

September 16, 2020

Mr. Sadique Ahmed
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233
Email: sadique.ahmed@dec.ny.gov

**RE: Supplemental Pre-Design Investigation Work Plan
Rockfarmer 37th Avenue
82-13 37th Avenue
Jackson Heights, Queens County, New York 11372
Block 1456, Lots 35 & 41
Brownfield Cleanup Program Site No. C241212
VERTEX Project Number: 48122**

Dear Mr. Ahmed:

Vertex Engineering, PC (VERTEX) is pleased to submit this Supplemental Pre-Design Investigation Work Plan for the Rockfarmer 37th Avenue property located at 82-13 37th Avenue in Jackson Heights, Queens County, New York (the Site). The Volunteers (37th Owner LLC; Horizon 37th Ave, LLC; and RFC Ketcham 37th Ave, LLC) are participating in the New York State Brownfield Cleanup Program (BCP) pursuant to a Brownfield Cleanup Agreement (BCA) executed on July 25, 2018. The site is identified with Site No. C241212.

Site Description

The Site consists of two contiguous parcels identified as Block 1456, Lots 35 and 41. The approximate site area is 20,000 square feet (0.46 acres), which is divided equally between the two lots.

The Site is improved with an approximately 108,000-square foot (above-grade), nine-story commercial office building, with ground-floor retail (Rite Aid, nail salon, and vacant space) and a two-level parking garage. The Site building is improved with a basement, which is occupied by office space, utilities and storage space. The Site building is serviced by municipal water (New York City Department of Environmental Protection (NYCDEP)), municipal sanitary and storm sewer (NYCDEP), natural gas (Consolidated Edison), and electric (Consolidated Edison). The building footprint covers the entire Site, and is surrounded to the south, east, and west by public sidewalks and roadways and to the north are residential structures.

Background

The Volunteers are conducting interior renovations at the Site to accommodate new tenant occupancy, which work has resulted in making accessible the sections of the Site building slab in the path of the proposed sub-slab depressurization system (SSDS) that has been proposed as a component of the Remedial Action Work Plan (RAWP). This has afforded the opportunity to complete the Supplement Pre-Design Investigation, which is described in greater detail below. The scope of work will be conducted in accordance with the NYSDEC and New York State Department of Health (NYSDOH) comments to VERTEX's proposed RAWP dated August 4, 2020. The NYSDEC/NYSDOH provided comments via a letter dated September 3, 2020 and additional comments via email on September 8, 2020. The scope of the Supplemental Pre-Design Investigation Work Plan incorporates all of the foregoing comments.

Supplemental Pre-Design Investigation Work Plan

The scope of the Supplemental Pre-Design Investigation will include the following:

1. Installation of trenches in the Site building basement along the pathway of the proposed SSDS horizontal piping. The SSDS piping layout is illustrated on the attached Figure 1.
2. Sampling of soils at the requested intervals at each of the identified extraction points for the SSDS. In accordance with the NYSDEC's email dated September 9, 2020, soil samples will be collected at the 14 planned extraction points for the SSDS. The soil sample locations are depicted on the attached Figure 2. The soils will be screened with a photoionization detector (PID) from the soil intervals at 0.0 to 2.0 feet below basement slab and 2.0 to 4.0 feet below basement slab. A soil sample for volatile organic compounds (VOC) analysis will be collected from the interval exhibiting the highest PID reading. If the PID readings are the same at each interval, the soil sample will be collected from the 2.0- to 4.0-foot interval.
3. Installation of horizontal SSDS piping and gravel in the exposed trenches. Only below-grade piping will be installed. The horizontal piping will be capped, and no risers or blower will be installed. Following the installation of the horizontal piping, the trenches will be backfilled, and the concrete will be restored.

Investigative work will be performed in full compliance with applicable health and safety laws and regulations, including Site and Occupational Safety & Health Administration (OSHA) worker safety requirements and Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements. A site-specific Health and Safety Plan (HASP) was prepared to guide the conduct of the work in the event that petroleum hydrocarbons and/or hazardous substances are encountered during the performance of the field activities.

All sampling will be conducted in accordance with NYSDEC *DER-10 Technical Guidance for Site Investigation and Remediation*, dated May 3, 2010, and Sampling Guidelines and Protocols, dated

March 1991. Disposable nitrile gloves will be worn during the soil screening process and sample collection. The soil samples will be collected in dedicated laboratory-provided Encore samplers and laboratory-provided containers.

