TENEN ENVIRONMENTAL

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July 8, 2020

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7016

Attn: Kimberly Junkins

Re: Supplemental Remedial Investigation Work Plan
965 Mamaroneck Avenue, Mamaroneck, NY
Westchester County TaxID No. 8-20-244
BCP Site No. C360189

Dear Kimberly:

This letter work plan describes the scope of work proposed to supplement the New York State Department of Environmental Conservation (NYSDEC) approved Remedial Investigation Work Plan (RIWP) dated January 2020. Tenen Environmental, LLC (Tenen) conducted remedial investigation (RI) activities at 965 Mamaroneck Avenue, Mamaroneck, New York (Site) in March 2020. Upon submittal of analytical data from the RI to NYSDEC, the Department requested further delineation of chlorinated volatile organic compounds (cVOCs) and per- and polyfluoroalkyl substances (PFAS) found in groundwater on and off the Site. This Supplemental RIWP has been prepared to address the Department's requests for additional investigation in accordance with the NYSDEC Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10, May 3, 2010). Methodology, quality assurance/quality control, health and safety (including community air monitoring) and citizen participation activities will be implemented in accordance with Tenen's NYSDEC-approved RIWP.

Background
The Site is located at 965 Mamaroneck Avenue in the Village and Town of Mamaroneck, New York. The Site is an irregularly shaped parcel, identified by Westchester County TaxID No. 8-20-244 with an area of approximately 22,520 square feet (SF). The Site is located on the southeast corner of the intersection of Mamaroneck Avenue and North Barry Avenue Extension.

In accordance with the January 2020 NYSDEC-approved RIWP, Tenen conducted RI activities at the Site in March 2020. The results of this investigation are being used to prepare Tenen's draft Remedial Investigation Report.

Groundwater samples collected during the RI indicated that cVOCs are present in groundwater at concentrations above the NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards and Guidance Values (Class GA Standards) across the Site and up/cross-gradient of the Site and concentrations of PFAS were in exceedance of NYSDEC PFAS Guidelines were in eleven of 13 groundwater samples Additionally, groundwater flow was determined during the RI to be east with an onsite northerly component. Based on these findings, NYSDEC requested additional sampling in order to further investigate and delineate cVOC and PFAS impacts north, south and southwest of the Site.

Scope of Work
The following scope of work was discussed with NYSDEC and the New York State Department of Health (NYSDOH) during a conference call on June 30, 2020. This scope of work is proposed to supplement the findings

of the RI and further delineate documented cVOC and PFAS impacts in groundwater identified during Tenen's RI.

The following scope of work will be implemented:

- Install three offsite permanent groundwater monitoring wells (MW-10 through MW-12) to assess groundwater quality and delineate previously identified cVOC and PFAS impacts. One monitoring well will be installed to the south of MW-7, along the eastern sidewalk of Mamaroneck Avenue; one monitoring well will be installed to the south of MW-3, in the parking lot of the south adjoining property (contingent upon permitted access); and one monitoring well will be installed in the northern sidewalk of North Barry Avenue Extension;
- Gauge and collect groundwater samples from newly-installed groundwater wells;
- Samples from newly installed groundwater monitoring wells will be analyzed for Target Compound List (TCL) VOCs by EPA Method 8260C and per- and PFAS by EPA Method 537 Modified; and,
- Survey newly installed monitoring wells; collect one round of depth-to-groundwater measurements from the entire well network; evaluate groundwater elevations and present updated groundwater contours.

Proposed monitoring well locations are shown in the attached Figure 1.

Monitoring Well Installation and Groundwater Sampling Methodology

Monitoring wells will be installed and groundwater samples will be collected in accordance with Section 3.4.1 of the RIWP as described below.

Three permanent groundwater wells (MW-10 through MW-12) will be installed offsite in order to horizontally delineate cVOC and PFAS impacts within the shallow aquifer (5-15 feet below grade) north, south and southwest of the Site. The three newly installed permanent groundwater wells will be sampled and analyzed for VOCs and PFAS and surveyed to a common datum. Depth-to-water readings will be collected for the entire well network, an updated groundwater flow direction will be calculated and the existing groundwater flow map with be revised.

