-8) 4/30/2019 Fill		R1903954-011 TB-08-24(8-9) 4/30/2019 Soil	
Acetone	0.05	100	500	NA	U		**0.640**	**A**	U		**0.250** E	**A**	U	
Benzene	0.06	4.8	44	0.06	**0.092** J	**AD**	**0.089** J	**AD**	0.026 J		0.042		U	
2-Butanone (MEK)	0.12	100	500	NA	U		U		U		0.029		U	
n-Butylbenzene	12	100	500	12	U		0.059 J		U		0.110		**36.0**	**AD**
sec-Butylbenzene	11	100	500	11	0.290 J		0.058 J		0.076 J		0.086		10.0	
tert-Butylbenzene	5.9	100	500	5.9	0.034 J		U		U		0.021 DJ		0.93 J	
Carbon Disulfide	NA	NA	NA	NA	0.043 J		0.040 J		0.038 J		0.0014 J		U	
Chloroethane	NA	NA	NA	NA	U		U		U		U		0.98 J	
Cyclohexane	NA	NA	NA	NA	0.330 J		0.710		0.150 J		1.500 D		29.0	
1,2-Dichlorobenzene	1.1	100	500	NA	U		U		U		0.0034 J		U	
1,4-Dichlorobenzene	1.8	13	130	NA	U		U		U		0.0005 J		U	
Ethylbenzene	1	41	390	1	0.190 J		U		0.038 J		**1.300** D	**AD**	**4.5** J	**AD**
Isopropylbenzene	NA	NA	NA	2.3	0.120 J		0.039 J		0.058 J		0.540 D		**17.0**	**D**
p-Isopropyltoluene	NA	NA	NA	10	0.420 J		0.049 J		U		0.076		0.82 J	
Methyl Acetate	NA	NA	NA	NA	1.500 U		4.400		1.600		0.057		4.5 J	
Methylcyclohexane	NA	NA	NA	NA	U		0.980		0.950		2.800 D		100.0	
Naphthalene	12	100	500	12	0.200 J		0.160 BJ		0.089 BJ		0.068		**49.0**	**AD**
n-Propylbenzene	3.9	100	500	3.9	0.440 J		U		0.096 J		2.600 D		**76.0**	**AD**
Toluene	0.7	100	500	0.7	0.130 J		0.042 J		0.060 J		0.005		U	
1,2,4-Trimethylbenzene	3.6	52	190	3.6	0.390 J		0.140 J		0.091 J		**11.000** D	**AD**	1.2 J	
1,3,5-Trimethylbenzene	8.4	52	190	8.4	U		0.100 J		0.023 J		0.029		U	
m,p-Xylene	0.26	100	500	0.26	**0.390** J	**AD**	U		0.110 J		**3.200** D	**AD**	U	
o-Xylene	0.26	100	500	0.26	0.045 J		0.041 J		0.030 J		0.020		U	
Total VOCs	NA	NA	NA	NA	4.614		7.547		3.435		23.7383		329.93	

U = Not detected above laboratory method detection limit
J = Estimated Value
D = Data reported from a dilution
B = Constituent also detected in method blank
VOC = Volatile Organic Compound
NA = Not available
(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006 and CP-51 dated 10/21/2010
(2) = Soil Cleanup Level (SCL) referenced in CP-51 dated 10/21/2010
Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.
A = Concentration Exceeds Unrestricted Use SCO
B = Concentration Exceeds Restricted Residential Use SCO
C = Concentration Exceeds Commercial Use SCO
D = Concentration Exceeds SCL

Table 2

24 York Street
Rochester, New York

Summary of Detected SVOC Results in mg/Kg or Parts Per Million (ppm)

Soil/Fill Samples

Detected Constituent	A Unrestricted SCO (1)	B Restricted Residential SCO(1)	C Commercial SCO(1)	D CP-51 SCL (2)	R1903954-001 TB-01-24(1-3) 4/30/2019 Fill		R1903954-004 TB-02-24(7-8) 4/30/2019 Fill		R1903954-006 TB-05-24(1-4) 4/30/2019 Fill		R1903954-008 TB-06-24(4-5) 4/30/2019 Fill		R1903954-010 TB-07-24(2-4) 4/30/2019 Fill	
Acenaphthene	20	100	500	20	0.094 J		U		U		U		U	
Acenaphthylene	100	100	500	100	0.430		U		U		U		U	
Anthracene	100	100	500	100	0.370 J		U		U		0.240 J		0.310 J	
Benzo(a)anthracene	1	1	5.6	1	**2.000**	**ABC**	0.130 J		0.120 J		0.770 J		0.720 J	
Benzo(a)pyrene	1	1	1	1	**2.700**	**ABCD**	0.100 J		0.180 J		**1.100**	**ABCD**	0.680 J	
Benzo(b)fluoranthene	1	1	5.6	1	**2.600**	**ABD**	0.140 J		0.180 J		0.990 J		0.700 J	
Benzo(g,h,i)perylene	100	100	500	100	1.700		U		0.220 J		0.800 J		0.470 J	
Benzo(k)fluoranthene	0.8	3.9	56	0.8	**1.000**	**AD**	U		U		0.320 J		U	
Carbazole	NA	NA	NA	NA	0.110 J		U		U		U		U	
Chrysene	1	3.9	56	1	**2.000**	**AD**	0.170 J		0.140 J		0.870 J		0.720 J	
Dibenzo(a,h) anthracene	0.33	0.33	0.56	0.33	**0.400**	**ABD**	U		U		U		U	
Fluoranthene	100	100	500	100	2.800		0.540		0.190 J		1.100		1.600	
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	0.5	**1.600**	**ABD**	U		0.160 J		**0.590** J	**ABD**	0.370 J	
2-Methylnaphthalene	NA	NA	NA	NA	U		0.260 J		U		U		U	
Naphthalene	12	100	500	12	0.089 J		0.160 J		U		U		U	
Phenanthrene	100	100	500	100	1.200		0.340 J		U		0.840 J		1.300	
Pyrene	100	100	500	100	2.800		0.420		0.260 J		1.500		1.800	
Total SVOCs	NA	NA	NA	NA	21.893		2.260		1.450		9.120		8.670	

Notes:
U = Not detected above laboratory method detection limit
J = Estimated Value
SVOC = Semi-Volatile Organic Compound
NA = Not available
(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006 and CP-51 dated 10/21/2010
(2) = Soil Cleanup Level (SCL) referenced in CP-51 dated 10/21/2010
Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.
A = Concentration Exceeds Unrestricted Use SCO
B = Concentration Exceeds Restricted Residential Use SCO
C = Concentration Exceeds Commercial Use SCO
D = Concentration Exceeds SCL

Table 4

24 York Street
Rochester, New York

Summary of Detected VOC Results in ug/l or Parts per Billion (ppb)

Groundwater Samples

Detected Constituent	Groundwater Standard or Guidance Value [1]	R1903954-012 TMW-01-24 5/1/2019 Groundwater		R1903954-013 TMW-02-24 5/1/2019 Groundwater		R1903954-014 TMW-04-24 5/1/2019 Groundwater		R1903954-015 TMW-06-24 5/1/2019 Groundwater		R1903954-016 TMW-08-24 5/1/2019 Groundwater	
Acetone	50	2.8 J		11 J		U		3.8 J		**60**	**X**
Benzene	1	U		**1.2** J	**X**	U		**1.4** J	**X**	**1.6** J	**X**
2-Butanone (MEK)	50	U		2.8 J		U		U		18 J	
n-Butylbenzene	5	U		**13**	**X**	U		0.92 J		**81**	**X**
sec-Butylbenzene	5	0.33 J		**6.7** J	**X**	U		2.0 J		**27**	**X**
tert-Butylbenzene	5	0.73 J		1.9 J		U		0.48 J		3.6 J	
Ethylbenzene	5	U		1.4 J		U		0.55 J		**67**	**X**
2-Hexanone (MBK)	50	U		U		U		U		2.9 J	
Isopropylbenzene	5	U		**25**	**X**	U		2.5 J		**130**	**X**
p-Isopropyltoluene	5	U		1.6 J		U		U		2.6 J	
4-Methyl-2-pentanone (MIBK)	NA	U		U		U		U		1.8 J	
Naphthalene	10	U		**56**	**X**	U		U		**650**	**X**
n-Propylbenzene	5	U		**46**	**X**	U		4.9 J		**440**	**X**
Toluene	5	U		0.75 J		U		0.48 J		1.2 J	
1,2,4-Trimethylbenzene	5	U		1.5 J		U		1.7 J		**12** J	**X**
m,p-Xylene	5	U		1.1 J		U		1.2 J		3.6 J	
o-Xylene	5	U		0.73 J		U		0.39 J		1.3 J	
Cyclohexane	NA	U		61		U		2.3 J		72	
Methylcyclohexane	NA	U		180		U		5.1 J		240	
Total VOCs	NA	3.86		411.68		0.0		27.72		1815.6	

U = Not detected above laboratory method detection limit

J = Estimated Value

[1] Groundwater standard or guidance value are as referenced in NYSDEC TOGS 1.1.1 dated June 1998 with April 2000 and June 2004 addendums.

X = Concentration exceeds groundwater standard or guidance value

VOC = Volatile Organic Compound

NA = Not available

Table 1

32 York Street
Rochester, New York

Summary of Detected VOC Results in mg/Kg or Parts per Million (ppm)

Soil/Fill Samples

Detected Constituent	A Unrestricted SCO (1)	B Restricted Residential SCO(1)	C Commercial SCO(1)	D CP-51 SCL (2)	R1903959-001 TB-01-32(1-2) 4/30/2019 Fill		R1903959-004 TB-02-32(2-3) 4/30/2019 Fill		R1903959-007 TB-03-32(7-8) 4/30/2019 Soil		R1903959-009 TB-04-32(1-4) 4/30/2019 Fill	
Acetone	0.05	100	500	NA	**0.054**	**A**	**0.076**	**A**	U		0.016	
Benzene	0.06	4.8	44	0.06	U		0.0002	J	U		U	
2-Butanone (MEK)	0.12	100	500	NA	0.0023	J	0.0028	J	U		U	
n-Butylbenzene	12	100	500	12	U		U		0.950		U	
sec-Butylbenzene	11	100	500	11	U		U		0.370	J	U	
tert-Butylbenzene	5.9	100	500	5.9	U		U		0.051	J	U	
Chloroethane	NA	NA	NA	NA	U		U		0.032	J	U	
Cyclohexane	NA	NA	NA	NA	U		U		8.100		0.00028	J
2-Hexanone (MBK)	NA	NA	NA	NA	U		0.0016	J	U		U	
Isopropylbenzene	NA	NA	NA	2.3	U		U		0.240	J	U	
p-Isopropyltoluene	NA	NA	NA	10	U		U		0.130	J	U	
Methyl Acetate	NA	NA	NA	NA	0.0011	J	0.011		1.600	D	U	
Methyl tert-butyl Ether	NA	NA	NA	0.93	U		0.00025	J	U		U	
Methylcyclohexane	NA	NA	NA	NA	0.00036	J	0.00056	J	15.000	D	0.00047	J
Naphthalene	12	100	500	12	0.00099	BJ	0.00067	BJ	0.260	DJ	U	
n-Propylbenzene	3.9	100	500	3.9	U		U		0.740		U	
Toluene	0.7	100	500	0.7	0.0003	J	0.00024	J	U		0.00017	J
1,2,4-Trichlorobenzene	NA	NA	NA	NA	0.00047	BJ	U		U		U	
Trichloroethene	0.47	21	200	NA	U		U		0.035	J	U	
Trichlorofluoromethane (Freon 11)	NA	NA	NA	NA	U		U		U		0.00032	J
1,2,4-Trimethylbenzene	3.6	52	190	3.6	0.00023	J	U		0.039	J	U	
Total VOCs	NA	NA	NA	NA	0.05975		0.09332		27.547		0.01724	

