

October 8, 2007
File No. 21.0056127.00

Mr. Frank Evangelisti
Chief Planner
Broome Co. Dept. of Planning and Economic Development
44 Hawley Street, 5th Floor
Binghamton, New York 13902



Re: Revised Supplemental Remedial Investigation Work Plan
ERP#B00168-7
312 Maple St., Endicott, NY

Dear Mr. Evangelisti:

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Buffalo, New York 14203
716-685-2300
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www.gza.com

GZA GeoEnvironmental of New York (GZA) has prepared this revised supplemental work plan for additional remedial investigation activities to be completed on and off-site in regards to 312 Maple Street in Endicott, New York (Site). This revised supplemental work plan was prepared to address comments from New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) review of our August 13, 2007 supplemental remedial investigation work plan, in a letter to you dated September 6, 2007. This additional investigation work was requested by the NYSDEC in its letter to you dated July 17, 2007. The letter is a summary of the discussions held at the meeting/conference call on July 11, 2007 between NYSDEC, New York State Department of Health (NYSDOH), Broome County Department of Planning and Economic Development (Broome County) and GZA regarding additional environmental investigation work.

PURPOSE

The purpose of this supplemental remedial investigation work plan is to provide the requested additional on-site and off-site environmental information to assist in the selection of an appropriate remedial strategy for the Site and surrounding area. This work will include the following.

On-Site Activities

- Collect water levels and resample existing groundwater monitoring wells; and
- Conduct soil vapor screening and soil sampling from beneath the three Site building to potentially identify additional sources of contamination.

Off-Site Activities

- Delineate the vertical and horizontal extent of soil contamination on the railroad property located to the south of the Site;
- Delineate the extent of groundwater contamination to the west and south of the Site by installing new monitoring wells; and

- Conduct vapor intrusion sampling at off-site properties northwest of the Site that have not been previously sampled by Broome County or NYSDEC/NYSDOH and resample structures that previous sampling has indicated the need for monitoring.



A sub-slab depressurization (SSD) system for the mitigation of soil vapor intrusion is required for Site buildings, based on previous on-Site work. The installation of the SSD system is planned as part of an Interim Remedial Measure (IRM) and is not discussed in this supplemental investigation work plan. Because the supplemental investigation requested, requires field screening of soil vapors and soil sampling from beneath the Site buildings to determine if additional source areas are present, the installation of the SSD system will not occur until after this task is completed.

Also, NYSDEC requested that the completion of the Remedial Investigation Report be postponed until this supplemental investigation is completed in order to provide additional data to better assess the on-site and off-site conditions.

SCOPE OF SERVICES

PROJECT PREPARATION AND COORDINATION/MANAGEMENT

GZA assumes the approved health and safety plan (HASP) and Quality Assurance Plan (QAP) previously submitted for the on-Site RI/AAR and used for our previous vapor intrusion sampling events will be acceptable for the additional on and off-site work requested. Prior to the commencement of field activities, GZA will coordinate with our subcontractors (analytical laboratory, drilling company) to arrange for the required equipment and sample analysis; and obtain proper permits and insurance requirement to work on the railroad property. We will inquire about utility information for intrusive sampling point locations (i.e., subslab air samples, soil probes and monitoring wells) from the respective property owners or occupants who will be required to approve locations prior to the start of work.

GZA assumes that this supplemental work plan will need to be provided to the railroad for approval prior to commencing work on their property and has included budget under this task for their review time.

Additionally, GZA assumes that NYSDEC/NYSDOH and/or Broome County Department of Health (BCDOH) will assist in making initial contact with the property owners that have been selected for vapor intrusion sampling, as done on previous sampling rounds.

VAPOR INTRUSION SAMPLING

Vapor intrusion sampling will be conducted at off-site properties northwest of the Site that have not been previously sampled by Broome County or NYSDEC/NYSDOH and at structures where previous sampling has indicated the need for additional monitoring. GZA proposes to sample the following properties/structures shown on Figure 1.