Equipment will be operated in accordance with the manufacturer's specifications, including calibration of all field instruments, which will be performed prior to the initiation of field work and on a schedule indicated by the manufacturer.

Following the soil and groundwater sample collection, the sample containers will be secured, labeled, and placed in a storage/transportation cooler and cooled to acceptable temperatures (e.g., four degrees Celsius) with ice. Samples will then be transported by a field courier to the laboratory following proper chain of custody procedures. The courier will relinquish custody to the log-in sample custodian upon arrival at the laboratory.

All samples will be submitted under proper chain-of-custody protocols to Alpha Analytical, Inc. (Alpha) in Westborough, Massachusetts (New York Environmental Laboratory Approval Program (ELAP) No. 11627) for VOC analysis via United States Environmental Protection Agency (USEPA) Method 8260.

Interim Remedial Measures Work Plan

An Interim Remedial Measures (IRM) Work Plan has been prepared to outline the proposed remedial actions to remove the soils exhibiting, or that previously exhibited, the elevated presence of tetrachloroethene (PCE) at soil sample RF-9. Soil sample RF-9 was collected during the remedial investigation (RI) activities in February 2019, at a depth of 1.5 to 2.0 feet below the basement slab. The sample location is depicted on Figure 2.

In accordance with the NYSDEC's RAWP response letter dated September 3, 2020, an IRM will be performed to remediate soil contamination identified at soil sample RF-9. The IRM will be conducted to address the PCE detection of 1.4 milligrams per kilogram (mg/kg), which exceeds the NYSDEC Unrestricted Use Soil Cleanup Objective (UUSCO) and NYSDEC Restricted Use Soil Cleanup Objective – Protection of Groundwater (RUSCO-GW) of 1.3 mg/kg. The IRM will be performed during the trench installation activities associated with the Supplemental Pre-Design Investigation Work Plan and will consist of a limited soil excavation at the location identified as sample RF-9. During the excavation activities, the soil will be screened with a PID. Excavated soil will be placed into a 55-gallon drum to be characterized for disposal and, subsequently, properly disposed off-site.

A post-excavation soil sample will be collected when its PID reading is 0.0 parts per million (ppm) and analyzed for VOCs via USEPA Method 8260. The soil sampling will be conducted in accordance with the sampling methodology noted above.

Remedial activities will be performed in full compliance with applicable health and safety laws and regulations, including OSHA worker safety requirements and HAZWOPER requirements, as

well as the site-specific Health and Safety Plan (HASP). During the limited soil excavation activities, a Community Air Monitoring Plan (CAMP) will be implemented.

The IRM Work Plan was submitted to the NYSDEC via email on September 11, 2020 and approved by the NYSDEC that same day.

Please do not hesitate to contact us at your convenience should you have any questions or comments regarding this Supplemental Pre-Design Investigation Work Plan summary letter.

