NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF ENVIRONMENTAL REMEDIATION
BCP Significant Threat Determination Report

5/29/2019

Site Code C224259 **Site Name** 480 Flushing
City Brooklyn **Town** New York City
Region 2 **County** Kings
Current Classification A
Estimated Size 0.1020 **Allowable Use**
Significant Threat: Yes **Project Manager** Aaron Fischer

Summary of Approvals

Originator/Supervisor: Sally Dewes **05/08/2019**

Regional Hazardous Waste Remedial Engineer: Jane O'Connell **05/15/2019**

BEEI of NYSDOH: **05/14/2019**

CO Bureau Director: Gerard Burke, Director, Remedial Bureau E **05/08/2019**

Assistant Division Director: George. Heitzman, P.E.: **05/15/2019**

Basis for Significant Threat Determination

The soil, groundwater, and soil vapor at this 0.1 acre site have been tested as part of an RI. Tetrachloroethene (PCE), trichloroethene (TCE), and 1,2-dichlorethene (1,2-DCE), in addition to a suite of SVOCs present.
PCE was found at a max of 16 ppm in surface soil and a max of 99 ppm in subsurface soil. In groundwater PCE max is 2,400 ppb, TCE at 350 ppb max, and 1,2-dichlorethene at 340 ppb max. Soil vapor has elevated PCE, TCE, and vinyl chloride.

Site Description - Last Review: 05/29/2019

Location
The site (a.k.a. Former Techtronics B, Site No. 224259). is in the Bedford Stuyvesant section of Brooklyn in the City of New York and is comprised of a single tax parcel totaling 4,450 square feet (0.102 acre). The site is rectangular in shape with 50 feet of frontage on Flushing Avenue and 89.25 feet of frontage on Walworth Street. The north side of the property is bordered by Flushing Avenue, and the east side is bordered by Walworth Street. The west and south property lines are bordered by two NYSBCP sites; the 11 Spencer site to the west and the 8 Walworth site to the south.

Site Features
The site is currently vacant with no structures present. An 8-foot-high construction fence borders

the property on the north and west sites to prevent unauthorized access. The property was most recently used as an auto repair shop.

Current Zoning and Land Use

The property is currently zoned M1-2. M1 districts are often buffers between M2 or M3 districts and adjacent residential or commercial districts. M1 districts typically include light industrial uses, such as woodworking shops, repair shops, and wholesale service and storage facilities. M2 districts buffer light industrial zones (M1) and zones which are occupied by heavy industrial use (M3) (i.e. power plants, solid waste transfer facilities and recycling plants). Nearly all industrial uses are allowed in M1 districts if they meet the stringent M1 performance standards. Offices, hotels and most retail uses are also permitted. Certain community facilities, such as hospitals, are allowed in M1 districts only by special permit, but houses of worship are allowed as-of-right. The site is currently vacant with no structures present and is not being used. Surrounding land use includes commercial and mixed-use (retail / residential) properties along the north side of Flushing Avenue, commercial / office use to the west, commercial (warehouses) properties to the south and to the east. The area surrounding the property is highly urbanized and predominantly consists of older industrial / commercial buildings with mixed use (retail / residential) buildings along main corridors such as Bedford Avenue, Flushing Avenue and Park Avenue. There are ten schools located within 1,200 feet of the site including Bnei Shimon Yisroel of Sopron approximately 150 feet to the east. There were no nursing homes or hospitals identified within 1,000 feet of the site.

Past Use of the Site

The environmental history of the subject property was previously investigated through the review of Federal and State Environmental databases, Environmental Sanborn Fire Insurance maps, NYC Department of Building records and the NYC Department of Finance databases. According to the review of these sources the property was developed sometime prior to 1887 with two 2-story residences in the southern portion of the Lot with the northern portion vacant. A 1-story building was constructed on the northern portion which is shown as “broom manufacturers supply” till 1950. Based on sources provided, a 1 story building was constructed in 1965 and identified as “paint mixing”. The northern building is shown as storage or warehouse. Both buildings remain unchanged till 2016 when the north building was demolished. The south building was demolished in 2018. The property was known to be most recently used by an auto repair shop and a fish market.

A site characterization of the site was completed under the project name Former Techtronics B (Site No. 224259). After the site characterization the site entered the brownfield program as 480 Flushing.