U = Not detected
J = Estimated Value
D = Data reported from a dilution
B = Constituent also detected in method blank
VOC = Volatile Organic Compound
NA = Not available
(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006 and CP-51 dated 10/21/2010
(2) = Soil Cleanup Level (SCL) referenced in CP-51 dated 10/21/2010
Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.
A = Concentration Exceeds Unrestricted Use SCO
B = Concentration Exceeds Restricted Residential Use SCO
C = Concentration Exceeds Commercial Use SCO
D = Concentration Exceeds SCL

Table 2

32 York Street
Rochester, New York

Summary of Detected SVOC Results in mg/Kg or Parts Per Million (ppm)

Soil/Fill Samples

Detected Constituent	A Unrestricted SCO (1)	B Restricted Residential SCO(1)	C Commercial SCO(1)	D CP-51 SCL (2)	R1903959-002 TB-01-32(2-3) 4/30/2019 Fill	R1903959-006 TB-02-32(4-5) 4/30/2019 Soil/Fill	R1903959-008 TB-03-32(5-7) 4/30/2019 Soil	R190395-010 TB-04-32(4-5) 4/30/2019 Soil
Acenaphthylene	100	100	500	100	0.096 J	U	U	U
Anthracene	100	100	500	100	0.190 J	U	U	U
Benzo(a)anthracene	1	1	5.6	1	0.630	U	U	U
Benzo(a)pyrene	1	1	1	1	0.580	U	U	U
Benzo(b)fluoranthene	1	1	5.6	1	0.730	U	0.083 J	U
Benzo(g,h,i)perylene	100	100	500	100	0.420 J	U	U	U
Benzo(k)fluoranthene	0.8	3.9	56	0.8	0.280 J	U	U	U
Chrysene	1	3.9	56	1	0.610	U	U	U
Dibenzo(a,h) anthracene	0.33	0.33	0.56	0.33	0.082 J	U	U	U
Fluoranthene	100	100	500	100	1.300	U	0.095 J	U
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	0.5	0.390 J	U	U	U
Phenanthrene	100	100	500	100	0.700	U	U	U
Pyrene	100	100	500	100	1.100	U	0.091 J	U
Total SVOCs	NA	NA	NA	NA	7.108	0.000	0.269	0.000

U = Not detected above laboratory method detection limit
J = Estimated Value
SVOC = Semi-Volatile Organic Compound
NA = Not available
(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006 and CP-51 dated 10/21/2010
(2) = Soil Cleanup Level (SCL) referenced in CP-51 dated 10/21/2010
Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.
A = Concentration Exceeds Unrestricted Use SCO
B = Concentration Exceeds Restricted Residential Use SCO
C = Concentration Exceeds Commercial Use SCO
D = Concentration Exceeds SCL

Table 4

32 York Street
Rochester, New York

Summary of Detected VOC Results in ug/l or Parts per Billion (ppb)

Groundwater Samples

Detected Constituent	Groundwater Standard or Guidance Value [1]	R1903959-011 TMW-01-32 5/1/2019 Groundwater		R1903959-012 TMW-02-32 5/1/2019 Groundwater		R1903959-013 TMW-03-32 5/1/2019 Groundwater			R1903959-014 TMW-04-32 5/1/2019 Groundwater	
Acetone	50	2.5	J	U		220		X	8.7	J
Bromodichloromethane	50	U		U		U			2.2	J
2-Butanone (MEK)	50	U		U		78		X	U	
n-Butylbenzene	5	U		U		16		X	U	
sec-Butylbenzene	5	U		U		9.2	J	X	U	
tert-Butylbenzene	5	U		U		2.0	J		U	
Chloroethane	5	U		U		1.9	J		U	
Chloroform	7	U		U		U			5.7	
Chloromethane	5	U		U		1.2	J		U	
Dibromochloromethane	50	U		U		U			0.78	J
Ethylbenzene	5	U		U		2.1	J		U	
2-Hexanone (MBK)	50	U		U		12	J		U	
Isopropylbenzene	5	U		U		15		X	U	
p-Isopropyltoluene	5	U		U		3.6	J		U	
4-Methyl-2-pentanone (MIBK)	NA	U		U		7.0	J		U	
Naphthalene	10	U		U		28		X	U	
n-Propylbenzene	5	U		U		39		X	U	
Tetrachloroethene	5	0.33	J	U		U			U	
Toluene	5	U		0.36	J	0.55	J		0.22	J
1,2,4-Trimethylbenzene	5	U		0.25	J	0.85	J		U	
m,p-Xylene	5	U		0.42	J	0.85	J		U	
Cyclohexane	NA	U		U		62			U	
Methylcyclohexane	NA	0.37	J	0.45	J	210			U	
Total VOCs	NA	3.2		1.48		709.25			17.60	

U = Not detected

J = Estimated Value

[1] Groundwater standard or guidance value are as referenced in NYSDEC TOGS 1.1.1 dated June 1998 with April 2000 and June 2004 addendums.

X = Concentration exceeds groundwater standard or guidance value

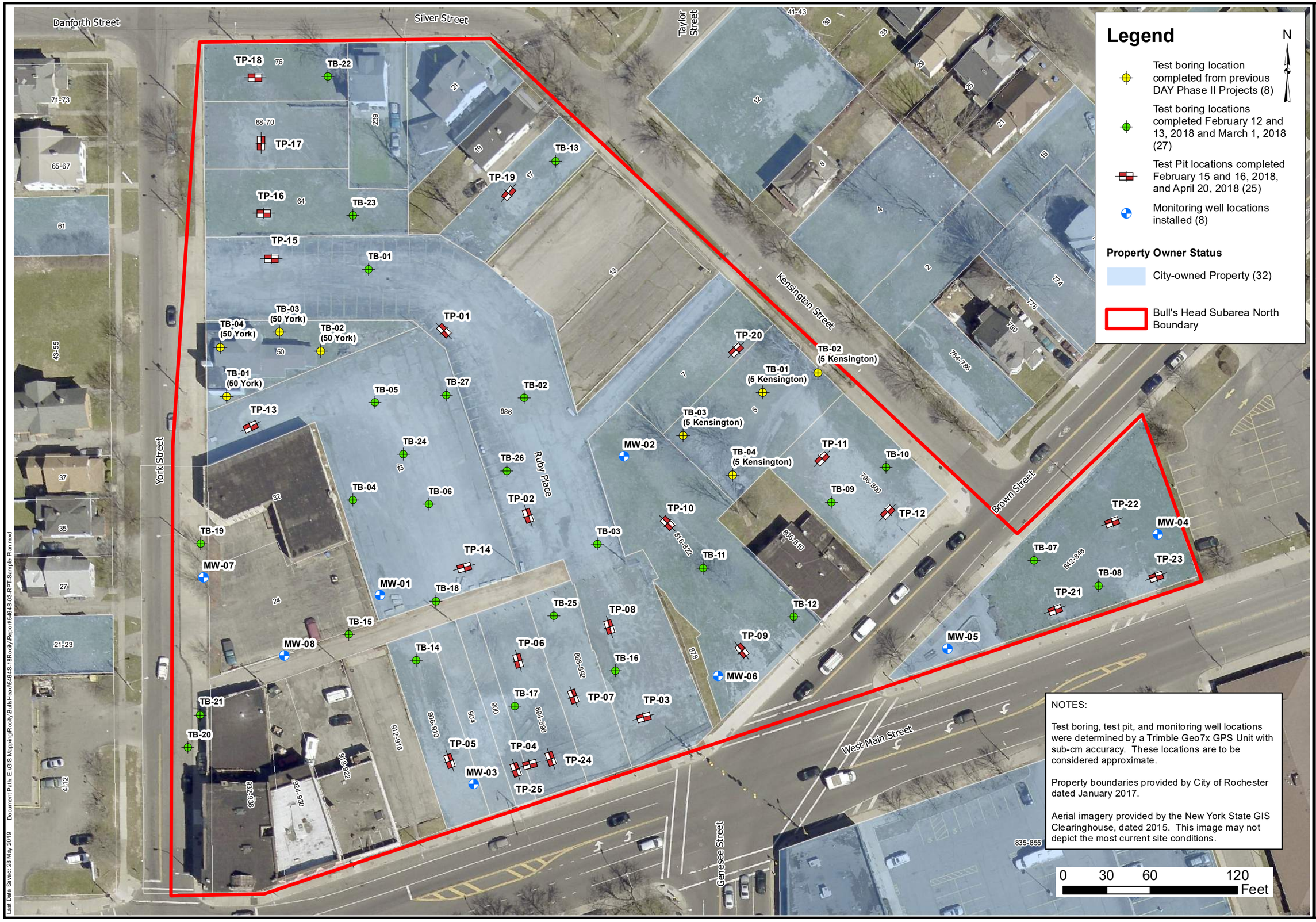
VOC = Volatile Organic Compound

NA = Not available

Day Environmental, Inc.

July 2019 Pre-Development Phase II ESA and Geotechnical Study – Bull's Head Sub Area North

Figures and Laboratory Data Summary Tables



Legend

N

- Test boring location completed from previous DAY Phase II Projects (8)
- Test boring locations completed February 12 and 13, 2018 and March 1, 2018 (27)
- Test Pit locations completed February 15 and 16, 2018, and April 20, 2018 (25)
- Monitoring well locations installed (8)

Property Owner Status

- City-owned Property (32)
- Bull's Head Subarea North Boundary

NOTES:

Test boring, test pit, and monitoring well locations were determined by a Trimble Geo7x GPS Unit with sub-cm accuracy. These locations are to be considered approximate.

Property boundaries provided by City of Rochester dated January 2017.

Aerial imagery provided by the New York State GIS Clearinghouse, dated 2015. This image may not depict the most current site conditions.

0 30 60 120 Feet

DESIGNED BY	DATE	DRAWN BY	DATE DRAWN	SCALE	DATE ISSUED
JAD	06-2018	CPS	06-2018	AS NOTED	06-18-2018

DAY ENVIRONMENTAL, INC.
Environmental Consultants
Rochester, New York 14606
New York, New York 10170

Project Title
BULL'S HEAD SUB-AREA NORTH
ROCHESTER, NEW YORK
ENVIRONMENTAL AND GEOPHYSICAL INVESTIGATION

Drawing Title
Site Plan with Completed Sample Locations

Project No.
5464S-18

FIGURE 3

Last Date Saved: 28 May 2019 Document Path: E:\GIS Mapping\Rocckly\BullsHead\5464S-18\Rocckly\Report\5464S-03-RPT-Sample Plan.mxd

Table 5

Bulls Head Sub Area North
Rochester, New York

Summary of Detected VOC Results in mg/Kg or Parts Per Million (ppm)

