March 15, 2019
Project 1602600

Consulting
Engineers and
Scientists

Mr. John B. Miller, P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 11th Floor
Albany, NY 12233-7014

**Re: Supplemental Pre-Design Investigation Work Plan**
**Former Safety Kleen Dry Cleaners Site (Site # 336078)**
**115 Temple Hill Road**
**Vails Gate, New York 12584**

Dear Mr. Miller:

GEI Consultants, Inc., P.C. has prepared this supplemental Pre-Design Investigation (PDI) Work Plan for the Former Safety Kleen Dry Cleaners Site (the Site) located in Vails Gate, New York (Site # 336078) **(Figure 1)**. This investigation is intended to generate additional analytical data which will be used in conjunction with existing site investigation data to allow for development of the final remedial design limits.

## Scope of Work

The scope of the supplemental PDI will include advancement of up to 5 soil borings to collect grab and composite samples for laboratory analysis. The grab samples will be analyzed for contaminates of concern to confirm the proposed excavation limits and the composite samples will be collected to confirm soil disposal and/or reuse. The soil boring locations are shown in **Figure 2** and the sampling rationale is presented in **Table 1**. The scope of work will also include Quality Assurance and Quality Control (QA/QC), data validation, and reporting.

### *Utility Clearance*

Underground utilities within the public rights-of-ways (e.g., sidewalks and streets) adjacent to the work area will be marked by the One Call Center prior to initiation of intrusive work. In addition to the public area underground utility mark-outs, a private utility survey of the proposed sampling locations will be conducted using Ground Penetrating Radar (GPR) if deemed necessary.

### *Soil Boring Installation*

Up to 5 soil borings (PDI-SB-101 to PDI-SB-105) are proposed as part of the supplemental PDI work. The borings are located in the vicinity of monitoring well MW-7 where previous investigations have shown the presence of chlorinated volatile organic compounds (VOCs) at depth. The proposed boring locations may change based on any current subsurface utilities. The soil borings will be advanced using a Geoprobe® drill rig equipped with Macro-Core® MC5 to a


GEI Consultants, Inc., P.C.
455 Winding Brook Drive, Suite 201, Glastonbury, CT 06033
860.368.5300 fax: 860.368.5307

depth of 12 feet below ground surface (bgs). The Geoprobe® will be capable of using augers to advance the borings to the desired depth given the glacial till deposits encountered during previous mobilizations. Soil samples will be collected continuously from each boring using a 5-foot long MC5 disposable liner. If refusal is encountered during the advancement of any soil boring shallower than 10 feet, an additional soil boring will be advanced adjacent to the location to confirm the refusal or to advance the boring to the target depth. Soil borings will be logged for geology and environmental impacts and a photo-ionization detector (PID) with 11.7 eV lamp will be used to screen soils for volatile contaminants before collecting soil samples.

Grab soil samples will be collected from 0-4 feet bgs, 4-8 feet bgs, 8-10 feet bgs, and 10-12 feet bgs from each boring (total of four samples per boring). However, these intervals may be adjusted in the field based on PID readings collected or physical observations in the geology. Each grab sample will be analyzed for VOCs by EPA Method 8260.

Composite soil samples will be collected over the depth intervals identified for grab samples. Soils collected from 0-4 feet bgs and 4-8 feet bgs will be composited to generate one composite sample. A second composite sample will be generated from soils collected from 8-10 feet bgs and 10-12 feet bgs. Therefore, a total of two composite samples will be collected and analyzed for soil disposal and reuse criteria. The locations and depths of the composite samples is included on **Table 1**. The composite soil samples will be analyzed as follows:

- Semi volatile organic compounds (SVOCs) by EPA Method 8270
- Total analyte list (TAL) Metals by EPA Method 6000/7000 (Mercury 7471)
- Extractable Petroleum Hydrocarbon (EPH) by EPA Method 8015M
- Toxicity characteristic leaching procedure (TCLP) SVOCs by EPA Method 1311/8270
- TCLP Metals by EPA Method 1311/6010B
- Polychlorinated biphenyls (PCBs) by EPA Method 8082A
- TCLP Pesticides by EPA 1311/8081B
- Ignitability by EPA Method 1010A
- Corrosivity pH by EPA Method 9045C
- Reactive Cyanide by SW 846 CH. 7.3

The soil samples will be analyzed by York Analytical Laboratories, Inc., an environmental laboratory approval program (ELAP)-certified laboratory.