Site Geology and Hydrogeology

5/29/2019

Site Code C224259 **Site Name** 480 Flushing

Subsurface soils at the site consist of historic fill materials to a depth of approximately 1 foot below grade followed by native silty-sand and clay. According to the USGS topographic map for the area (Brooklyn Quadrangle), the elevation of the property is approximately 16 feet above mean sea level. The topography within the immediate area slopes gradually from south to north. Groundwater was reported to be present under semi-confined conditions at approximately 12-14 ft below grade. Based upon the site characterization, groundwater flow was reported to be northwest. Neighboring sites indicate a east by north east groundwater flow. The site is not located within a designated flood zone area.

Contaminants of Concern (Including Materials Disposed)	**Quantity Disposed**
OU 01	
tetrachloroethene (PCE)	UNKNOWN
trichloroethene (TCE)	UNKNOWN

Analytical Data Available for : Groundwater, Soil, Soil Vapor

Applicable Standards Exceeded for: Groundwater, Soil

Site Environmental Assessment - Last Review: 05/29/2019

Soil and groundwater were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), some metals, and polychlorinated biphenyls (PCBs) as part of a site characterization. Soil Vapor samples were collected and analyzed for VOCs. Based upon the limited investigation conducted to date, the primary contaminants of concern are chlorinated solvents, Tetrachloroethene (PCE), trichloroethene (TCE), and 1,2-dichlorethene (1,2-DCE), in addition to a suite of SVOCs present in soil.

Surface Soil – PCE [maximum concentration 16 parts per million (ppm), standard 1.3 unrestricted use soil cleanup objective (UUSCO)], Benzo(a)anthracene (5.5 ppm max, standard 1 UUSCO), Benzo(a)pyrene (4.7 ppm, standard 1 UUSCO), Benzo(b)fluoranthene (8.5 ppm, standard 1 UUSCO), Indo(1,2,3-cd)pyrene (4.5 ppm, standard 0.5 UUSCO).

Subsurface Soil – PCE [maximum concentration 99 parts per million (ppm), standard 1.3 unrestricted use soil cleanup objective (UUSCO)], Benzo(a)anthracene (260 ppm max, standard 1 UUSCO), Benzo(a)pyrene (230 ppm, standard 1 UUSCO), Benzo(b)fluoranthene (280 ppm, standard 1 UUSCO), Benzo(k)Fluoranthene (100 ppm, standard 0.8 UUSCO), Phenanthrene (800 ppm, standard 1 UUSCO), Dibenzo(a,h)anthracene (37 ppm, standard 0.33 UUSCO), Indo(1,2,3-cd)pyrene (140 ppm, standard 0.5 UUSCO).
Brick and coal fragments were observed in shallow soil at some of the soil borings collected, suggesting the presence of urban fill.

Groundwater - PCE [maximum concentration 2,400 parts per billion (ppb), standard 5 ppb], TCE

(350 ppb max, 5 ppb standard), and 1,2-dichlorethene (340 ppb max, 5 ppb standard). Elevated metal concentrations were detected in groundwater throughout the site. Iron (8840 ppb max, standard 300 ppb), Manganese (6621 ppb max, standard 300 ppb), and Sodium (66100 ppb max, standard 2000 ppb).

Soil Vapor – The site is currently undeveloped. Three soil vapor samples were collected on-site with elevated concentrations of chlorinated VOCs. Max concentrations of PCE are 40.6 micrograms per cubic meter (ug/m3), TCE 1470 ug/m3 and vinyl chloride 7.77 ug/m3.

Site Health Assessment - Last Update: 05/14/2019

Access is restricted by a fence. People may contact contaminants in soil by walking on the site, digging, or otherwise disturbing the soil. People are not drinking the contaminated groundwater because the area is served by a public water supply that obtains water from a different source not affected by this contamination. Volatile organic compounds in soil vapor (air spaces within the soil) may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The site is currently vacant and redevelopment is planned. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for future on-site buildings. Additional investigation is needed to determine whether actions are needed to address soil vapor intrusion in off-site structures.