Soil and Fill Samples

Detected Constituent	CAS Number	A Unrestricted SCO (1)	B Residential SCO(1)	C Restricted Residential SCO(1)	D Commercial SCO(1)	G Protection of Groundwater SCO (1)	R1801334-003 TB-04 (2.5) 2/12/18 Fill	R1801334-004 TB-07 (5.5) 2/12/18 Fill	R1801334-005 TB-10 (15.0) 2/12/18 Fill	R1801334-005 TB-13 (8.0) 2/12/18 Soil	R1801334-005 TB-14 (7.0) 2/13/18 Fill	R1801334-008 TB-15 (7.0-7.5) 2/13/18 Soil	R1801334-010 TB-19 (10.0) 2/13/18 Soil	R1801334-011 TB-20 (3.0) 2/13/18 Soil
Acetone	67-64-1	0.05	100	100	500	0.05	0.038	0.068 AG	0.040	0.0023 J	U	0.024	0.0091	0.010
Benzene	71-43-2	0.06	2.9	4.8	44	0.06	0.0011 J	0.00032 J	0.00030 J	U	U	U	0.00045 J	0.0064
2-Butanone (MEK)	78-93-3	0.12	100	100	500	0.12	0.0052	0.010	0.012	U	U	U	0.0021 J	0.0018 J
n-Butylbenzene	104-51-8	12	100	100	500	12	0.0010 J	0.0024 J	U	U	7.5	U	U	U
sec-Butylbenzene	135-98-8	11	100	100	500	11	U	U	U	U	3.4	U	U	U
tert-Butylbenzene	98-06-6	5.9	100	100	500	5.9	U	U	U	U	0.760 J	U	U	U
Carbon Disulfide	75-15-0	NA	100	NA	NA	2.7	U	0.015	U	U	U	U	U	U
Cyclohexane	110-82-7	NA	NA	NA	NA	NA	0.020	U	U	U	1.300 J	U	0.0017 J	0.012
Ethylbenzene	100-41-4	1	30	41	390	1	0.0013 J	U	U	U	0.720 J	U	U	0.0018 J
Isopropylbenzene	98-82-8	NA	100	NA	NA	2.3	U	U	U	U	1.1 J	U	U	U
p-Isopropyltoluene	99-87-6	NA	NA	NA	NA	10	U	0.00099 J	U	U	3.7	U	U	U
Methylene chloride	75-09-2	0.05	51	100	500	0.05	0.00062 J	U	0.00061 J	U	U	U	U	0.00050 J
Methylcyclohexane	108-87-2	NA	NA	NA	NA	NA	0.0032 J	0.0017 J	U	U	5.2	U	0.0020 J	0.020
n-Propylbenzene	103-65-1	3.9	100	100	500	3.9	0.0011 J	U	U	U	2.4	U	U	U
Styrene	100-42-5	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
1,1,2,2-Tetrachloroethane	79-34-5	NA	35	NA	NA	0.6	0.0012 J	0.0011 J	U	U	U	U	U	U
Tetrachloroethene	127-18-4	1.3	5.5	19	150	1.3	U	U	U	U	U	U	U	U
Toluene	108-88-3	0.7	100	100	500	0.7	0.0023 J	U	U	U	U	U	0.0016 J	0.015
Trichloroethene	79-01-6	0.47	10	21	200	0.47	U	U	U	U	U	U	U	U
Trichlorofluoromethane (Freon 11)	75-69-4	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
1,2,4-Trimethylbenzene	95-63-6	3.6	47	52	190	3.6	0.0021 J	0.0082	U	U	27 AG	U	0.00066 J	0.0071
1,3,5-Trimethylbenzene	108-67-8	8.4	47	52	190	8.4	0.0012 J	0.0025 J	U	U	8.1	U	U	0.0035 J
m,p-Xylene	179601-23-1	0.26	100	100	500	1.6	0.0021 J	U	U	U	2.9 AG	U	0.0015 J	0.014
o-Xylene	95-47-6	0.26	100	100	500	1.6	0.00090 J	U	U	U	0.220 J	U	U	0.0042
Total VOCs		NA	NA	NA	NA	NA	0.08132	0.11021	0.05291	0.0023	64.300	0.024	0.01911	0.0963

(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006

Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.

A = Concentration Exceeds Unrestricted Use SCO

B = Concentration Exceeds Residential Use SCO

C = Concentration Exceeds Restricted Residential Use SCO

D = Concentration Exceeds Commercial Use SCO

G = Concentration Exceeds Protection of Groundwater SCO

B = Also detected in associated blank

J = Estimated Value

U = Not Detected

D = Data reported from a dilution

VOC = Volatile Organic Compound

NA = Not Available

Table 5

Bulls Head Sub Area North
Rochester, New York

Summary of Detected VOC Results in mg/Kg or Parts Per Million (ppm)

Soil and Fill Samples

Detected Constituent	CAS Number	A Unrestricted SCO (1)	B Residential SCO(1)	C Restricted Residential SCO(1)	D Commercial SCO(1)	G Protection of Groundwater SCO (1)	R1801334-012 TB-21 (5.0) 2/13/18 Soil	R1801334-013 TB-22 (12.0) 2/13/18 Soil	R1801453-008 TP-07 (4.0) 2/15/18 Fill	R1801453-009 TP-08 (5.5) 2/15/18 Fill	R1801453-011 TP-10 (5.0) 2/15/18 Fill	R1801453-012 TP-12 (5.0) 2/15/18 Fill	R1801453-019 TP-22 (4.0-5.0) 2/16/18 Fill	R1801818-001 MW-08 (6.0-8.0) 2/28/18 Soil
Acetone	67-64-1	0.05	100	100	500	0.05	0.0093	U	0.042 B	0.033 B	0.0043 BJ	0.022 B	0.034 B	U
Benzene	71-43-2	0.06	2.9	4.8	44	0.06	0.00058 J	U	U	0.0034 J	U	U	0.00057 J	0.890 **AG**
2-Butanone (MEK)	78-93-3	0.12	100	100	500	0.12	U	U	0.012	0.0071	U	U	0.0091	U
n-Butylbenzene	104-51-8	12	100	100	500	12	U	U	U	U	U	U	0.170	0.790 J
sec-Butylbenzene	135-98-8	11	100	100	500	11	U	U	U	U	U	U	0.150	0.390 J
tert-Butylbenzene	98-06-6	5.9	100	100	500	5.9	U	U	U	U	U	U	U	U
Carbon Disulfide	75-15-0	NA	100	NA	NA	2.7	U	U	U	0.0015 J	U	U	0.0021 J	U
Cyclohexane	110-82-7	NA	NA	NA	NA	NA	U	U	U	U	U	U	0.0026 J	0.450 J
Ethylbenzene	100-41-4	1	30	41	390	1	U	U	U	0.0030 J	U	0.00038 J	0.018	1.300 **AG**
Isopropylbenzene	98-82-8	NA	100	NA	NA	2.3	U	U	U	0.00067 J	U	U	0.063	0.320 J
p-Isopropyltoluene	99-87-6	NA	NA	NA	NA	10	U	U	U	U	U	U	0.780 D	U
Methylene chloride	75-09-2	0.05	51	100	500	0.05	U	U	U	0.00061 J	0.00074 J	U	U	U
Methylcyclohexane	108-87-2	NA	NA	NA	NA	NA	0.0014 J	U	U	U	U	U	0.023	1.800
n-Propylbenzene	103-65-1	3.9	100	100	500	3.9	U	U	U	U	U	U	0.084	1.300
Styrene	100-42-5	NA	NA	NA	NA	NA	U	U	U	0.0025 J	U	U	U	U
1,1,2,2-Tetrachloroethane	79-34-5	NA	35	NA	NA	0.6	U	U	U	U	U	U	U	U
Tetrachloroethene	127-18-4	1.3	5.5	19	150	1.3	0.00095 J	U	U	U	U	U	U	U
Toluene	108-88-3	0.7	100	100	500	0.7	0.0015 J	U	U	U	U	U	0.0029 J	2.600 **AG**
Trichloroethene	79-01-6	0.47	10	21	200	0.47	U	U	U	0.0012 J	U	U	U	U
Trichlorofluoromethane (Freon 11)	75-69-4	NA	NA	NA	NA	NA	U	U	U	0.00059 J	U	U	U	U
1,2,4-Trimethylbenzene	95-63-6	3.6	47	52	190	3.6	0.00052 J	U	U	0.0013 J	U	0.0065	5.000 D **AG**	2.400
1,3,5-Trimethylbenzene	108-67-8	8.4	47	52	190	8.4	U	U	U	0.00063 J	U	0.0021 J	0.240 DJ	0.310 J
m,p-Xylene	179601-23-1	0.26	100	100	500	1.6	0.0011 J	U	U	0.0020 J	U	0.0018 J	0.023	4.900 **AG**
o-Xylene	95-47-6	0.26	100	100	500	1.6	U	U	U	0.0012 J	U	0.0010 J	0.020	0.790 J **A**
Total VOCs		NA	NA	NA	NA	NA	0.01535	0.000	0.054	0.05870	0.00504	0.03378	6.62227	18.240

(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006

Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.

A = Concentration Exceeds Unrestricted Use SCO

B = Concentration Exceeds Residential Use SCO

C = Concentration Exceeds Restricted Residential Use SCO

D = Concentration Exceeds Commercial Use SCO

G = Concentration Exceeds Protection of Groundwater SCO

B = Also detected in associated blank

J = Estimated Value

U = Not Detected

D = Data reported from a dilution

VOC = Volatile Organic Compound

NA = Not Available

Table 6

Bulls Head Sub Area North
Rochester, New York

Summary of Detected SVOC Results in mg/Kg or Parts Per Million (ppm)

Soil and Fill Samples

Detected Constituent	CAS Number	A Unrestricted SCO (1)	B Residential SCO(1)	C Restricted Residential SCO(1)	D Commercial SCO(1)	G Protection of Groundwater SCO (1)	R1801334-001 TB-01 (3.0) 2/12/18 Fill	R1801334-002 TB-02 (8.0) 2/12/18 Fill	R1801334-003 TB-04 (2.5) 2/12/18 Fill	R1801334-007 TB-14 (7.0) 2/13/18 Fill	R1801334-009 TB-18 (10.0-11.0) 2/13/18 Soil	R1801334-014 TB-24 (2.5) 2/13/18 Fill	R1801453-001 TP-01 (3.0-4.0) 2/15/18 Fill	R1801453-002 TP-02 (4.0) 2/15/18 Fill
Acenaphthene	83-32-9	20	100	100	500	98	U	U	U	0.220 J	U	U	U	U
Acenaphthylene	208-96-8	100	100	100	500	107	U	U	U	U	U	U	U	U
Anthracene	120-12-7	100	100	100	500	1000	U	0.170 J	U	U J	U	U	U	U
Benzo(a)anthracene	56-55-3	1	1	1	5.6	1	0.086 J	0.450 J	U	U	U	0.093 J	0.680 J	0.280 J
Benzo(a)pyrene	50-32-8	1	1	1	1	22	0.091 J	0.400 J	U	U	U	0.100 J	0.770 J	0.290 J
Benzo(b)fluoranthene	205-99-2	1	1	1	5.6	1.7	0.120 J	0.480 J	0.160 J	U	U	0.170 J	1.100 J ABC	0.350 J
Benzo(g,h,i)perylene	191-24-2	100	100	100	500	1000	0.092 J	0.270 J	U	U	U	0.140 J	0.780 J	0.230 J
Benzo(k)fluoranthene	207-08-9	0.8	1.0	3.9	56	1.7	U	0.190 J	U	U	U	U	U	0.130 J
Biphenyl	92-52-4	NA	NA	NA	NA	NA	U	U	U	0.220 J	U	U	U	U
Butyl benzyl phthalate	85-68-7	NA	100	NA	NA	122	U	U	U	U	U	U	U	U
Carbazole	86-74-8	NA	NA	NA	NA	NA	U	0.150 J	U	U	U	U	U	U
Chrysene	218-01-9	1	1	3.9	56	1	0.100 J	0.490 J	U	U	U	0.110 J	0.920 J	0.320 J
Dibenzo(a,h) anthracene	53-70-3	0.33	0.33	0.33	0.56	1000	U	U	U	U	U	U	U	U
Dibenzofuran	132-64-9	7	14	59	350	210	U	U	U	U	U	U	U	U
Fluoranthene	206-44-0	100	100	100	500	1000	0.160 J	0.980	U	U	U	0.110 J	1.900	0.670
Fluorene	86-73-7	30	100	100	500	386	U	U	U	0.350 J	U	U	U	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	5.6	8.2	0.090 J	0.290 J	U	U	U	0.110 J	0.720 J ABC	0.230 J
2-Methylnaphthalene	91-57-6	NA	0.41	NA	NA	36.4	U	U	U	1.800 B	U	U	U	U
3 & 4-Methylphenol (m & p-Cresol)	108-39-4, 106-44-5	0.33	100	100	500	0.33	U	0.170 J	U	U	U	U	U	U
Naphthalene	91-20-3	12	100	100	500	12	U	U	U	0.250 J	U	U	U	U
Phenanthrene	85-01-8	100	100	100	500	1000	0.091 J	0.880	U	1.300	U	U	1.200 J	0.370 J
Pyrene	129-00-0	100	100	100	500	1000	0.150 J	0.800	U	U	U	0.098 J	1.600 J	0.560
Total SVOCs		NA	NA	NA	NA	NA	0.980	5.720	0.160	4.140	0.000	0.931	9.670	3.430

(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006

Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.