Sincerely,

Vertex Engineering, PC



Joseph J.C. Dultz
Regional Vice President

Attachments

Figure 1 – SSDS Piping Layout

Figure 2 – Supplemental Pre-Design Investigation

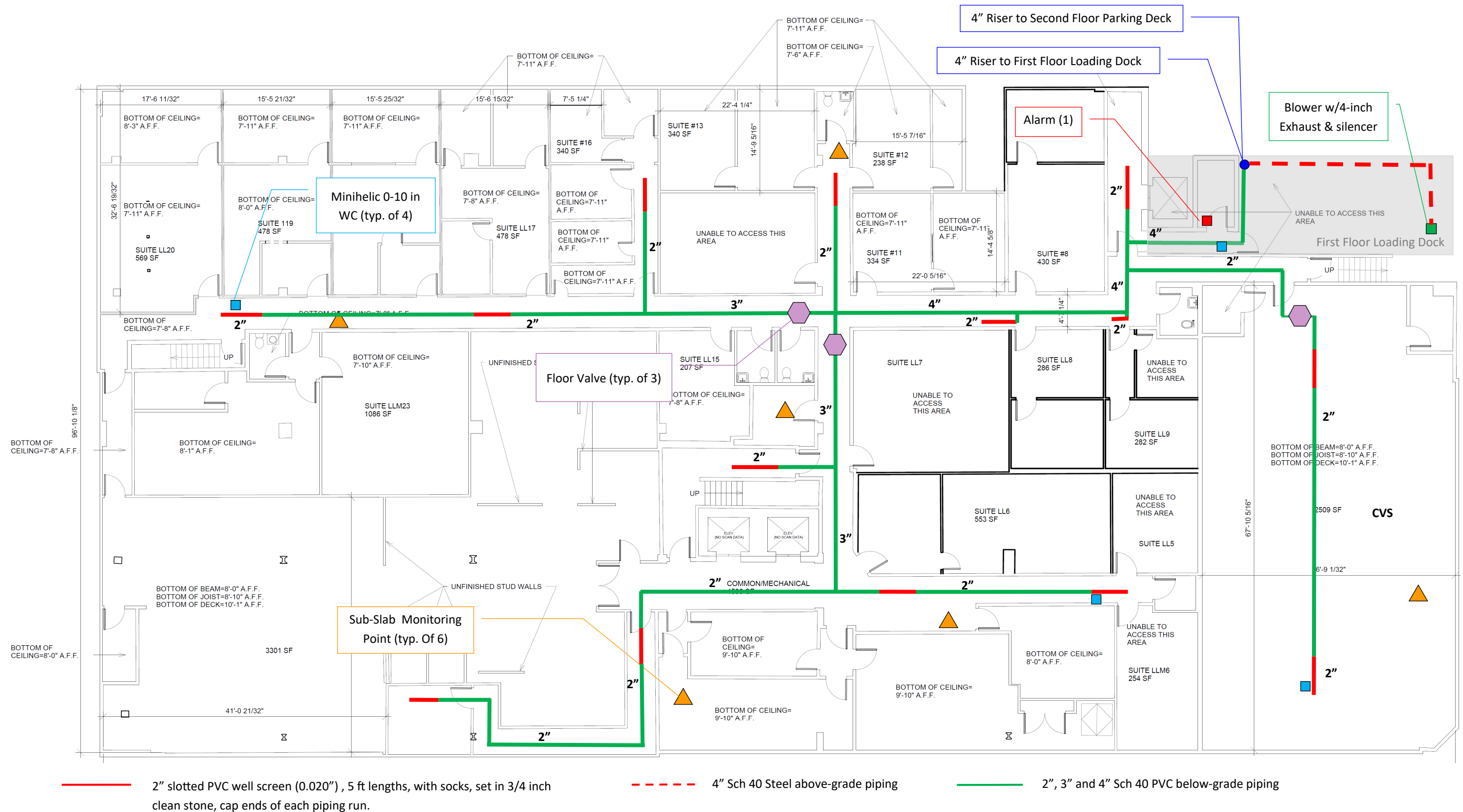
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		RUSCO-I	RUSCO-C	RUSCO-RR	RUSCO-R	UUSCO
VC	Vinyl chloride	27	13	0.9	0.21	0.02
trans-1,2-DCE	trans-1,2-Dichloroethene	1000	500	100	100	0.19
cis-1,2-DCE	cis-1,2-Dichloroethene	1000	500	100	59	0.25
Carbon Tetra	Carbon tetrachloride	44	22	2.4	1.4	0.76
TCE	Trichloroethene	400	200	21	10	0.47
PCE	Tetrachloroethene	300	150	19	5.5	1.3
4,4'-DDD	4,4'-DDD	180	92	2.6	13	0.0033
4,4'-DDE	4,4'-DDE	120	62	1.8	8.9	0.0033
4,4'-DDT	4,4'-DDT	94	47	1.7	7.9	0.0033
Dieldrin	Dieldrin	2.8	1.4	0.039	0.2	0.005
Cadmium	Cadmium	60	9.3	2.5	4.3	2.5
Copper	Copper	10000	270	270	270	50
Zinc	Zinc	10000	10000	2200	10000	109

All concentrations in milligrams per kilogram (mg/kg)

Bold & Highlighted = Concentration exceeds NYSDEC soil cleanup objective

Note: For soil samples collected below the building footprint, sample depth is feet below basement slab.

For soil samples collected on building exterior, sample depth is feet below ground surface.