	Start		End	
OU 01				
Agreement	12/12/18	ACT	4/18/19	ACT
Application Approval	12/3/18	ACT	3/8/19	ACT
Application Completion	10/15/18	ACT	12/3/18	ACT
OGC Docket - Eligibility Determination	12/3/18	ACT	12/12/18	ACT
Reclass Pkg.	5/8/19	ACT	6/8/19	PLN
Remedial Action	5/13/20	PLN	4/13/21	PLN
Remedial Design	10/7/19	PLN	4/13/20	PLN
Remedial Investigation	3/8/19	ACT	4/18/19	ACT

Remedy Description and Cost

Remedy Description for Operable Unit 01

Total Cost

Site Location Map
C224259, 480 Flushing

300 150 0 300 Feet

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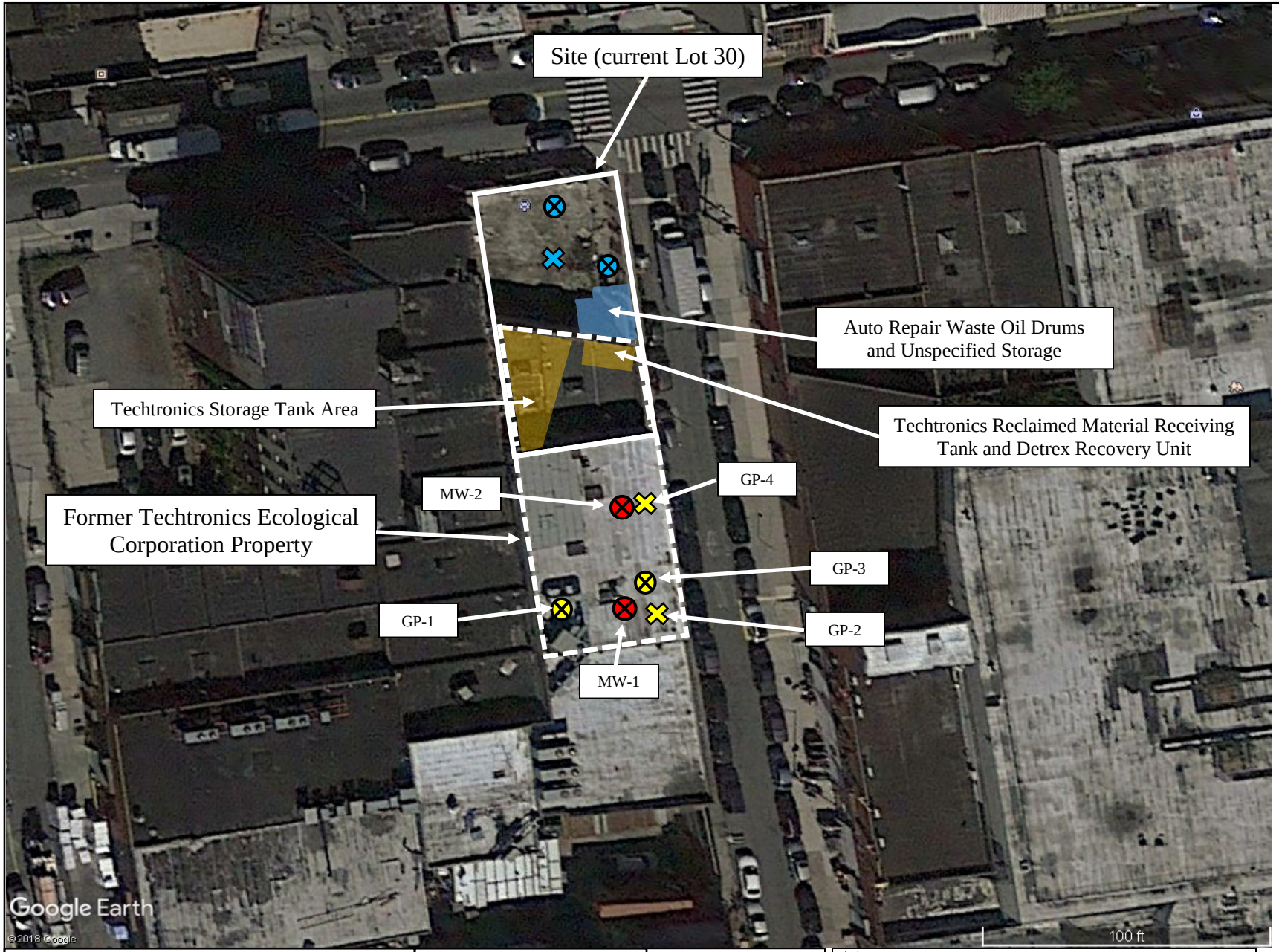
W E
S



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Laurel Environmental Associates, Ltd.
53 West Hills Road, Suite 1
Huntington Station, NY 11746
PHONE: 631-673-0612
FAX: 631-427-5323