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G = Concentration Exceeds Protection of Groundwater SCO

SVOC = Semi-Volatile Organic Compound

U = Not detected

J = Estimated Value

NA = Not Available

Table 6

Bulls Head Sub Area North
Rochester, New York

Summary of Detected SVOC Results in mg/Kg or Parts Per Million (ppm)

Soil and Fill Samples

Detected Constituent	CAS Number	A Unrestricted SCO (1)	B Residential SCO(1)	C Restricted Residential SCO(1)	D Commercial SCO(1)	G Protection of Groundwater SCO (1)	R1801453-003 TP-02 (10.0) 2/15/18 Soil	R1801453-005 TP-05 (6.0) 2/15/18 Fill	R1801453-006 TP-06 (5.5) 2/15/18 Fill	R1801453-007 TP-06 (9.0) 2/15/18 Soil	R1801453-008 TP-07 (4.0) 2/15/18 Fill	R1801453-009 TP-08 (5.5) 2/15/18 Fill	R1801453-010 TP-09 (7.0) 2/15/18 Fill	R1801453-011 TP-10 (5.0) 2/15/18 Fill
Acenaphthene	83-32-9	20	100	100	500	98	U	U	U	U	0.2200 J	0.960 J	U	U
Acenaphthylene	208-96-8	100	100	100	500	107	U	U	U	U	U	U	U	U
Anthracene	120-12-7	100	100	100	500	1000	U	U	U	U	0.680	3.200	0.400 J	U
Benzo(a)anthracene	56-55-3	1	1	1	5.6	1	U	U	0.097 J	U	1.700 **ABCG**	4.400 **ABCG**	0.930	0.590 J
Benzo(a)pyrene	50-32-8	1	1	1	1	22	U	U	0.130 J	U	1.400 **ABCD**	3.700 **ABCD**	1.000	0.660 J
Benzo(b)fluoranthene	205-99-2	1	1	1	5.6	1.7	U	U	0.170 J	U	1.800 **ABCG**	4.400 **ABCG**	1.200 **ABC**	0.780 J
Benzo(g,h,i)perylene	191-24-2	100	100	100	500	1000	U	U	0.110 J	U	0.710	2.300	0.540 J	0.480 J
Benzo(k)fluoranthene	207-08-9	0.8	1.0	3.9	56	1.7	U	U	U	U	0.700	1.700 **AB**	0.450 J	U
Biphenyl	92-52-4	NA	NA	NA	NA	NA	U	U	U	U	U	U	U	U
Butyl benzyl phthalate	85-68-7	NA	100	NA	NA	122	U	U	U	U	U	U	U	U
Carbazole	86-74-8	NA	NA	NA	NA	NA	U	U	U	U	0.300 J	1.700	U	U
Chrysene	218-01-9	1	1	3.9	56	1	U	U	0.120 J	U	1.700 **ABG**	4.200 **ABCG**	0.960	0.630 J
Dibenzo(a,h) anthracene	53-70-3	0.33	0.33	0.33	0.56	1000	U	U	U	U	0.200 J	0.580 J **ABCD**	U	U
Dibenzofuran	132-64-9	7	14	59	350	210	U	U	U	U	0.120 J	1.300	U	U
Fluoranthene	206-44-0	100	100	100	500	1000	U	U	0.140 J	U	4.100	12.000	1.600	1.100 J
Fluorene	86-73-7	30	100	100	500	386	U	U	U	U	0.200 J	1.400	U	U
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	5.6	8.2	U	U	0.092 J	U	0.860 **ABC**	2.500 **ABC**	0.590 J **ABC**	0.460 J
2-Methylnaphthalene	91-57-6	NA	0.41	NA	NA	36.4	U	U	U	U	U	0.500 J **B**	U	U
3 & 4-Methylphenol (m & p-Cresol)	108-39-4, 106-44-5	0.33	100	100	500	0.33	U	U	U	U	U	U	U	U
Naphthalene	91-20-3	12	100	100	500	12	U	U	U	U	U	1.400	U	U
Phenanthrene	85-01-8	100	100	100	500	1000	U	U	U	U	2.800	12.000	1.500	0.570 J
Pyrene	129-00-0	100	100	100	500	1000	U	U	0.130 J	U	3.200	9.400	1.600	0.990 J
Total SVOCs		NA	NA	NA	NA	NA	0.000	0.000	0.9890	0.000	20.690	67.640	10.770	6.260

(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006

Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.

A = Concentration Exceeds Unrestricted Use SCO

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G = Concentration Exceeds Protection of Groundwater SCO

SVOC = Semi-Volatile Organic Compound

U = Not detected

J = Estimated Value

NA = Not Available

Table 6

Bulls Head Sub Area North
Rochester, New York

Summary of Detected SVOC Results in mg/Kg or Parts Per Million (ppm)

Soil and Fill Samples

Detected Constituent	CAS Number	A Unrestricted SCO (1)	B Residential SCO(1)	C Restricted Residential SCO(1)	D Commercial SCO(1)	G Protection of Groundwater SCO (1)	R1801453-012 TP-12 (5.0) 2/15/18 Fill		R1801453-013 TP-13 (1.0-2.0) 2/16/18 Fill		R1801453-014 TP-13 (7.0) 2/16/18 Soil		R1801453-015 TP-14 (3.5) 2/16/18 Fill		R1801804-005 TP-14 (8.5) 2/16/18 Soil		R1801453-016 TP-17 (4.0) 2/16/18 Fill		R1801453-017 TP-19 (3.0-4.0) 2/16/18 Fill		R1801453-018 TP-20 (9.0) 2/16/18 Fill	
Acenaphthene	83-32-9	20	100	100	500	98	U		U		U		U		U		U		U		U	
Acenaphthylene	208-96-8	100	100	100	500	107	0.280 J		U		U		U		U		0.130 J		U		0.760 J	
Anthracene	120-12-7	100	100	100	500	1000	0.630 J		U		U		0.290 J		U		0.370 J		U		2.300	
Benzo(a)anthracene	56-55-3	1	1	1	5.6	1	3.500	ABCG	U		U		1.000		U		0.950		0.490 J		4.000	ABCG
Benzo(a)pyrene	50-32-8	1	1	1	1	22	2.900	ABCD	U		U		1.400	ABCD	U		0.920		0.590 J		3.500	ABCD
Benzo(b)fluoranthene	205-99-2	1	1	1	5.6	1.7	3.500	ABCG	U		U		1.700	ABC	U		1.200	ABC	0.740 J		3.600	ABCG
Benzo(g,h,i)perylene	191-24-2	100	100	100	500	1000	1.400		U		U		1.000		U		0.480		U		1.700	
Benzo(k)fluoranthene	207-08-9	0.8	1.0	3.9	56	1.7	1.300	AB	U		U		0.590		U		0.500		U		1.500	AB
Biphenyl	92-52-4	NA	NA	NA	NA	NA	U		U		U		U		U		U		U		U	
Butyl benzyl phthalate	85-68-7	NA	100	NA	NA	122	U		U		U		U		U		0.470		U		U	
Carbazole	86-74-8	NA	NA	NA	NA	NA	U		U		U		U		U		0.140 J		U		0.460 J	
Chrysene	218-01-9	1	1	3.9	56	1	3.400	ABG	U		U		1.100	ABG	U		0.980		0.480 J		3.500	ABG
Dibenzo(a,h) anthracene	53-70-3	0.33	0.33	0.33	0.56	1000	0.430 J	ABC	U		U		0.220 J		U		0.130 J		U		0.530 J	ABC
Dibenzofuran	132-64-9	7	14	59	350	210	U		U		U		0.130 J		U		U		U		0.500 J	
Fluoranthene	206-44-0	100	100	100	500	1000	5.200		U		U		1.700		U		1.900		0.790 J		8.700	
Fluorene	86-73-7	30	100	100	500	386	U		U		U		U		U		0.110 J		U		0.930	
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	5.6	8.2	1.700	ABC	U		U		1.100	ABC	U		0.570	ABC	U		2.300	ABC
2-Methylnaphthalene	91-57-6	NA	0.41	NA	NA	36.4	U		U		U		U		U		U		U		U	
3 & 4-Methylphenol (m & p-Cresol)	108-39-4, 106-44-5	0.33	100	100	500	0.33	U		U		U		U		U		U		U		U	
Naphthalene	91-20-3	12	100	100	500	12	U		U		U		0.120 J		U		U		U		U	
Phenanthrene	85-01-8	100	100	100	500	1000	2.000		U		U		1.100		U		1.200		U		7.700	
Pyrene	129-00-0	100	100	100	500	1000	5.000		U		U		1.600		U		1.600		0.730 J		7.000	
Total SVOCs		NA	NA	NA	NA	NA	31.240		0.000		0.000		13.050		0.000		11.650		3.820		48.980	

(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006

Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.

A = Concentration Exceeds Unrestricted Use SCO

B = Concentration Exceeds Residential Use SCO

C = Concentration Exceeds Restricted Residential Use SCO

D = Concentration Exceeds Commercial Use SCO

G = Concentration Exceeds Protection of Groundwater SCO

SVOC = Semi-Volatile Organic Compound

U = Not detected

J = Estimated Value

NA = Not Available

Table 6

Bulls Head Sub Area North
Rochester, New York

Summary of Detected SVOC Results in mg/Kg or Parts Per Million (ppm)

Soil and Fill Samples

Detected Constituent	CAS Number	A Unrestricted SCO (1)	B Residential SCO(1)	C Restricted Residential SCO(1)	D Commercial SCO(1)	G Protection of Groundwater SCO (1)	R1801453-019 TP-22 (4.0-5.0) 2/16/18 Fill		R1803614-001 TP-24 (4.0) 4/20/18 Fill		R1803614-002 TP-25 (5.0) 4/20/18 Fill	
Acenaphthene	83-32-9	20	100	100	500	98	2.700		U		U	
Acenaphthylene	208-96-8	100	100	100	500	107	U		U		U	
Anthracene	120-12-7	100	100	100	500	1000	3.800		0.110 J		U	
Benzo(a)anthracene	56-55-3	1	1	1	5.6	1	7.800	**ABCDG**	0.320 J		U	
Benzo(a)pyrene	50-32-8	1	1	1	1	22	8.600	**ABCD**	0.330 J		U	
Benzo(b)fluoranthene	205-99-2	1	1	1	5.6	1.7	9.800	**ABCDG**	0.420		U	
Benzo(g,h,i)perylene	191-24-2	100	100	100	500	1000	5.500		0.230 J		U	
Benzo(k)fluoranthene	207-08-9	0.8	1.0	3.9	56	1.7	3.700	**ABG**	0.140 J		U	
Biphenyl	92-52-4	NA	NA	NA	NA	NA	U		U		U	
Butyl benzyl phthalate	85-68-7	NA	100	NA	NA	122	U		U		U	
Carbazole	86-74-8	NA	NA	NA	NA	NA	2.000 J		U		U	
Chrysene	218-01-9	1	1	3.9	56	1	7.600	**ABCG**	0.330 J		U	
Dibenzo(a,h) anthracene	53-70-3	0.33	0.33	0.33	0.56	1000	1.500 J	**ABCD**	U		U	
Dibenzofuran	132-64-9	7	14	59	350	210	1.900 J		U		U	
Fluoranthene	206-44-0	100	100	100	500	1000	14.000		0.660		U	
Fluorene	86-73-7	30	100	100	500	386	4.500		U		U	
Indeno(1,2,3-cd)pyrene	193-39-5	0.5	0.5	0.5	5.6	8.2	6.100	**ABCD**	0.220 J		U	
2-Methylnaphthalene	91-57-6	NA	0.41	NA	NA	36.4	5.500	**B**	U		U	
3 & 4-Methylphenol (m & p-Cresol)	108-39-4, 106-44-5	0.33	100	100	500	0.33	U		U		U	
Naphthalene	91-20-3	12	100	100	500	12	2.700		U		U	
Phenanthrene	85-01-8	100	100	100	500	1000	20.000		0.410		U	
Pyrene	129-00-0	100	100	100	500	1000	12.000		0.600		U	
Total SVOCs		NA	NA	NA	NA	NA	119.700		3.770		0.000	

(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006

Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.