RF-1	
2/25/2019	
2.0-6.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	0.0031
4,4'-DDD	0.00763
4,4'-DDE	0.0148
4,4'-DDT	0.0444
Dieldrin	0.0205
Cadmium	0.117
Copper	14
Zinc	31.4

RF-8	
2/22/2019	
8.5-9.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	ND
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	7.93
Zinc	8.64

RF-5	
2/19/2019	
10.5-11.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	ND
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	7.72
Zinc	11.3

RF-6	
2/21/2019	
6.5-7.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	ND
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	5.6
Zinc	7.91

RF-9	
2/21/2019	
1.5-2.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	0.019
PCE	1.4
4,4'-DDD	0.00724
4,4'-DDE	0.0776
4,4'-DDT	0.0899
Dieldrin	0.000675
Cadmium	ND
Copper	18.4
Zinc	35.4

RF-10	
2/22/2019	
2.0-2.5	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	0.006
4,4'-DDD	ND
4,4'-DDE	0.0026
4,4'-DDT	0.00922
Dieldrin	ND
Cadmium	ND
Copper	13.9
Zinc	21.3

RF-12	
2/21/2019	
8.0-8.5	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	0.00036
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	13
Zinc	21.8

VTW-3	
2/14/2018	
15.0-15.5	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	ND
4,4'-DDD	NA
4,4'-DDE	NA
4,4'-DDT	NA
Dieldrin	NA
Cadmium	NA
Copper	NA
Zinc	NA

RF-13	
2/21/2019	
2.5-3.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	ND
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	7.54
Zinc	14.4

RF-11	
2/22/2019	
10.5-11.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	ND
4,4'-DDD	ND
4,4'-DDE	0.00337
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	27.3
Zinc	11.9

RF-14	
2/21/2019	
6.5-7.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	0.0024
TCE	0.00025
PCE	0.033
4,4'-DDD	ND
4,4'-DDE	0.00604
4,4'-DDT	0.00151
Dieldrin	ND
Cadmium	ND
Copper	12.8
Zinc	19.2

S-6	
2/21/2019	
31.0-31.5	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	ND
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	7.47
Zinc	9.4

VTW-1		
2/14/2018		
	17.0-17.5	34.0-34.5
VC	ND	ND
trans-1,2-DCE	ND	ND
cis-1,2-DCE	ND	ND
Carbon Tetra	ND	ND
TCE	ND	ND
PCE	ND	ND
4,4'-DDD	NA	NA
4,4'-DDE	NA	NA
4,4'-DDT	NA	NA
Dieldrin	NA	NA
Cadmium	NA	NA
Copper	NA	NA
Zinc	NA	NA

S-5	
2/21/2019	
15.0-15.5	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	0.00028
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	15.9
Zinc	30.5

S-4	
2/21/2019	
29.5-30.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	ND
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	17.4
Zinc	15.8

S-3	
2/22/2019	
32.0-32.5	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	ND
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	8.41
Zinc	10

S-2	
2/22/2019	
32.0-32.5	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	0.00027
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	10.2
Zinc	18.5