FIGURE 2.0
SITE SKETCH, HISTORIC SITE USES, AND HISTORIC SAMPLE LOCATIONS

480 FLUSHING AVENUE
BROOKLYN, NEW YORK

PROJECT #: 17-310
DRAWING DATE: 5-8-18
DRAWN BY: KW
CHECKED BY: SY

- 2007 Soil boring
- 2007 Soil boring/temporary monitoring well
- 2014 Soil boring
- 2014 Soil boring/temporary monitoring well
- Permanent monitoring well

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FIGURE 3.0
SITE SKETCH AND HISTORIC ON-SITE SAMPLE RESULTS

480 FLUSHING AVENUE
BROOKLYN, NEW YORK

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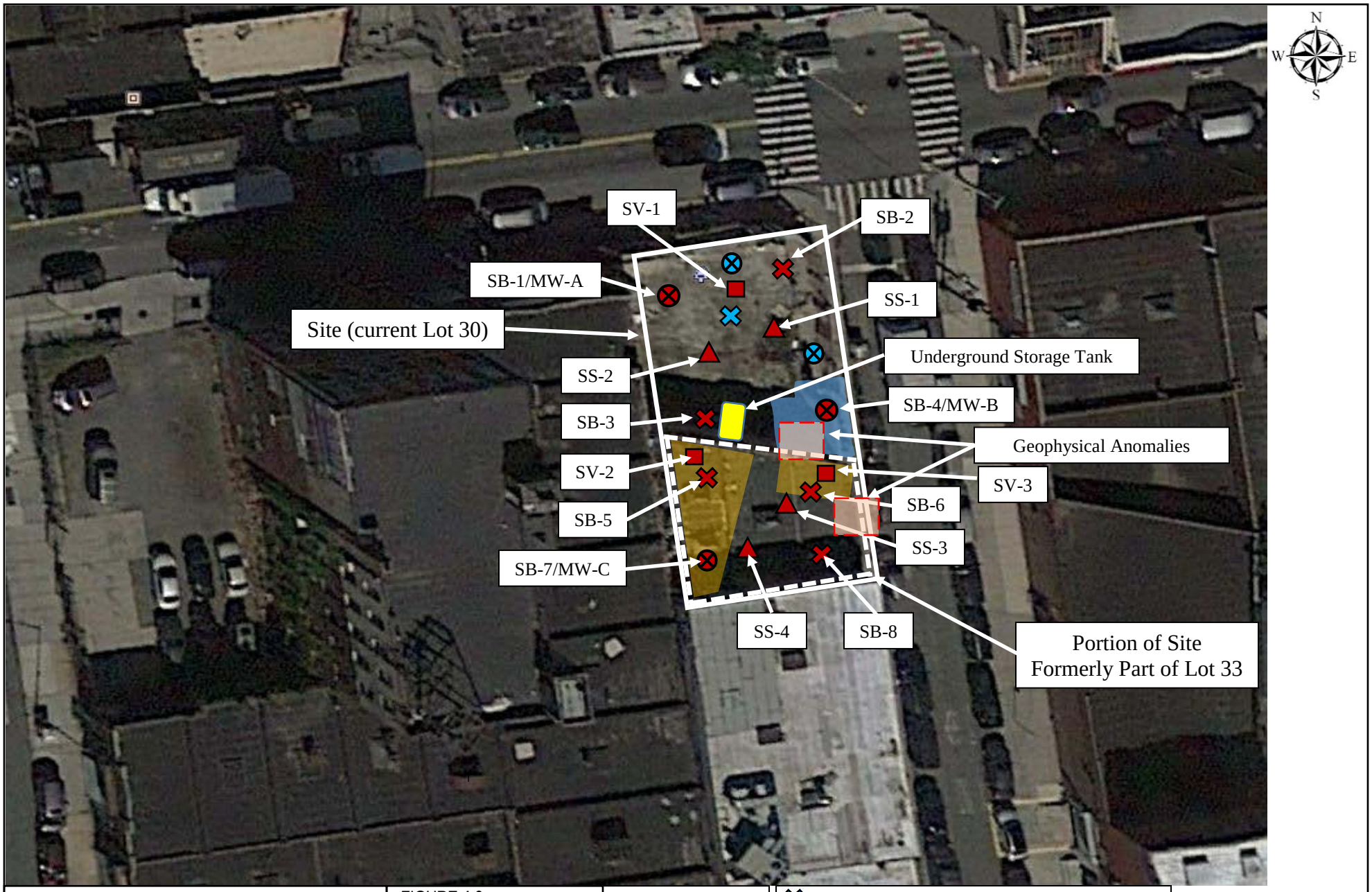