A = Concentration Exceeds Unrestricted Use SCO

B = Concentration Exceeds Residential Use SCO

C = Concentration Exceeds Restricted Residential Use SCO

D = Concentration Exceeds Commercial Use SCO

G = Concentration Exceeds Protection of Groundwater SCO

SVOC = Semi-Volatile Organic Compound

U = Not detected

J = Estimated Value

NA = Not Available

Table 11

Bulls Head High Priority Sub Area North
Rochester, New York

Summary of Detected Constituents Results in ug/l or Parts per Billion (ppb)

Groundwater Samples

Detected Constituent	CAS Number	Groundwater Standard or Guidance Value [1]	R1802137-001 MW-01 3/9/18 Groundwater	R1803412-001 MW-01 4/16/18 Groundwater	R1802137-002 MW-02 3/9/18 Groundwater	R1803412-002 MW-02 4/16/18 Groundwater	R1802137-003 MW-03 3/9/18 Groundwater	R1803412-003 MW-03 4/16/18 Groundwater	R1802137-004 MW-04 3/9/18 Groundwater	R1803412-004 MW-04 4/16/18 Groundwater
Volatile Organic Compounds										
Acetone	67-64-1	50	U	2.0 JB	U	1.4 JB	U	U	U	1.7 JB
tert-Butylbenzene	98-06-6	5	U	U	U	U	U	U	U	U
Carbon Disulfide	75-15-0	60	U	U	U	U	U	U	U	U
Chloroform	67-66-3	7	U	U	U	U	U	U	U	U
1,1-Dichloroethane	75-34-3	5	U	U	U	U	U	U	U	0.34 J
Cyclohexane	110-82-7	NA	U	U	U	U	U	U	U	U
Methylcyclohexane	108-87-2	NA	U	U	U	U	U	U	U	U
Total VOCs		NA	0.0	2.0	0.0	1.4	0.0	0.0	0.0	2.04
Total TICs		NA	NT	0.0	NT	12.2 JN	NT	0.0	NT	0.0
Total VOCs and TICs		NA	0.0	2.0	0.0	13.6	0.0	0.0	0.0	2.04
Semi-Volatile Organic Compounds										
Naphthalene	91-20-3	10	NT	NT	10	NT	NT	NT	NT	NT
Total SVOCs		NA	NT	NT	10.00	NT	NT	NT	NT	NT
Metals										
Barium	7440-39-3	1,000	NT	NT	138	NT	NT	NT	NT	NT

U = Not detected

VOC = Volatile Organic Compound

SVOC = Semi-Volatile Organic Compound

NA = Not available

NT = Not tested

[1] Groundwater standard or guidance value are as referenced in NYSDEC TOGS 1.1.1 dated June 1998 with April 2000 and June 2004 addendums.

X = Concentration exceeds groundwater standard or guidance value

J = Estimated Value

B= Constituent was also detected in the associated trip blank, which may have contributed to the sample result.

N = Indicates presumptive evidence of a compound

Bulls Head High Priority Sub Area North
Rochester, New York

Summary of Detected Constituents Results in ug/l or Parts per Billion (ppb)

Groundwater Samples

Detected Constituent	CAS Number	Groundwater Standard or Guidance Value [1]	R1802137-005 MW-05 3/9/18 Groundwater	R1803412-005 MW-05 4/16/18 Groundwater	R1802137-006 MW-06 3/9/18 Groundwater	R1803412-006 MW-06 4/16/18 Groundwater	R1802137-007 MW-07 3/9/18 Groundwater	R1803412-007 MW-07 4/16/18 Groundwater	R1802137-001 MW-08 3/9/18 Groundwater	R1803412-008 MW-08 4/16/18 Groundwater
Volatile Organic Compounds										
Acetone	67-64-1	50	U	U	U	U	U	3.6 JB	U	2.9 JB
tert-Butylbenzene	98-06-6	5	U	U	U	U	U	0.25 J	U	U
Carbon Disulfide	75-15-0	60	U	U	U	U	U	U	U	0.45 J
Chloroform	67-66-3	7	U	0.49	U	U	U	U	U	U
1,1-Dichloroethane	75-34-3	5	U	U	U	U	U	U	U	U
Cyclohexane	110-82-7	NA	U	U	U	U	U	0.56 J	U	U
Methylcyclohexane	108-87-2	NA	U	U	U	U	U	U	U	0.29 J
Total VOCs		NA	0.0	0.49	0.0	0.0	0.0	4.41	0.0	3.6
Total TICs		NA	NT	0.0	NT	0.0	NT	0.0	NT	5.0 J
Total VOCs and TICs		NA	0.0	0.5	0.0	0.0	0.0	4.4	0.0	8.6
Semi-Volatile Organic Compounds										
Naphthalene	91-20-3	10	NT	NT	NT	NT	NT	NT	U	NT
Total SVOCs		NA	NT	NT	NT	NT	NT	NT	U	NT
Metals										
Barium	7440-39-3	1,000	NT	NT	NT	NT	NT	NT	78	NT

U = Not detected

VOC = Volatile Organic Compound

SVOC = Semi-Volatile Organic Compound

NA = Not available

NT = Not tested

[1] Groundwater standard or guidance value are as referenced in NYSDEC TOGS 1.1.1 dated June 1998 with April 2000 and June 2004 addendums.

X = Concentration exceeds groundwater standard or guidance value

Results of Data Usability Report have been incorporated

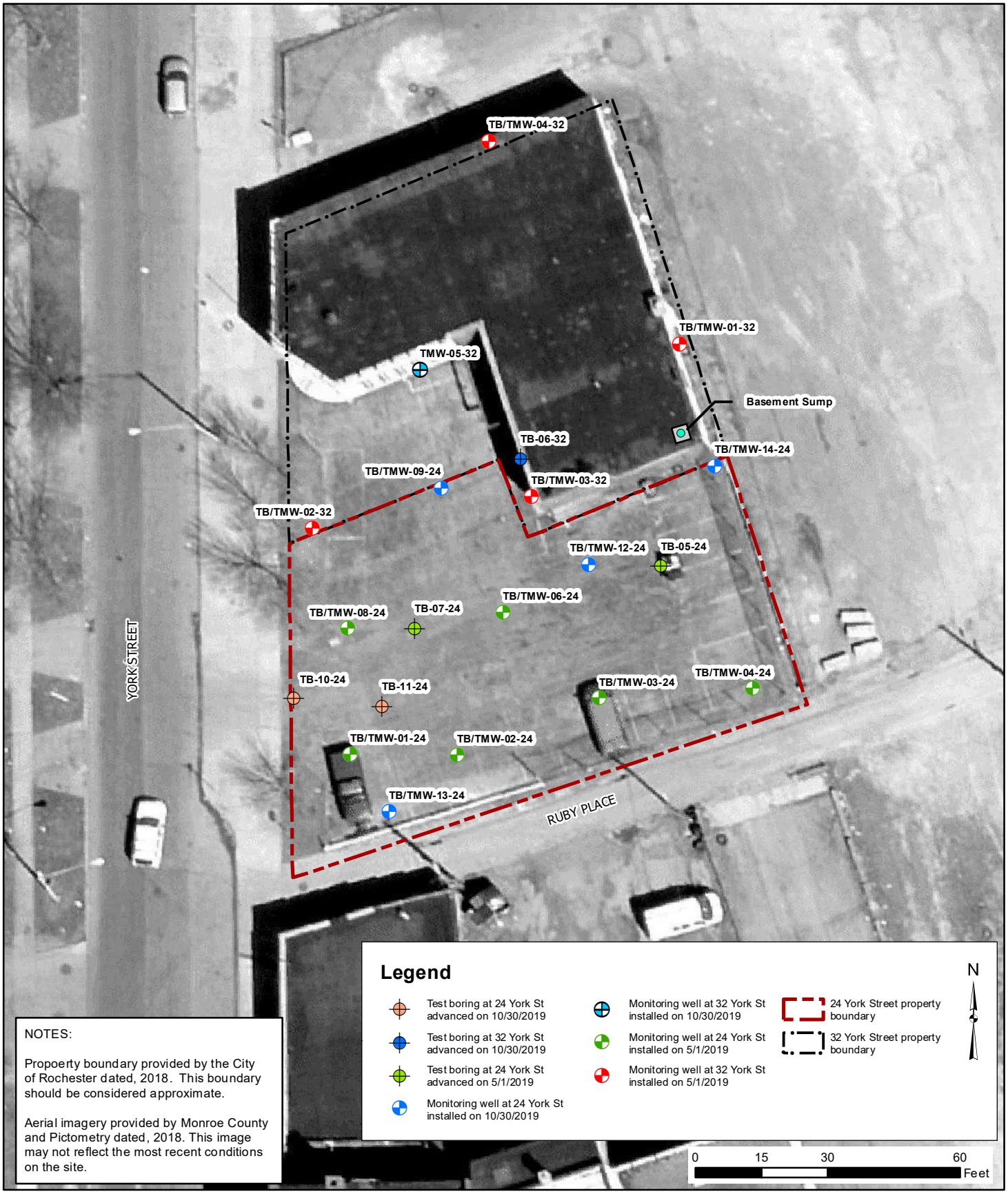
B= Constituent was also detected in the associated trip blank, which may have contributed to the sample result.

N = Indicates presumptive evidence of a compound

Day Environmental, Inc.

November 19, 2019 Preliminary Phase II ESA – 24 & 32 York Street

Figures and Laboratory Data Summary Tables



NOTES:

Propoerty boundary provided by the City of Rochester dated, 2018. This boundary should be considered approximate.

Aerial imagery provided by Monroe County and Pictometry dated, 2018. This image may not reflect the most recent conditions on the site.