Soil cores collected during well installation will be screened for VOCs using a 10.6 electron-volt (EV) photoionization detector (PID). All observations regarding potential contamination such as odors, staining, etc. will be documented. Soil will be screened from grade to the terminal depth of each boring. If evidence of contamination (e.g., elevated PID readings, odor) or staining is observed, the soil boring will be extended, to the extent possible based on the equipment, to delineate the vertical extent of contamination. If evidence of impacts are present, a soil sample will be collected from the interval of highest suspected contamination and the next apparent non-impacted zone, both soil samples will be analyzed for TCL VOCs by EPA Method 8260C. If no visual contamination is observed, no soil samples will be collected.

Quality Assurance/Quality Control

Groundwater samples will be collected in accordance with the Quality Assurance Project Plan (QAPP) included as Appendix B of the RIWP. The laboratory will report sample results on a five-day turn-around time. An independent sub-consultant will validate sample results and prepare a Data Usability Summary Report (DUSR).

Health and Safety

All work at the Site will be completed in accordance with the Health and Safety Plan (HASP) included in Appendix C of the RIWP.

Air Monitoring and Daily Reporting

The NYSDOH Generic Community Air Monitoring Plan (CAMP), included as Appendix 1A of DER-10 and Appendix D of the RIWP, will be implemented during all ground-intrusive sampling activities.

Daily reports will be sent to the NYSDOH and NYSDEC Project Manager via email. Daily reports will include a Site figure depicting Work Zones; activities; wind direction, in addition to CAMP monitor readings and CAMP station locations. Any exceedances of CAMP readings and corrective actions taken will be communicated to the NYSDEC and the NYSDOH Project Managers on the day of occurrence.

Investigation Derived Waste

Following the completion of sampling, boreholes will be backfilled with clean cuttings or sand. If grossly-contaminated soil cuttings are encountered or if excess soil cuttings are generated, they will be placed in 55-gallon drums. Any purge water or other investigation-derived waste (IDW) will be containerized in 55-gallon drums. After the investigation is complete, the drum contents will be characterized for offsite disposal.

Reporting

The findings of the Supplemental RI will be incorporated into the draft RIR and submitted to NYSDEC for approval.

Please contact us if you need any additional information.