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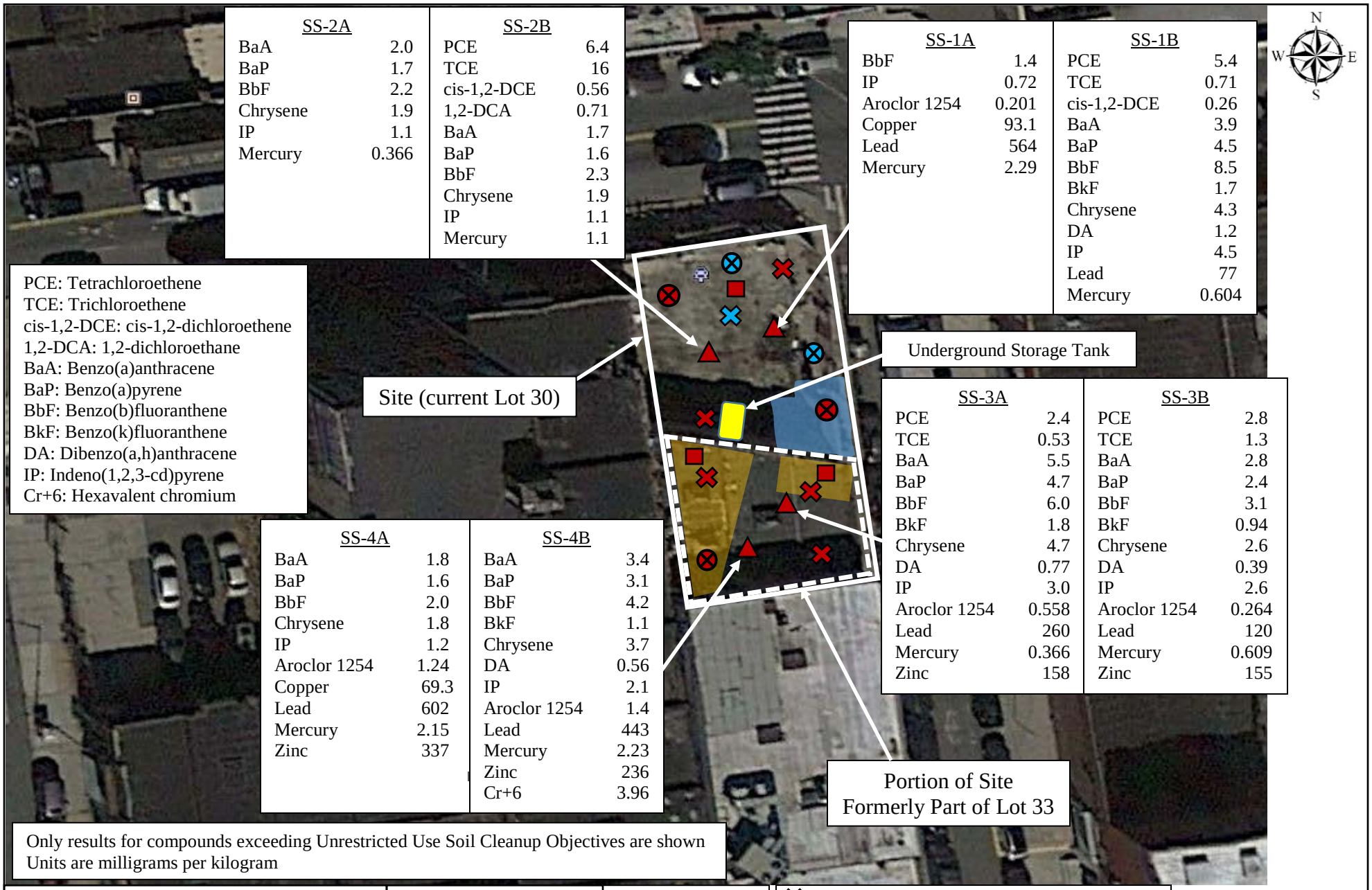
FIGURE 4.0
SITE SKETCH WITH SAMPLE LOCATIONS