Document Path: E:\GIS Mapping\Rocity\24 and 32 York Street\5658S-19Rocity\PhaseIIESA\5658S-01-SitePlan.mxd

Last Date Saved: 13 Nov 2019

Date	11-13-2019
Drawn By	CPS
Scale	AS NOTED

day
DAY ENVIRONMENTAL, INC.
Environmental Consultants
Rochester, New York 14606
New York, New York 10170

Project Title

24 YORK STREET AND 32 YORK STREET
ROCHERSTER, NEW YORK

PHASE II ENVIRONMENTAL SITE ASSESSMENT

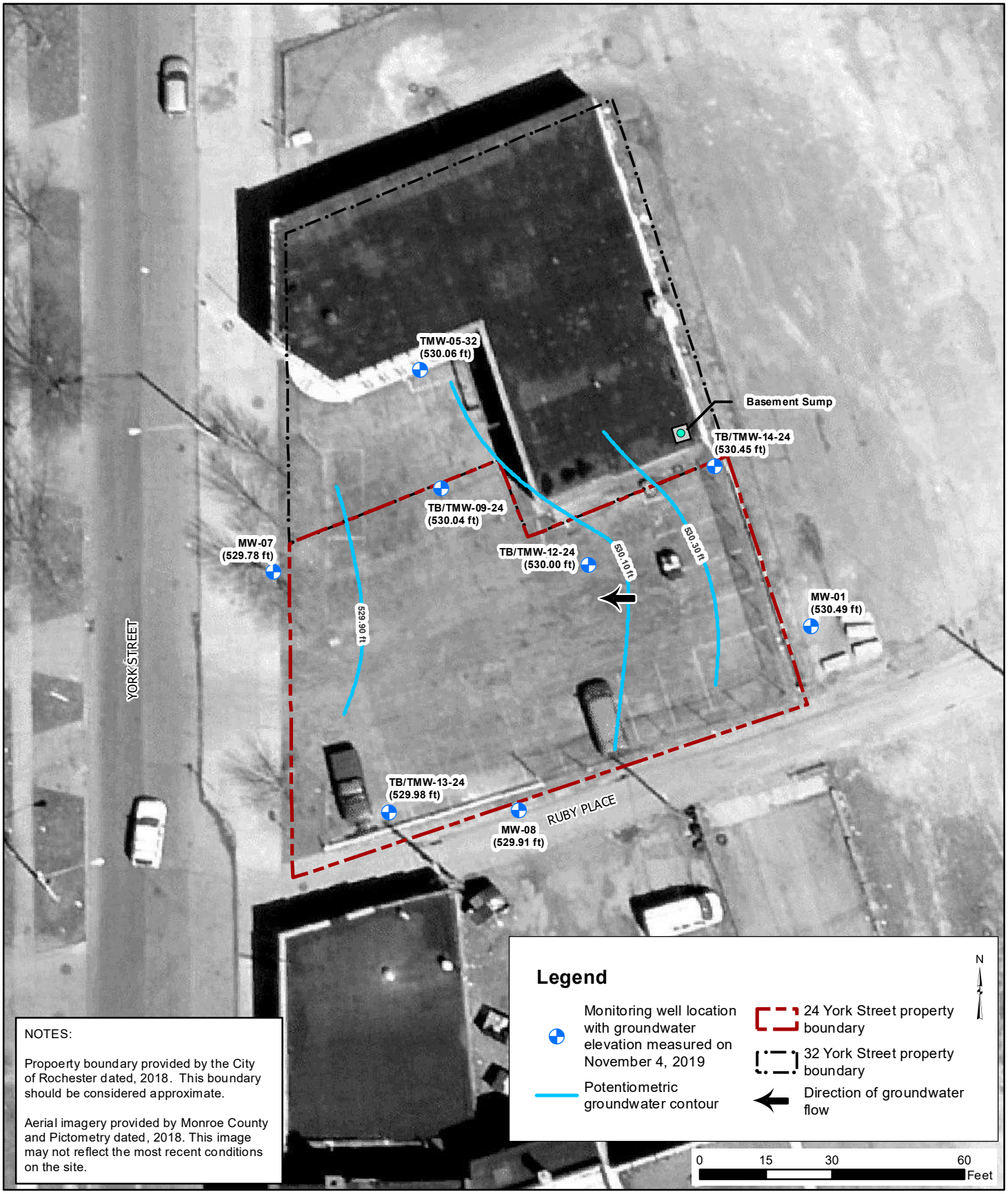
Drawing Title

Site Plan with Test Locations

Project No.

5658S-19

FIGURE 2



NOTES:

Propoerty boundary provided by the City of Rochester dated, 2018. This boundary should be considered approximate.

Aerial imagery provided by Monroe County and Pictometry dated, 2018. This image may not reflect the most recent conditions on the site.

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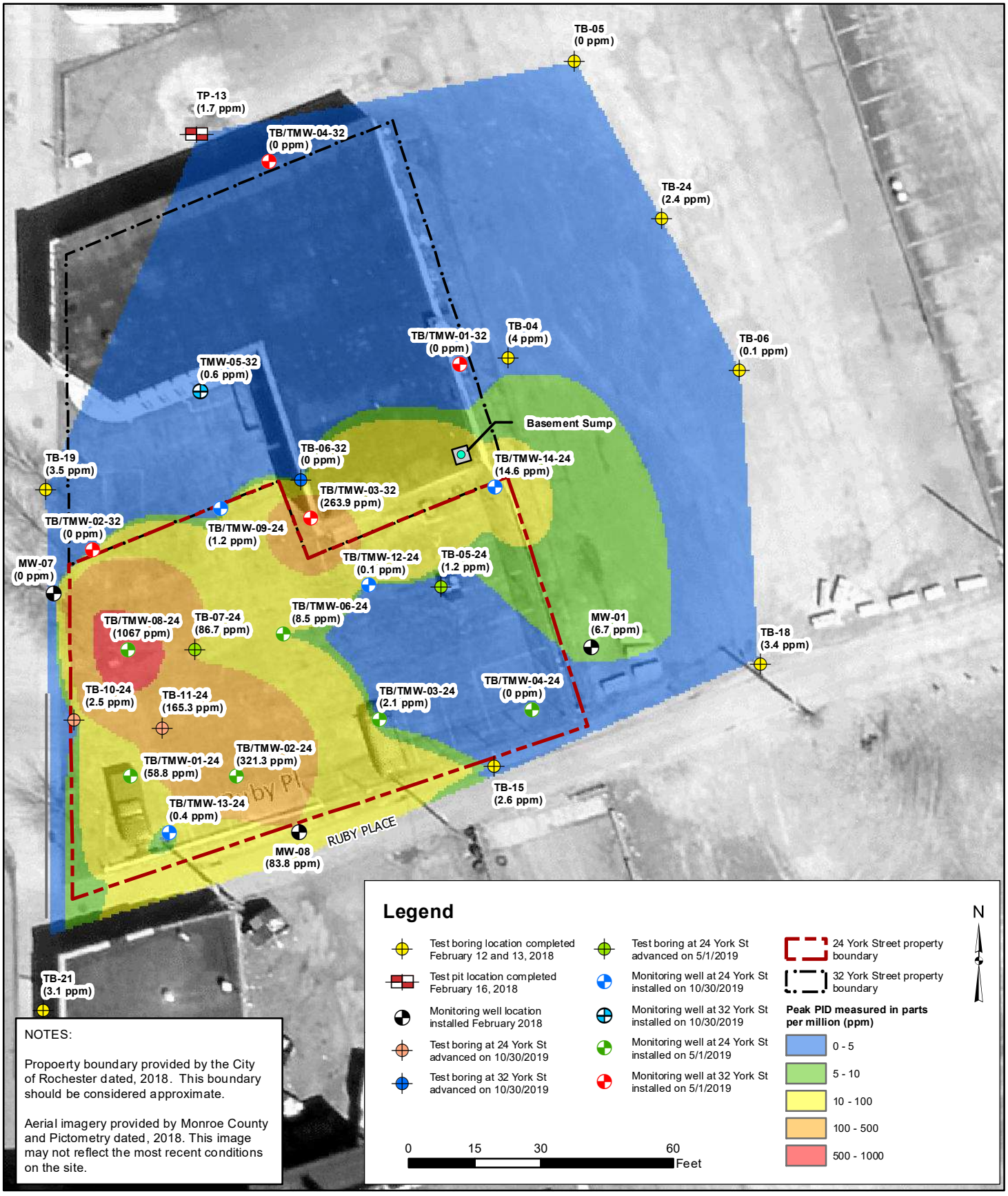
Last Date Saved: 13 Nov 2019

Date: 11-13-2019	**DAY ENVIRONMENTAL, INC.** Environmental Consultants Rochester, New York 14606 New York, New York 10170	Project Title: 24 YORK STREET AND 32 YORK STREET ROCHERSTER, NEW YORK PHASE II ENVIRONMENTAL SITE ASSESSMENT	Project No.: 5658S-19
Drawn By: CPS		Drawing Title: Potentiometric Groundwater Contour Map for November 4, 2019	FIGURE 3
Scale: AS NOTED			



NOTES:

Propoerty boundary provided by the City of Rochester dated, 2018. This boundary should be considered approximate.

Aerial imagery provided by Monroe County and Pictometry dated, 2018. This image may not reflect the most recent conditions on the site.

Document Path: E:\GIS Mapping\Rocity\24 and 32 York Street\5658S-19Rocity\PhaseIIESA\5658S-05-PeakPID.mxd

Last Date Saved: 15 Nov 2019

Date	11-13-2019
Drawn By	CPS
Scale	AS NOTED

DAY ENVIRONMENTAL, INC.
Environmental Consultants
Rochester, New York 14606
New York, New York 10170

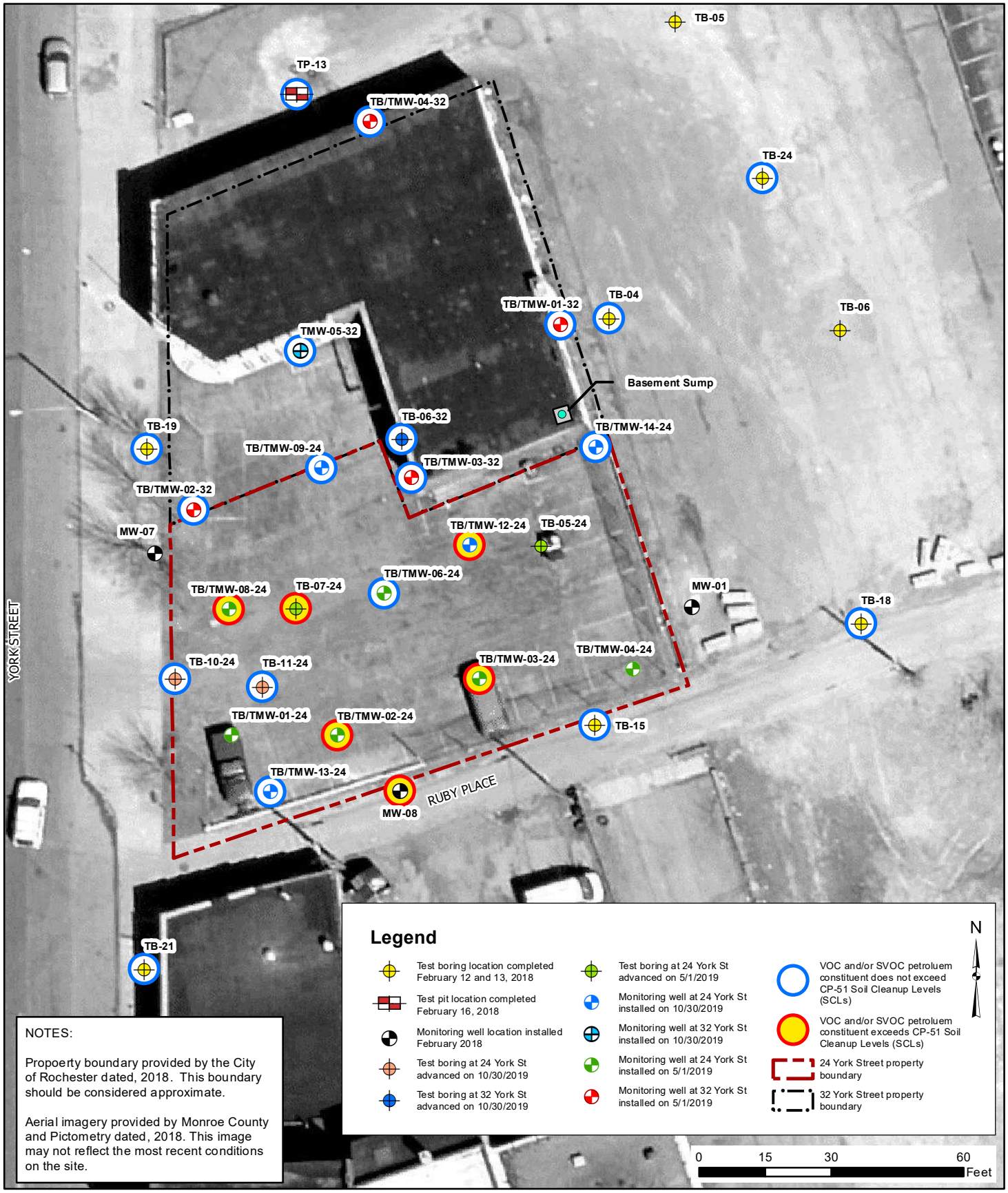
Project Title
24 YORK STREET AND 32 YORK STREET
ROCHERSTER, NEW YORK

PHASE II ENVIRONMENTAL SITE ASSESSMENT

Drawing Title
Peak PID Readings at Cumulative Test Locations

Project No.
5658S-19

FIGURE 4



NOTES:

Propoerty boundary provided by the City of Rochester dated, 2018. This boundary should be considered approximate.