Properties NOT Previously Sampled

- 325 Maple Street: SBL# 156.12-3-4
- 401 Maple Street: SBL# 156.12-3-22
- 408 Maple Street: SBL# 156.12-4-6
- 103/105 Dwight Avenue: SBL# 156.12-3-21
- 107 Dwight Avenue: SBL# 156.12-3-20
- 109 Dwight Avenue: SBL# 156.12-3-19
- 326 Jennings Street: SBL# 156.12-3-28
- 312 Jennings Street: SBL# 156.12-3-30

Previously Sampled Properties Requiring Monitoring

- 314 Maple Street, 2 structures: SBL# 156.12-4-9 and 156.12-4-10
- 323 Maple Street: SBL# 156.12-3-4
- 326 Maple Street: SBL# 156.12-4-8
- 4 South Duane Avenue: SBL# 156.12-4-46

Inventory of Chemical Use Within Each Structure

Prior to initiating the air sampling at sample locations being sampled for the first time, GZA will visit the identified structures to complete an indoor air quality questionnaire and survey each building for an inventory of various chemicals and products used/stored within the respective structures. The purpose of the survey will be to determine if contaminants of concern (i.e., chlorinated solvent compounds) are present within products currently used or stored at the sampling locations and which could potentially create interference in the air sampling results. Products identified containing chlorinated solvents will be removed from the specific structure 24-hours prior to the vapor sample collection. An organic vapor meter (i.e., ppbRae) capable of screening total VOCs in the parts per billion (ppb) range will be used to screen inventoried chemicals and products at each structure.

For structures or properties previously sampled by GZA, the product inventories previously completed will be updated to reflect the actual products present at the time of the sampling to determine if potential interferences exist. Products identified that may cause interference will be removed from the structure 24-hours prior to the vapor sampling.

Indoor, Sub Slab and Background Air Sampling

GZA proposes to collect three types of air samples, if applicable, (subslab, basement and living area at the designated sampling locations (see Figure 1). The samples will be collected via methodologies identified in the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006. Sampling methodology is further discussed below.





Generally, one subslab and two indoor air monitoring samples are proposed for each off-site building. One indoor air sample will be collected from an area of primary occupancy (i.e., first floor work area or residential area) from representative breathing zones inside each of the identified structures. We assume that each residential structure has a basement; therefore, an additional indoor air sample will be collected from the breathing zone in the basement. One air sample will be collected from beneath the lowest floor (i.e., foundation slab) at each of the locations. The air samples will be collected under the floor slab through an approximate 1/2 -inch diameter hole drilled in a competent portion of the floor away from cracks, drains and building foundations. Clean, dedicated tubing will be placed into the hole and sealed at the floor surface with modeling clay. A one-liter sampling canister will be attached to the tubing with an airtight seal for sample collection.

One exterior air sample will be collected for background comparative purposes for each day of sampling in a representative upwind location from the building sample locations.

Air sampling will be completed for a 24-hour duration in the structures in general accordance with NYSDOH requirements. Air samples collected will be analyzed via Method TO-15, including the VOC of concern trichloroethylene (TCE) which will be reported to 0.25 ug/m^3 and tetrachloroethylene (PCE) which will be reported to a detection limit of 1 ug/m^3 .

The samples collected as part of this third vapor intrusion sampling event will be subject to analytical testing methodologies that follow NYSDEC Analytical Service Protocol (ASP) Category B deliverables. A data usability summary report (DUSR) shall be prepared.

GZA proposes to submit the following Quality Assurance and Quality Control (QA/QC) samples per the air sampling event:

- Two sample locations (indoor air samples) as a duplicate samples;
- Two sample locations (indoor air sample) for a matrix spike/matrix spike duplicate (MS/MSD)) analysis. QA/QC samples will be submitted for VOCs via TO-15; and
- One trip blank will be submitted.

QA/QC samples will also be analyzed for VOCs via TO-15.

Sample selection will be dependant upon access of locations, engineering judgment, visual observations and information provided by the BCDOH, NYSDOH, NYSDEC and current occupant/owner of each identified structure. GZA assumes a ten-business day turn around time after sample collection before the draft analytical test results will be available.

The air sampling data generated will be provided to the respective owner and/or tenant of a structure within 30 days of receipt of validated data. A letter will be prepared that explains the results of the air sampling and provide recommendations, if required. A copy of the property's respective laboratory report will be attached to the letter.