480 FLUSHING AVENUE
BROOKLYN, NEW YORK

PROJECT #: 17-310
DRAWING DATE: 6-19-18
DRAWN BY: KW
CHECKED BY: SY

- 2014 Soil boring
- 2014 Soil boring/temporary monitoring well
- 2018 Soil boring
- 2018 Surface soil sample
- 2018 Soil boring/permanent monitoring well
- 2018 Soil vapor sample



Only results for compounds exceeding Unrestricted Use Soil Cleanup Objectives are shown
Units are milligrams per kilogram

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FIGURE 5.0
SITE SKETCH AND SURFACE SAMPLE RESULTS

480 FLUSHING AVENUE
BROOKLYN, NEW YORK

PROJECT #: 17-310
DRAWING DATE: 6-19-18
DRAWN BY: KW
CHECKED BY: SY

- 2014 Soil boring
- 2014 Soil boring/temporary monitoring well
- 2018 Soil boring
- 2018 Surface soil sample
- 2018 Soil boring/permanent monitoring well
- 2018 Soil vapor sample

Only results for compounds exceeding Unrestricted Use Soil Cleanup Objectives are shown
Units are milligrams per kilogram

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FIGURE 6.0
SITE SKETCH AND SUBSURFACE SOIL SAMPLE RESULTS

480 FLUSHING AVENUE
BROOKLYN, NEW YORK

PROJECT #: 17-310
DRAWING DATE: 6-19-18
DRAWN BY: KW
CHECKED BY: SY

- 2014 Soil boring
- 2014 Soil boring/temporary monitoring well
- 2018 Soil boring
- 2018 Surface soil sample
- 2018 Soil boring/permanent monitoring well
- 2018 Soil vapor sample