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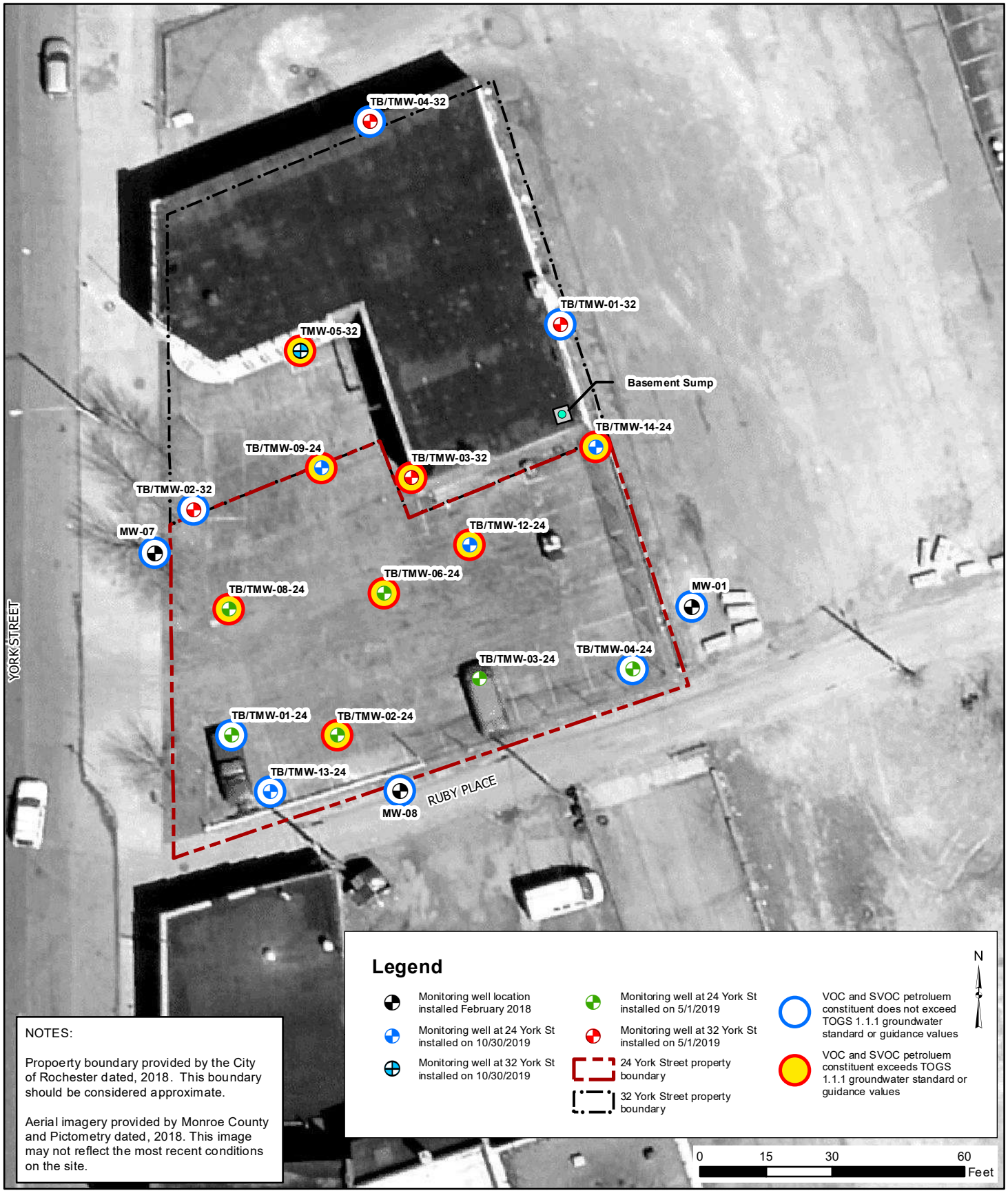
Last Date Saved: 13 Nov 2019

Date: 11-13-2019 Drawn By: CPS Scale: AS NOTED	**DAY ENVIRONMENTAL, INC.** Environmental Consultants Rochester, New York 14606 New York, New York 10170	Project Title: 24 YORK STREET AND 32 YORK STREET ROCHERSTER, NEW YORK PHASE II ENVIRONMENTAL SITE ASSESSMENT Drawing Title: Petroleum Constituent Results in Cumulative Soil Samples	Project No.: 5658S-19 FIGURE 5



NOTES:

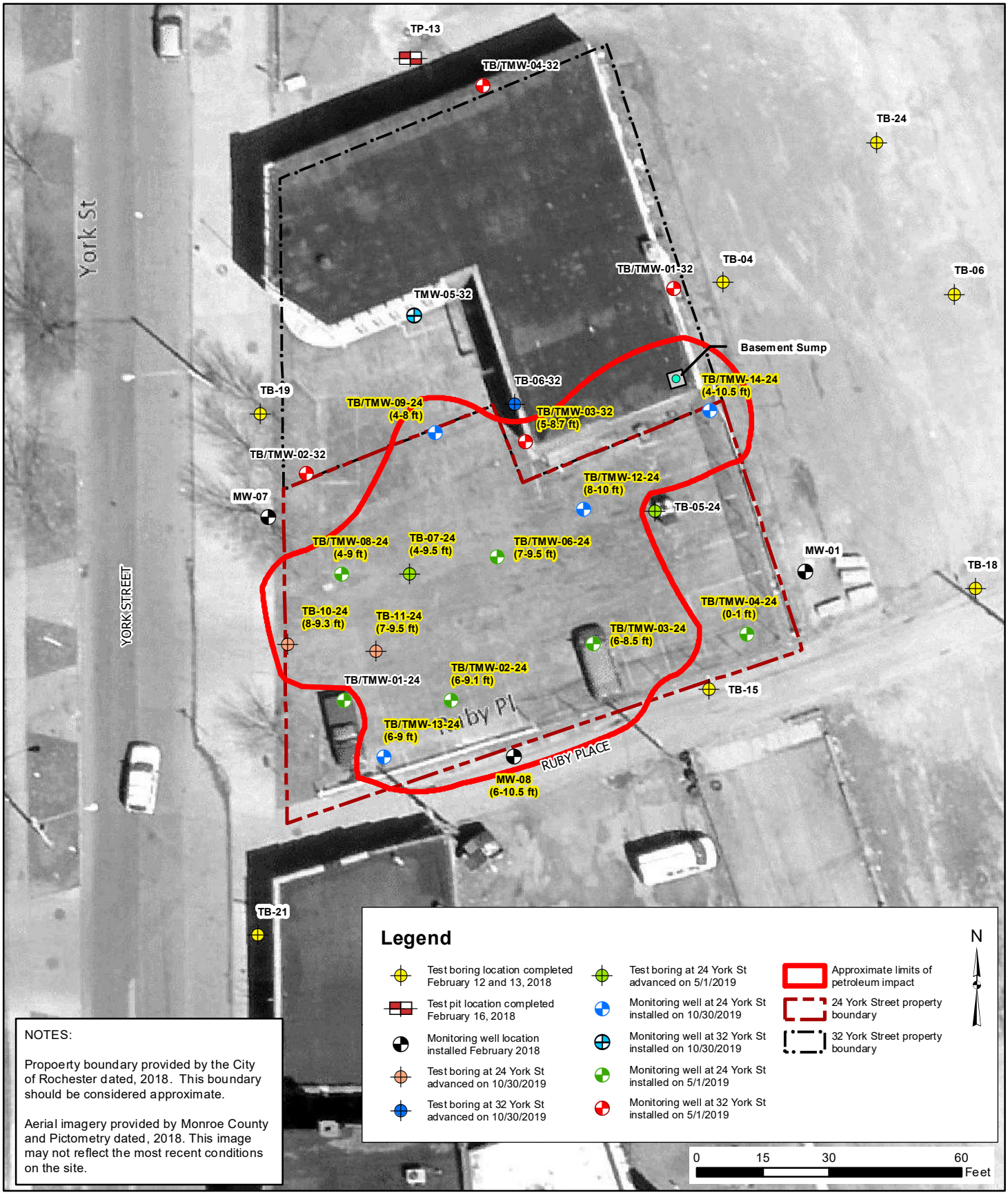
Propoerty boundary provided by the City of Rochester dated, 2018. This boundary should be considered approximate.

Aerial imagery provided by Monroe County and Pictometry dated, 2018. This image may not reflect the most recent conditions on the site.

Document Path: E:\GIS Mapping\Rocity\24 and 32 York Street\5658S-19Rocity\PhaseIIESA\5658S-07-TOGSExceedances.mxd

Last Date Saved: 13 Nov 2019

Date: 11-13-2019	day DAY ENVIRONMENTAL, INC. Environmental Consultants Rochester, New York 14606 New York, New York 10170	Project Title: 24 YORK STREET AND 32 YORK STREET ROCHERSTER, NEW YORK PHASE II ENVIRONMENTAL SITE ASSESSMENT	Project No.: 5658S-19
Drawn By: CPS		Drawing Title: Petroleum Constituent Results in Cumulative Groundwater Samples	FIGURE 6
Scale: AS NOTED			



NOTES:

Propoerty boundary provided by the City of Rochester dated, 2018. This boundary should be considered approximate.

Aerial imagery provided by Monroe County and Pictometry dated, 2018. This image may not reflect the most recent conditions on the site.