Following the collection of soil samples, the material removed during the work will be placed back in the bore hole at each location. If grossly impacted material is observed, it will be segregated and placed in a 55-gallon drum on site pending disposal.

### *QA/QC*

**Table 2** details the number of QA/QC samples that will be collected. QA/QC samples will be collected at a frequency of one set per 20 samples. Each set of QA/QC samples will consist of a blind duplicate, a trip blank, a field blank, and a matrix spike/matrix spike duplicate (MS/MSD).

### *Community Air Monitoring Plan*

Pursuant to New York State Department Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) requirements, a Community Air Monitoring Plan (CAMP) will be implemented during intrusive field activities. The objective of the CAMP is to provide a measure of protection for the downwind community (i.e., off-site receptors, including residences and businesses and on-site workers not involved with the site activities) from potential airborne contaminant releases as a direct result of field investigation activities.

## Schedule

The work is tentatively scheduled for the week of March 25, 2019. Work will commence following NYSDEC approval of this work plan.

## Reporting

GEI will prepare a summary report for this work. The report will present the findings of the soil sampling. The report will include recommendations for the final design limits based on the soil sample results and the Proposed Remedial Action Plan.

Please feel free to contact us with any questions.

Sincerely,

GEI CONSULTANTS, INC., P.C.

Matthew J. O'Neil, P.E.
Senior Engineer

Nicholas J. Recchia, P.G.
Project Manager

Enclosures

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**Table 1. Sample Location Rationale**
**Supplemental Pre-Design Investigation Work Plan**
**Former Safety Kleen Dry Cleaners Site**
**Vails Gate, New York**