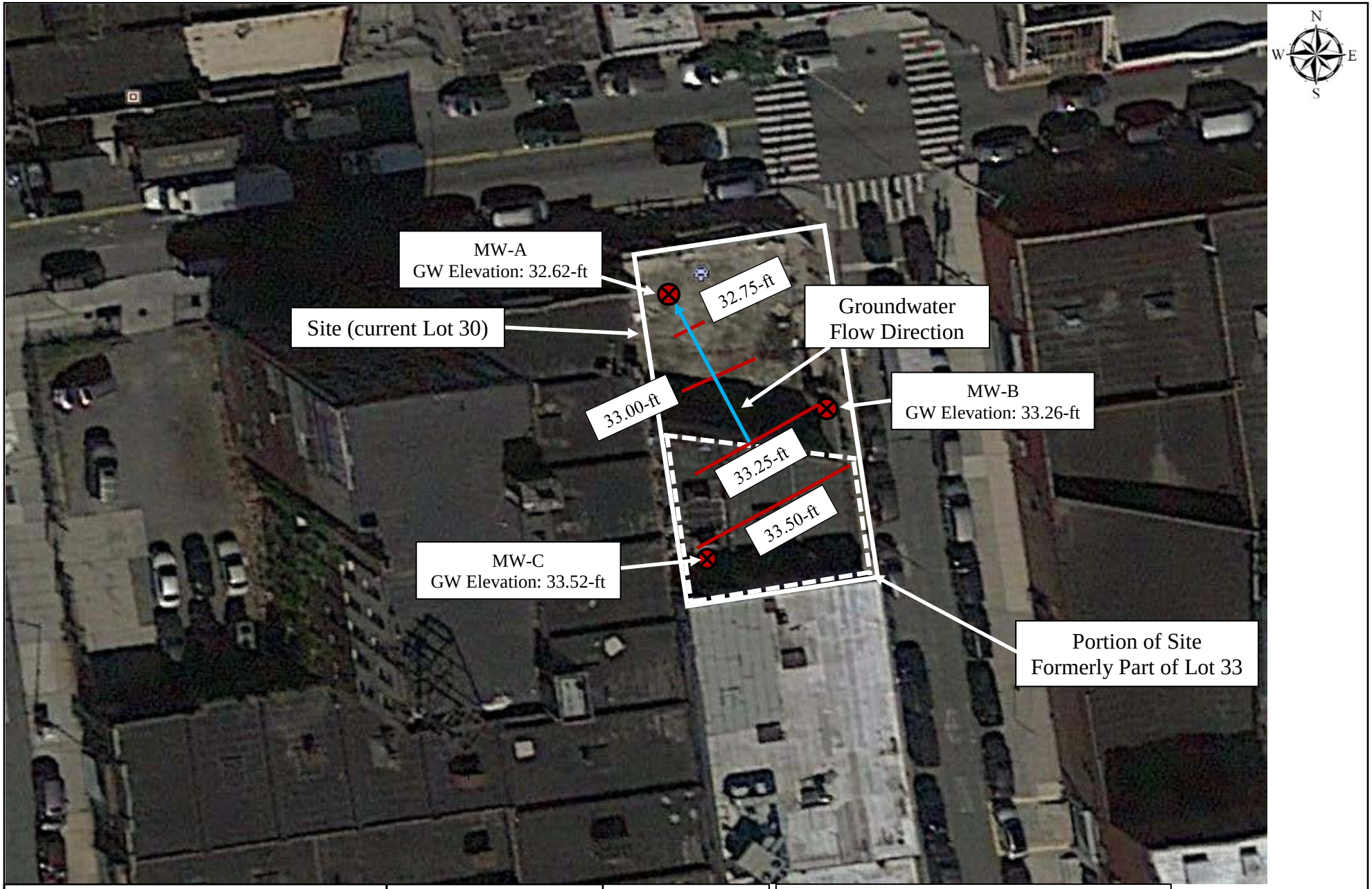

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FIGURE 7.0
SITE SKETCH WITH GROUNDWATER ELEVATION AND CONTOUR

480 FLUSHING AVENUE
BROOKLYN, NEW YORK

PROJECT #: 17-310

DRAWING DATE: 6-27-18

DRAWN BY: JB

CHECKED BY: KW

KEY

= groundwater elevation contour

= permanent monitoring well

Only results for compounds exceeding Class GA Groundwater Standards are shown
Units are micrograms per liter
Metals results are dissolved concentrations

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FIGURE 8.0
SITE SKETCH AND GROUNDWATER SAMPLE RESULTS

480 FLUSHING AVENUE
BROOKLYN, NEW YORK

PROJECT #: 17-310
DRAWING DATE: 6-19-18
DRAWN BY: KW
CHECKED BY: SY

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- 2014 Soil boring/temporary monitoring well
- 2018 Soil boring
- 2018 Surface soil sample
- 2018 Soil boring/permanent monitoring well
- 2018 Soil vapor sample