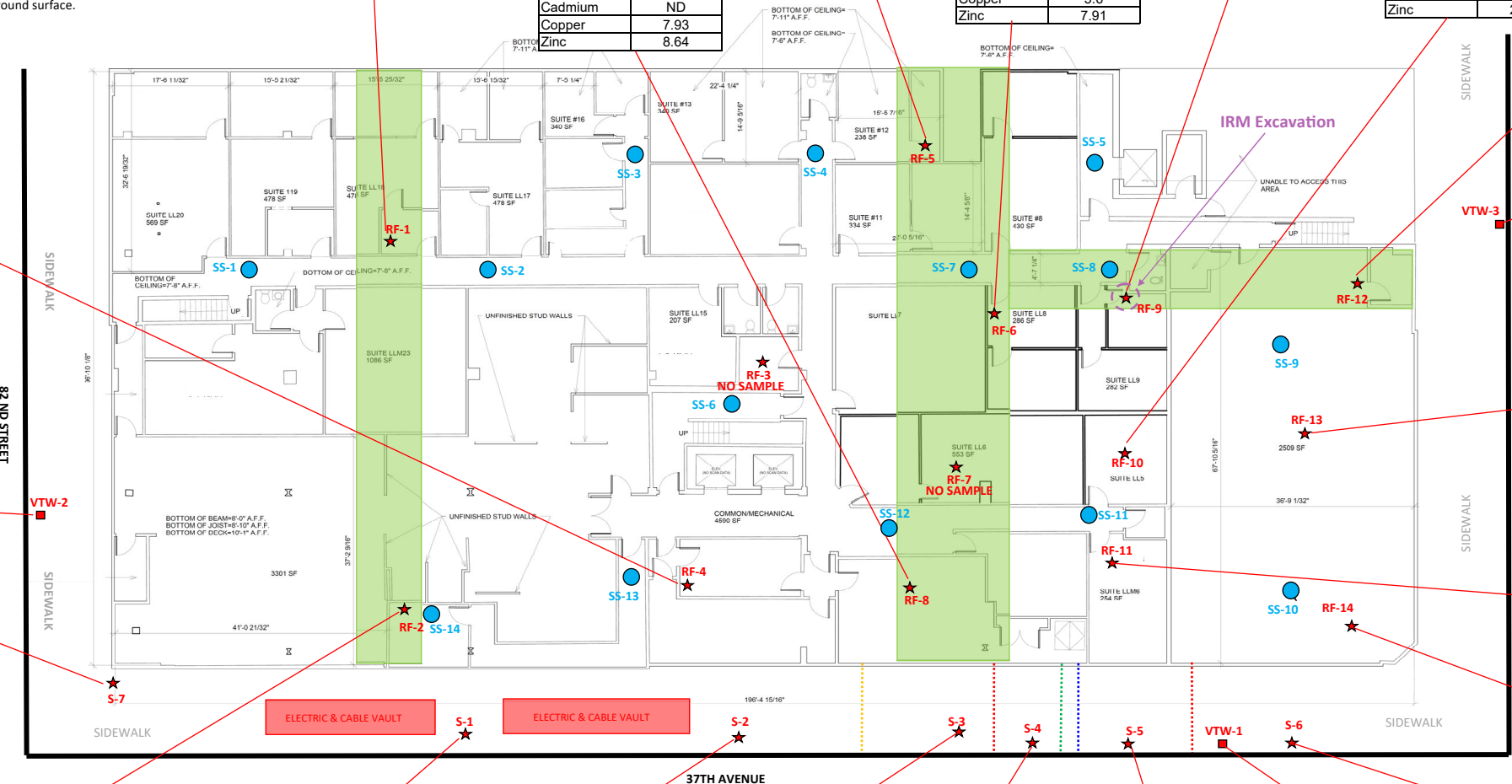
S-1	
2/22/2019	
31.5-32.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	ND
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	14.4
Zinc	32.4

RF-2	
2/25/2019	
1.0-2.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	0.00016
PCE	0.0084
4,4'-DDD	0.00389
4,4'-DDE	0.0236
4,4'-DDT	0.0574
Dieldrin	0.12
Cadmium	3.68
Copper	25.7
Zinc	286

S-7	
2/25/2019	
33.5-34.0	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	ND
4,4'-DDD	ND
4,4'-DDE	ND
4,4'-DDT	ND
Dieldrin	ND
Cadmium	ND
Copper	8.36
Zinc	22.2

VTW-2		
2/14/2018		
	26.5-27.0	34.0-34.5
VC	ND	ND
trans-1,2-DCE	ND	ND
cis-1,2-DCE	ND	ND
Carbon Tetra	ND	ND
TCE	ND	ND
PCE	ND	ND
4,4'-DDD	NA	NA
4,4'-DDE	NA	NA
4,4'-DDT	NA	NA
Dieldrin	NA	NA
Cadmium	NA	NA
Copper	NA	NA
Zinc	NA	NA

RF-4	
2/25/2019	
9.0-9.5	
VC	ND
trans-1,2-DCE	ND
cis-1,2-DCE	ND
Carbon Tetra	ND
TCE	ND
PCE	0.0026
4,4'-DDD	ND
4,4'-DDE	0.0209
4,4'-DDT	0.0177
Dieldrin	ND
Cadmium	ND
Copper	56
Zinc	35.4



Map Source: Existing Basement Floor Plan, Existing Conditions Surveys Inc., 11/30/2017

- PROPOSED SOIL BORING
- SOIL BORING (MARCH 2018)
- SOIL BORING (FEBRUARY 2019)

SUPPLEMENTAL PRE-DESIGN INVESTIGATION

82-13 37th AVENUE
JACKSON HEIGHTS, QUEENS COUNTY, NEW YORK

VERTEX ENGINEERING, PC

FIGURE NO. 2

VERTEX Project No. 48122