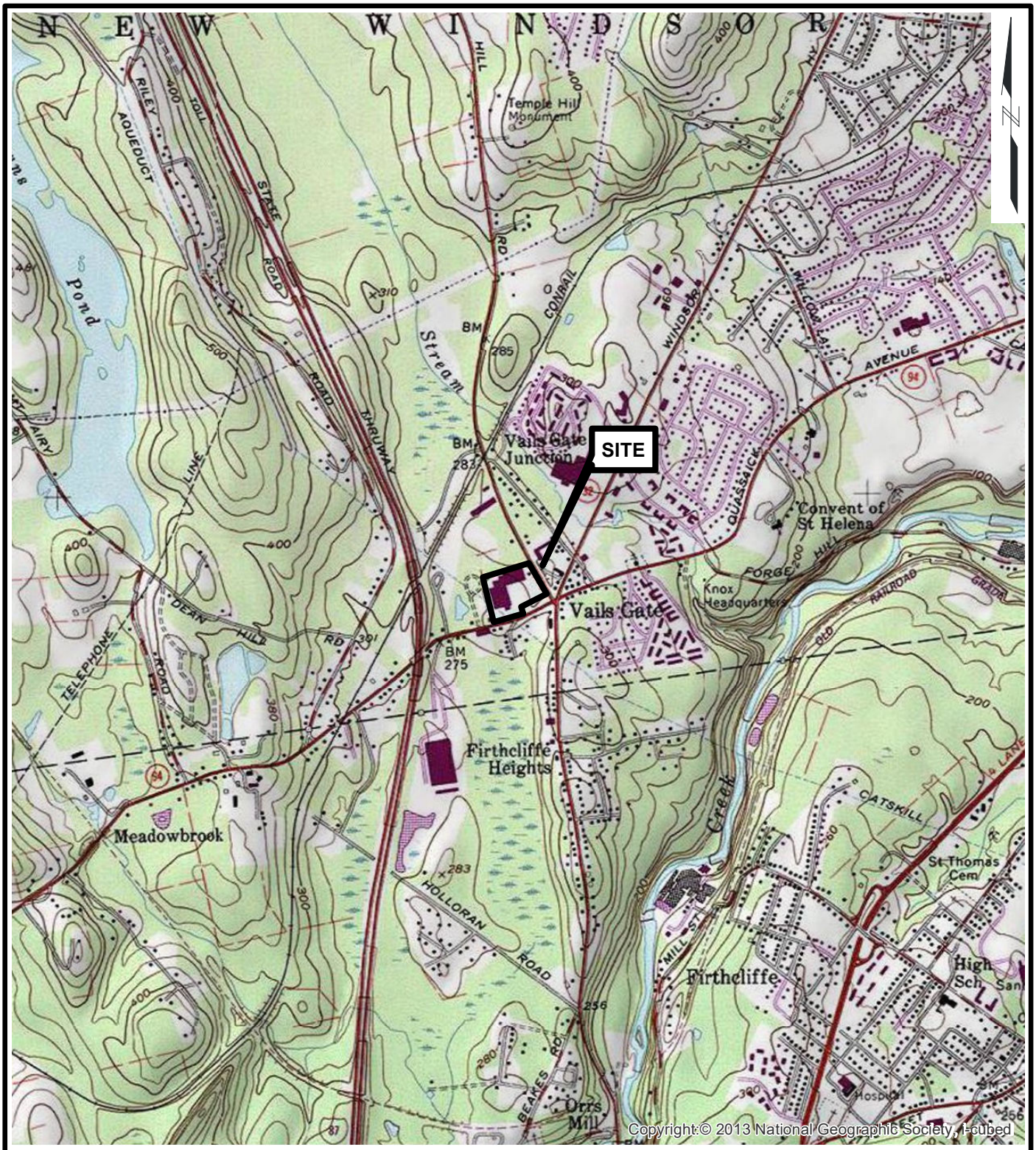
| Exploration ID | Exploration Rational | Exploration Depth (feet bgs) | Laboratory Sample Description | Sample Description | Number of Samples | Soil Reuse Criteria | | | | | Soil Disposal Criteria | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | VOCs (EPA 8260C) | SVOCs (EPA 8270D) | TAL Metals (EPA 6000/7000 and Mercury 7471) | PCBs (EPA 8082A) | TCLP Pesticides (EPA 1311/8081B) | EPH (EPA 8015M) | TCLP Metals (Method 1311/6010B) | TCLP SVOCs (EAP 1311/8270D) | RCRA Characteristics |
| **Grab Soil Samples for Delineation/Reuse/Disposal** | | | | | | | | | | | | | | |
| **PDI-SB-101** | Boring completed on south side of PRAP proposed excavation limits in the vicinity of MIP-19 and MW-7 | 12 | PDI-SB-101 (0-4) | Grab sample from 0-4 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-101 (4-8) | Grab sample from 4-8 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-101 (8-10) | Grab sample from 8-10 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-101 (10-12) | Grab sample from 10-12 feet bgs | 1 | X | | | | | | | | |
| **PDI-SB-102** | Boring completed on southeast side of PRAP proposed excavation limits in the vicinity of MIP-20 | 12 | PDI-SB-102 (0-4) | Grab sample from 0-4 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-102 (4-8) | Grab sample from 4-8 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-102 (8-10) | Grab sample from 8-10 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-102 (10-12) | Grab sample from 10-12 feet bgs | 1 | X | | | | | | | | |
| **PDI-SB-103** | Boring completed on east side of PRAP proposed excavation limits in the vicinity of MIP-22 | 12 | PDI-SB-103 (0-4) | Grab sample from 0-4 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-103 (4-8) | Grab sample from 4-8 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-103 (8-10) | Grab sample from 8-10 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-103 (10-12) | Grab sample from 10-12 feet bgs | 1 | X | | | | | | | | |