Document Path: E:\GIS Mapping\Rocity\24 and 32 York Street\5658S-19Rocity\PhaseIIESA\5658S-08-PetroEvidence.mxd

Last Date Saved: 15 Nov 2019

Date: 11-13-2019 Drawn By: CPS Scale: AS NOTED	day **DAY ENVIRONMENTAL, INC.** **Environmental Consultants** **Rochester, New York 14606** **New York, New York 10170**	Project Title 24 YORK STREET AND 32 YORK STREET ROCHERSTER, NEW YORK PHASE II ENVIRONMENTAL SITE ASSESSMENT Drawing Title Evidence of Petroleum Impact at Cumulative Test Locations	Project No. 5658S-19 FIGURE 7

Table 3

24 and 32 York Street
Rochester, New York

Summary of Detected VOC Results in mg/Kg or Parts per Million (ppm)

Soil/Fill Samples

Detected Constituent	A Unrestricted SCO (1)	B Restricted Residential SCO(1)	C Commercial SCO(1)	D CP-51 SCL (2)	L1951354-02 TB-05-32(8-9.8) 10/30/2019 Soil	L1951354-03 TB-06-32(6-8) 10/30/2019 Soil	L1951354-04 TB-09-24(8-8.3) 10/30/2019 Soil	L1951354-05 TB-10-24(8-9.3) 10/30/2019 Soil	L1951354-06 TB-11-24(6-7) 10/30/2019 Fill	L1951354-08 TB-12-24(6-8) 10/30/2019 Soil	L1951354-09 TB-13-24(8-10) 10/30/2019 Soil	L1951354-10 TB-14-24(4-6) 10/30/2019 Soil
Acetone	0.05	100	500	NA	**0.0054 J**	**0.035**	**0.017**	**0.023**	U	**0.030**	**0.026**	U
Benzene	0.06	4.8	44	0.06	U	U	**0.0046**	**0.00052**	**0.016 J**	U	**0.0023**	U
2-Butanone (MEK)	0.12	100	500	NA	U	**0.0073 J**	U	U	U	**0.006 J**	U	U
n-Butylbenzene	12	100	500	12	U	U	U	U	**0.420**	U	U	U
sec-Butylbenzene	11	100	500	11	U	U	**0.0024**	U	**0.200**	U	U	**0.020 J**
tert-Butylbenzene	5.9	100	500	5.9	U	U	**0.00046 J**	**0.00044 J**	**0.030 J**	U	**0.00048 J**	U
Cyclohexane	NA	NA	NA	NA	U	U	**0.0079 J**	**0.0014 J**	**1.900**	U	**0.0047 J**	U
1,4-Dichlorobenzene	1.8	13	130	NA	**0.00015 J**	U	U	U	U	U	U	U
trans-1,2-Dichloroethene	0.19	100	500	NA	**0.00015 J**	U	U	U	U	U	U	U
Ethylbenzene	1	41	390	1	U	U	U	**0.00020 J**	U	U	**0.00046 J**	**0.032 J**
Isopropylbenzene	NA	NA	NA	2.3	U	U	U	U	**0.093**	U	**0.00013 J**	**0.0076 J**
p-Isopropyltoluene	NA	NA	NA	10	U	U	U	U	**0.045 J**	U	U	**0.016 J**
Methyl Acetate	NA	NA	NA	NA	U	U	U	U	U	U	U	**0.090 J**
Methylcyclohexane	NA	NA	NA	NA	U	U	**0.031**	**0.0027 J**	**13.000**	U	**0.0082**	U
Naphthalene	12	100	500	12	U	U	**0.00074 J**	U	**0.190 J**	U	**0.00086 J**	**0.300**
n-Propylbenzene	3.9	100	500	3.9	U	U	U	U	**0.290**	U	U	**0.033 J**
Toluene	0.7	100	500	0.7	U	U	**0.0080**	**0.0014**	U	U	**0.0038**	U
1,2,4-Trimethylbenzene	3.6	52	190	3.6	U	U	**0.0028**	**0.00055 J**	**0.056 J**	U	**0.0011 J**	**0.110 J**
1,3,5-Trimethylbenzene	8.4	52	190	8.4	U	U	**0.0013 J**	**0.00021 J**	**0.019 J**	U	**0.00063 J**	**0.036 J**
m,p-Xylene	0.26	100	500	0.26	U	U	**0.0066**	**0.0010 J**	**0.054 J**	U	**0.0025**	**0.110 J**
o-Xylene	0.26	100	500	0.26	U	U	**0.0022**	**0.00034 J**	U	U	**0.00084 J**	**0.024 J**
Total VOCs	NA	NA	NA	NA	0.00570	0.0423	0.08500	0.03176	16.313	0.036	0.05200	0.7786

U = Not detected above laboratory method detection limit
J = Estimated Value
VOC = Volatile Organic Compound
NA = Not available
(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006 and CP-51 dated 10/21/2010
(2) = Soil Cleanup Level (SCL) referenced in CP-51 dated 10/21/2010
Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.
A = Concentration Exceeds Unrestricted Use SCO
B = Concentration Exceeds Restricted Residential Use SCO
C = Concentration Exceeds Commercial Use SCO
D = Concentration Exceeds SCL

Table 4

24 and 32 York Street
Rochester, New York

Summary of Detected SVOC Results in mg/Kg or Parts Per Million (ppm)

Soil Samples

Detected Constituent	A Unrestricted SCO (1)	B Restricted Residential SCO(1)	C Commercial SCO(1)	D CP-51 SCL (2)	L1951354-02 TB-05-32(8-9.8) 10/30/2019 Soil		L1951354-03 TB-06-32(6-8) 10/30/2019 Soil		L1951354-04 TB-09-24(8-8.3) 10/30/2019 Soil		L1951354-05 TB-10-24(8-9.3) 10/30/2019 Soil		L1951354-07 TB-11-24(8-9) 10/30/2019 Soil		L1951354-08 TB-12-24(6-8) 10/30/2019 Soil		L1951354-09 TB-13-24(8-10) 10/30/2019 Soil		L1951354-10 TB-14-24(4-6) 10/30/2019 Soil	
Acenaphthene	20	100	500	20	U		U		U		U		U		**15.0**		U		U	
Acenaphthylene	100	100	500	100	U		U		U		U		U		**7.3**		**0.029 J**		U	
Anthracene	100	100	500	100	U		U		U		U		U		**35.0**		**0.064 J**		U	
Benzo(a)anthracene	1	1	5.6	1	**0.051 J**		U		U		U		**0.048 J**		**36.0**	**ABCD**	**0.050 J**		**0.039 J**	
Benzo(a)pyrene	1	1	1	1	**0.051 J**		U		U		U		U		**26.0**	**ABCD**	U		U	
Benzo(b)fluoranthene	1	1	5.6	1	**0.083 J**		U		U		U		**0.068 J**		**30.0**	**ABCD**	**0.040 J**		U	
Benzo(g,h,i)perylene	100	100	500	100	**0.038 J**		U		U		U		**0.036 J**		**10.0**		U		U	
Benzo(k)fluoranthene	0.8	3.9	56	0.8	U		U		U		U		U		**11.0**	**ABD**	U		U	
Chrysene	1	3.9	56	1	**0.064 J**		U		U		U		**0.056 J**		**29.0**	**ABD**	**0.038 J**		**0.051 J**	
Dibenzo(a,h) anthracene	0.33	0.33	0.56	0.33	U		U		U		U		U		**3.3**	**ABCD**	U		U	
Fluoranthene	100	100	500	100	**0.160**		U		U		U		**0.110 J**		**76.0**		**0.110**		**0.065 J**	
Fluorene	30	100	500	30	U		U		U		U		U		**25.0**		**0.034 J**		U	
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	0.5	**0.038 J**		U		U		U		**0.038 J**		**12.0**	**ABCD**	U		U	
Phenanthrene	100	100	500	100	**0.100 J**		U		U		U		**0.058 J**		**100.0**	**ABD**	**0.140**		**0.056 J**	
Pyrene	100	100	500	100	**0.130**		U		U		U		**0.088 J**		**60.0**		**0.085 J**		**0.062 J**	
Total SVOCs	NA	NA	NA	NA	0.715		0		0		0		0.502		475.6		0.590		0.273	

Notes:
U = Not detected above laboratory method detection limit
J = Estimated Value
SVOC = Semi-Volatile Organic Compound
NA = Not available
(1) = Soil Cleanup Objective (SCO) referenced in 6 NYCRR Part 375 dated 12/14/2006 and CP-51 dated 10/21/2010
(2) = Soil Cleanup Level (SCL) referenced in CP-51 dated 10/21/2010
Concentration in **BOLD** and **RED** print exceeds one or more of the following criteria.
A = Concentration Exceeds Unrestricted Use SCO
B = Concentration Exceeds Restricted Residential Use SCO
C = Concentration Exceeds Commercial Use SCO
D = Concentration Exceeds SCL

Table 5

24 and 32 York Street
Rochester, New York

Summary of Detected VOC and SVOC Results in ug/l or Parts per Billion (ppb

Basement Sump - Post-Purge Water Sample

Detected Constituent	Groundwater Standard or Guidance Value [1]	L1951354-01 Sump-1(Post) 10/30/2019 Sump Water	
VOCs			
Acetone	50	2.0	J
Total VOCs	NA	2.00	
Total SVOCs	NA	U	

U = Not detected above laboratory method detection limit

J = Estimated Value

[1] Groundwater standard or guidance value are as referenced in NYSDEC TOGS 1.1.1 dated June 1998 with April 2000 and June 2004 addendums.

VOC = Volatile Organic Compound

SVOC = Semi-Volatile Organic Compound

NA = Not available

Table 6

24 and 32 York Street
Rochester, New York

Summary of Detected VOC and SVOC Results in ug/l or Parts per Billion (ppb)

Groundwater Samples

Detected Constituent	Groundwater Standard or Guidance Value (1)	L1952193-01 TMW-05-32 11/4/2019 Groundwater		L1952193-02 TMW-09-24 11/4/2019 Groundwater		L1952193-03 TMW-12-24 11/4/2019 Groundwater		L1952193-04 TMW-13-24 11/4/2019 Groundwater		L1952193-05 TMW-14-24 11/4/2019 Groundwater	
VOCs											
Acetone	50	**7.2**		**2.5 J**		U		**2.5 J**		**1.6 J**	
Benzene	1	U		U		**3.0**	X	U		U	
Bromodichloromethane	50	**0.51**		U		U		U		U	
Chloroform	7	**3.0**		U		U		U		U	
Dibromochloromethane	50	**0.26 J**		U		U		U		U	
Naphthalene	10	U		U		**460**	X	U		**1.0 J**	
Total VOCs	NA	10.97		2.5		463.0		2.5		2.6	
SVOCs											
Acenaphthene	20	U		U		**59**	X	**0.21**		**0.10**	
Acenaphthylene	NA	U		U		**11**		U		U	
Anthracene	50	U		U		**15**		U		U	
Benzo(a)anthracene	0.002	**0.06 J**	X	**0.02 J**	X	**2.0**	X	U		**0.06 J**	X
Benzo(a)pyrene	0	**0.06 J**	X	U		**1.2**	X	U		**0.04 J**	X
Benzo(b)fluoranthene	0.002	**0.09 J**	X	**0.03 J**	X	**1.4**	X	U		**0.09 J**	X
Benzo(g,h,i)perylene	NA	**0.06 J**		U		**0.48 J**		U		U	
Benzo(k)fluoranthene	0.002	U		U		**0.47 J**	X	U		U	
Chrysene	0.002	**0.07 J**	X	U		**1.8**	X	U		**0.10**	X
Fluoranthene	50	**0.11**		**0.06 J**		**9.7**		U		**0.13**	
Fluorene	50	U		U		**49**		U		U	
Indeno(1,2,3-cd)pyrene	0.002	**0.05 J**	X	U		**0.62**	X	U		U	
Phenanthrene	50	**0.08 J**		**0.05 J**		**61**	X	**0.02 J**		**0.06 J**	
Pyrene	50	**0.11**		**0.05 J**		**7.3**		U		**0.13**	
Total SVOCs	NA	0.69		0.21		219.97		0.23		0.71	

U = Not detected above laboratory method detection limit

J = Estimated Value

(1) Groundwater standard or guidance value are as referenced in NYSDEC TOGS 1.1.1 dated June 1998 with April 2000 and June 2004 addendums.

X = Concentration exceeds groundwater standard or guidance value

VOC = Volatile Organic Compound

SVOC = Semi-Volatile Organic Compound

NA = Not available