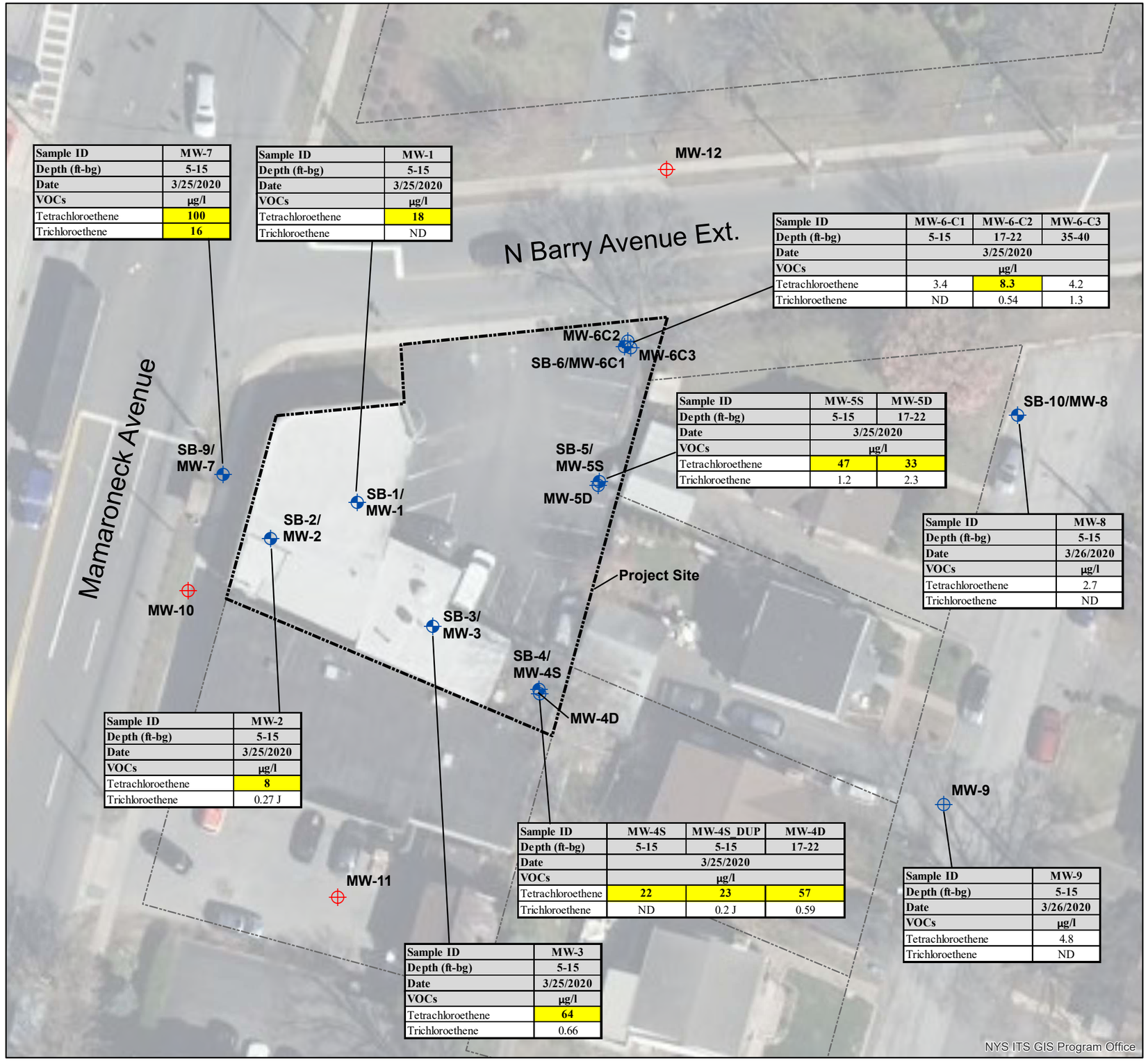
Sincerely,
Tenen Environmental, LLC

Alana Carroll

Alana Carroll, PG
Senior Project Manager

Attachments
Figure 1 cVOC Groundwater Results and Proposed Well Locations

Figure



Sample ID	MW-7
Depth (ft-bg)	5-15
Date	3/25/2020
VOCs	µg/l
Tetrachloroethene	**100**
Trichloroethene	**16**

Sample ID	MW-1
Depth (ft-bg)	5-15
Date	3/25/2020
VOCs	µg/l
Tetrachloroethene	**18**
Trichloroethene	ND

Sample ID	MW-6-C1	MW-6-C2	MW-6-C3
Depth (ft-bg)	5-15	17-22	35-40
Date	3/25/2020		
VOCs	µg/l		
Tetrachloroethene	3.4	**8.3**	4.2
Trichloroethene	ND	0.54	1.3

Sample ID	MW-5S	MW-5D
Depth (ft-bg)	5-15	17-22
Date	3/25/2020	
VOCs	µg/l	
Tetrachloroethene	**47**	**33**
Trichloroethene	1.2	2.3

Sample ID	MW-8
Depth (ft-bg)	5-15
Date	3/26/2020
VOCs	µg/l
Tetrachloroethene	2.7
Trichloroethene	ND

Sample ID	MW-2
Depth (ft-bg)	5-15
Date	3/25/2020
VOCs	µg/l
Tetrachloroethene	**8**
Trichloroethene	0.27 J

Sample ID	MW-4S	MW-4S_DUP	MW-4D
Depth (ft-bg)	5-15	5-15	17-22
Date	3/25/2020		
VOCs	µg/l		
Tetrachloroethene	**22**	**23**	**57**
Trichloroethene	ND	0.2 J	0.59

Sample ID	MW-9
Depth (ft-bg)	5-15
Date	3/26/2020
VOCs	µg/l
Tetrachloroethene	4.8
Trichloroethene	ND

Sample ID	MW-3
Depth (ft-bg)	5-15
Date	3/25/2020
VOCs	µg/l
Tetrachloroethene	**64**
Trichloroethene	0.66

Analyte	NY-AWQS
VOCs	µg/l
Tetrachloroethene	5
Trichloroethene	5

Notes:
1. Bold and shaded yellow value indicates concentration exceeds NY-AWQS
2. NY-AWQS = NYSDEC Division of Technical and Operational Guidance Series (TOGS) 1.1.1 Ambient Water Quality Standards (AWQS)
3. J = Estimated value
4. ND = Not detected
5. µg/l = micrograms per liter

Legend

- Proposed Monitoring Well Location
- Monitoring Well Location
- Soil Boring/Monitoring Well Location
- Project Site
- Tax Lots

0 15 30 60 Feet

Site

965 Mamaroneck Avenue
Mamaroneck, New York

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Drawn By	Checked By	Date	Scale
LM	AP	July 2020	As Noted

Drawing Title: **cVOC Groundwater Results and Proposed Well Locations**

Drawing No: **Figure 1**