| **PDI-SB-104** | Boring completed on west side of PRAP proposed excavation limits in the vicinity of MIP-21 and MW-7 | 12 | PDI-SB-104 (0-4) | Grab sample from 0-4 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-104 (4-8) | Grab sample from 4-8 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-104 (8-10) | Grab sample from 8-10 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-104 (10-12) | Grab sample from 10-12 feet bgs | 1 | X | | | | | | | | |
| **PDI-SB-105** | Boring completed on northwest side of PRAP proposed excavation limits in the vicinity of MIP-21 and MIP-23 | 12 | PDI-SB-105 (0-4) | Grab sample from 0-4 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-105 (4-8) | Grab sample from 4-8 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-105 (8-10) | Grab sample from 8-10 feet bgs | 1 | X | | | | | | | | |
| | | | PDI-SB-105 (10-12) | Grab sample from 10-12 feet bgs | 1 | X | | | | | | | | |
| **Composite Soil Samples for Reuse/Disposal** | | | | | | | | | | | | | | |
| **PDI-SB-101 to PDI-SB-105** | Collection of composite sample from the five boring locations over 0-8 ft interval for reuse/disposal parameters. Per DER-10 Table 5.4(e) 10, 1 composite sample collected for 0-100 cubic yards | NA | PD1-COMPOSITE-1 (0-8) | Composite sample from 0-8 feet bgs from the five boring locations approximately 90 cubic yards of material | 1 | | X | X | X | X | X | X | X | X |
| **PDI-SB-101 to PDI-SB-105** | Collection of composite sample from the five boring locations over 8-12 ft interval for reuse/disposal parameters. Per DER-10 Table 5.4(e) 10, 1 composite sample collected for 0-50 cubic yards | NA | PDI-COMPOSITE-2 (8-12) | Composite sample from 8-12 feet bgs from the five boring locations approximately 45 cubic yards of material | 1 | | X | X | X | X | X | X | X | X |