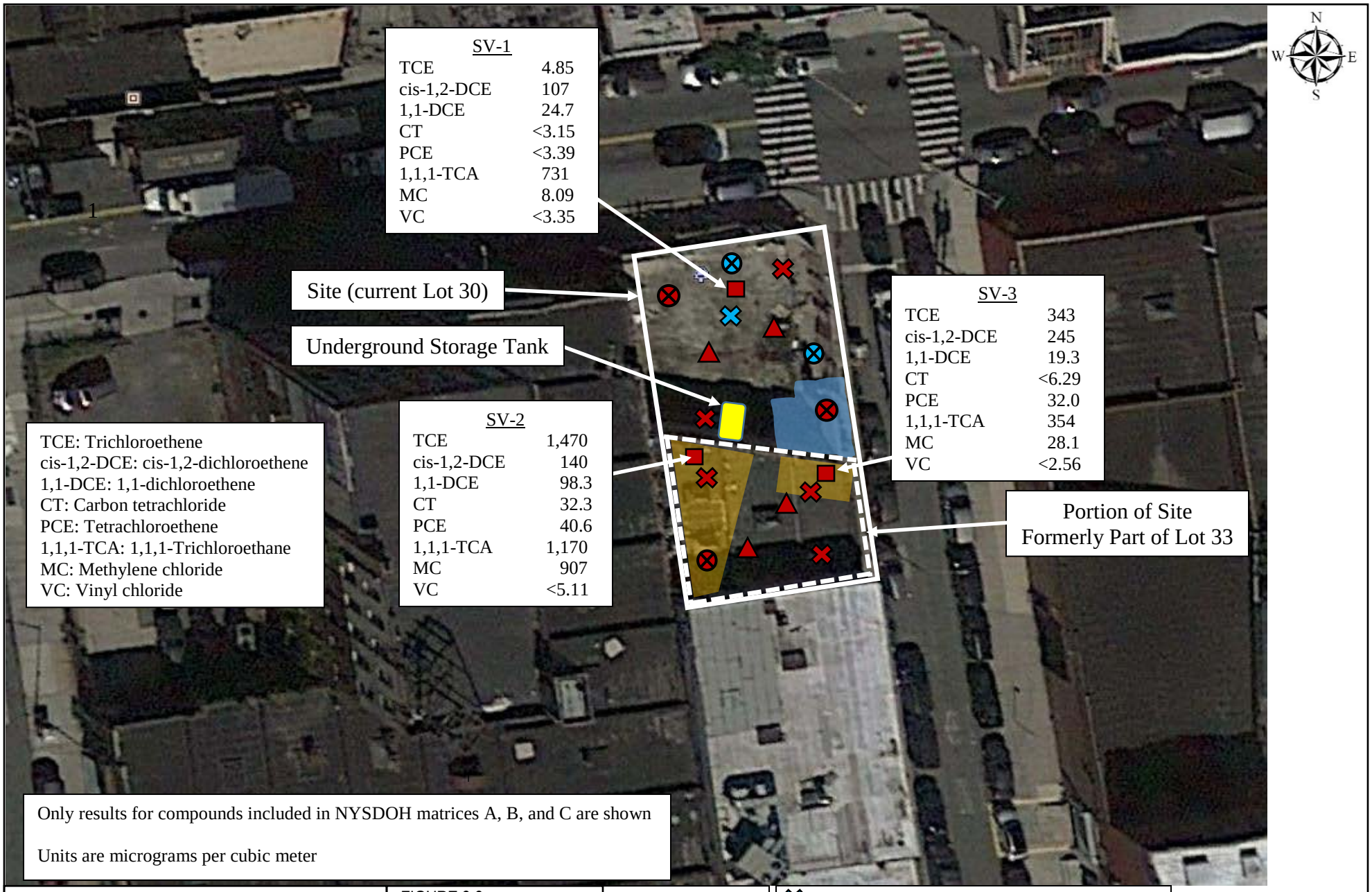

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FIGURE 9.0
SITE SKETCH AND SOIL VAPOR SAMPLE RESULTS

480 FLUSHING AVENUE
BROOKLYN, NEW YORK

PROJECT #: 17-310
DRAWING DATE: 6-19-18
DRAWN BY: KW
CHECKED BY: SY

- 2014 Soil boring
- 2014 Soil boring/temporary monitoring well
- 2018 Soil boring
- 2018 Surface soil sample
- 2018 Soil boring/permanent monitoring well
- 2018 Soil vapor sample

NEW YORK STATE OF OPPORTUNITY. Department of Health

ANDREW M. CUOMO
Governor

HOWARD A. ZUCKER, M.D., J.D.
Commissioner

SALLY DRESLIN, M.S., R.N.
Executive Deputy Commissioner

May 14, 2019

Gerard Burke, Director
Remedial Bureau B
Division of Environmental Remediation
NYS Dept. of Environmental Conservation
625 Broadway
Albany, NY 12233

Re: **Significant Threat Determination**
480 Flushing Avenue
Site #C224259
Brooklyn, Kings County

Dear Mr. Burke,

At your Department's request, we have reviewed the available information, including the August 9, 2018 *Site Characterization Report*, for the above-referenced site. Based on that review, I understand that volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and historic fill are present at the site. VOCs, including tetrachloroethene and degradation products, and SVOCs, including various polyaromatic hydrocarbon compounds, and metals, including mercury, have been detected at elevated levels in on-site soil. VOCs have been detected at elevated levels in on-site groundwater and soil vapor. Off-site groundwater and soil vapor are also contaminated with elevated levels of VOCs.

The site is currently undeveloped. Contaminated groundwater in the vicinity is not used for drinking purposes because the area is served by a public water supply that is not affected by this contamination. Environmental sampling indicates that soil vapor intrusion represents a concern for any future on-site development and a potential concern for other off-site structures. Additional environmental investigation is necessary to further evaluate and address potential exposure pathways associated with the site.

Based on the information provided to date, and the potential for exposure to site-related contaminants, I believe that this site represents a significant threat to public health. If you have any questions, or would like to discuss this site further, please contact me at (518) 402-7860.

Sincerely,

Justin H. Deming, Chief
Regions 2,4 & 8
Bureau of Environmental Exposure Investigation

Ec. C. Vooris / A. Martin / e-File
C. Westerman – NYSDOH MARO
C. D'Andrea – NYC DOHMH
S. Dewes / A. Fischer – NYSDEC Central Office
J. O'Connell – NYSDEC Region 2