**Notes:**

Chemical analysis test methods specified are from U.S. EPA SW-846 test methods
EPA - Environmental Protection Agency
EPH - Extractable petroleum hydrocarbon
VOC - Volatile organic compounds
SVOC - Semi volatile organic compounds
TAL - Total analyte list
TCLP - Toxicity characteristic leaching procedure
bgs - below ground surface
NA - Not Applicable

**Table 2. Quality Assurance Sampling Summary**
**Pre-Design Investigation Work Plan**
**Former Safety Kleen Dry Cleaners Site**
**Vails Gate, New York**

| Sample Matrix | Soil | Water |
|---|---|---|
| | | |
| **Number of Samples** | 20 | 0 |
| **Number of Field Blanks** | 0 | 1 |
| **Number of Matrix Spike** | 1 | 0 |
| **Number of Matrix Spike Duplicate** | 1 | 0 |
| **Number of Duplicate Samples** | 1 | 0 |
| **Number of Trip Blanks (One per sample day)** | 0 | 2 |

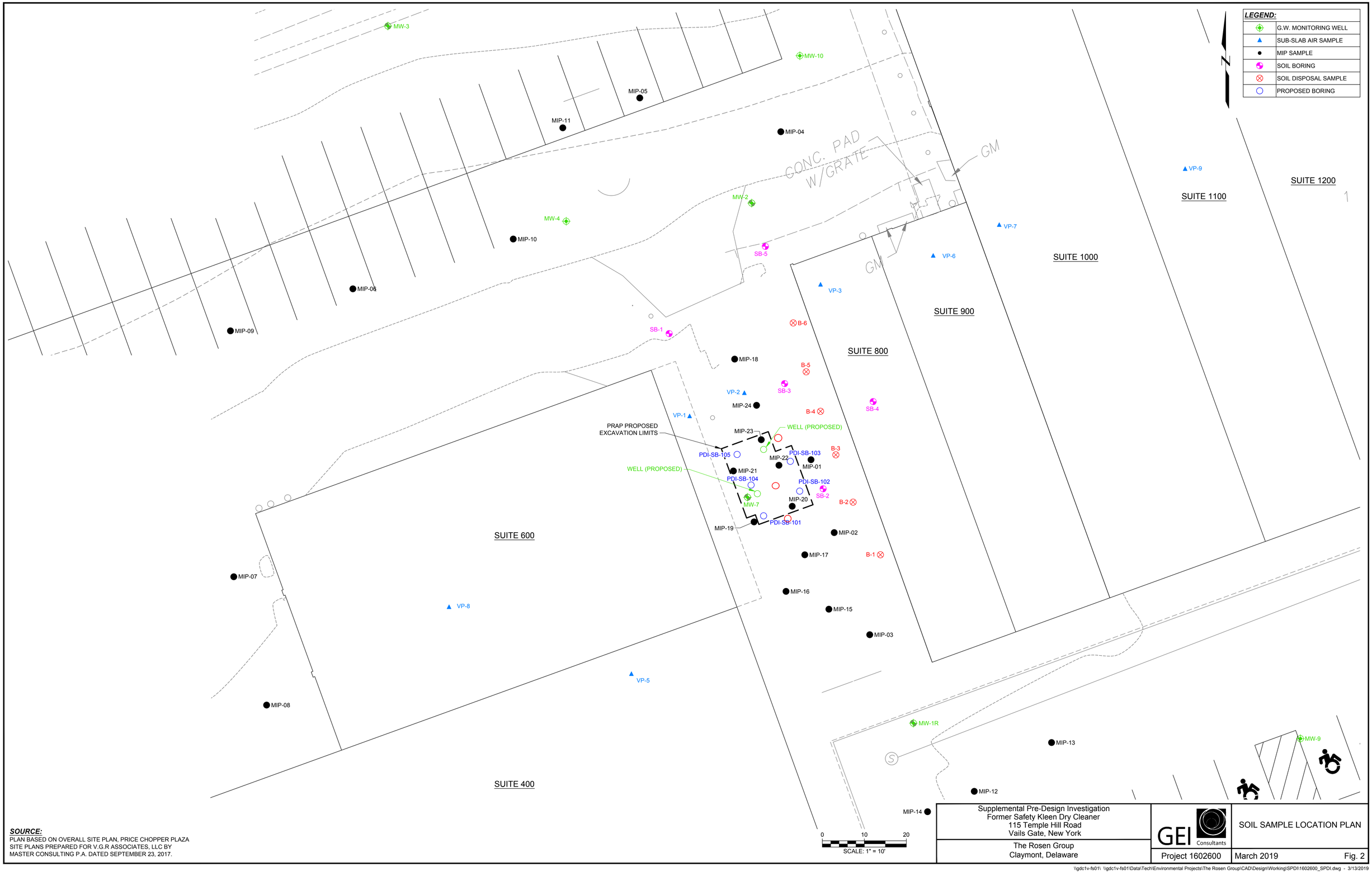



***SOURCE:***
1. USGS TOPOGRAPHIC MAP ACCESSED VIA ARCGIS ONLINE SERVICES.

0 2,000 4,000
SCALE: 1" = 2000'

| | | |
|---|---|---|
| Supplemental Pre-Design Investigation<br>Former Safety Kleen Dry Cleaner<br>115 Temple Hill Road<br>Vails Gate, New York | GEI Consultants | SITE LOCATION MAP |
| The Rosen Group<br>Claymont, Delaware | Project 1602600 | March 2019 Fig. 1 |

\\GTB1V-FS01\gis\Projects\1602600 The Rosen Group\Former Safety Kleen Dry Cleaner\Site Location Map- Supp PDI WP.mxd




***SOURCE:***
PLAN BASED ON OVERALL SITE PLAN, PRICE CHOPPER PLAZA SITE PLANS PREPARED FOR V.G.R ASSOCIATES, LLC BY MASTER CONSULTING P.A. DATED SEPTEMBER 23, 2017.

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SOIL SAMPLE LOCATION PLAN

March 2019 Fig. 2

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