SUBSURFACE SOIL DELINEATION ON THE RAILROAD PROPERTY



GZA proposes to complete 12 to 15 soil probes on the railroad property, in the area south of the previously completed IRM excavation (see Figure 2) to delineate the horizontal and vertical extent of contamination, if encountered. It is anticipated that this level of effort will be sufficient to properly delineate the extent of contaminated soil on the railroad property. However, if soil conditions encountered during the investigation warrant additional soil probes, additional work will be completed at that time.

The soil probes will be advanced into overburden soils utilizing direct push technology via a hydraulic hammer mounted on a truck or track mounted rig equipped with a 2-inch outer diameter by 48-inch long macrocore sampler. Soil probes will be advanced to a depth of about 12 feet bgs, or refusal, whichever is encountered first. Should it be required that additional depth is needed to explore the vertical extent of potential contamination, the probe depth will be extended.

A field engineer/geologist will observe the soil probes and create a field log for each probe. Real time air monitoring will be conducted while soil probes are being completed using an organic vapor meter (OVM). Soil samples will be collected from the soil probes for classification, laboratory analysis and screening with the OVM. Soil samples will be collected at two-foot intervals to the bottom of the probes. Samples collected for analytical testing will typically be collected from contaminated soils or material, based on visual, olfactory, field screening and engineering judgment that warrant further analysis. It is estimated that up to 10 soil samples (including QA/QC) will be analyzed for VOCs via EPA Method 8260. Additional soil samples will be collected and analyzed if deemed necessary to properly delineate the horizontal and vertical extent of contamination.

For budgeting purposes, we have included costs for a railroad employee (i.e., flag man) to be present during the two days of soil probes. GZA will also attempt to coordinate the test boring/monitoring well installation on railroad property (see next section) at the same time as the soil probes in order to minimize the need for railroad staff.

TEST BORING, MONITORING WELL INSTALLATION AND SAMPLING

Three off-site monitoring wells are proposed to be installed as part of the supplemental RI as shown on Figure 3. The purpose of the wells is to assist in delineating the extent of groundwater contamination to the west and south of the Site and to better define the groundwater flow direction in the area of the Site.

Test Boring Installation

Test borings for monitoring well installation will be advanced in the overburden soils using a track or truck mounted rotary drill rig using 4 1/4 - inch inside diameter hollow stem augers (HSA). Overburden soil samples will be obtained by driving a 1 3/8-inch inside diameter by 24-inch long split spoon sampler 24-inches ahead of the lead cutting shoe of the HSA, in general accordance with ASTM D1586.



A field engineer/geologist will observe the test borings/monitoring well installation and create a field log for each. Real time air monitoring will be conducted while borings are being completed using an OVM. Soil samples will be collected from the borings for classification, laboratory analysis and screening with the OVM. Boring logs that identify appropriate stratification lines, blow counts (if applicable), sample identification, sample depth interval and recovery, and date will be generated for each test boring and included as an appendix to the report.

Up to two soil samples will be collected for analytical testing from each test boring. Samples collected for analytical testing will typically be collected from contaminated soils or material, based on visual, olfactory, field screening and engineering judgment that warrant further analysis. Samples will be analyzed for VOCs via EPA Method 8260.

The HSAs will be advanced to a depth similar to the other five existing monitoring wells installed at the 312 Maple Site, depths ranging from approximately 20 to 25 feet bgs, about 5 feet into the upper water bearing zone. Drilling fluids will not be used while advancing the HSA in the overburden, so groundwater can be identified. GZA assumes the soil spoils generated from the test borings will be containerized for characterization and disposal. The spoils will be transported and staged at the Site until disposal.

Monitoring Well Installation

The completed test borings will be converted to groundwater monitoring wells. The wells will be constructed of 2-inch inner diameter flush coupled PVC riser and screen.

The screened interval shall intercept the water table extending above and below the water table. The screen will consist of a 5 to 10 foot long section of machine slotted pipe. The length of the screened section will be dependent on the depth at which groundwater is encountered and the depth to which the boring can be advanced.

A sand filter will be placed in the boring around the annulus space of the well screen such that the sand extends a minimum of 1-foot above the top of the screen. An approximate 3-foot thick layer of bentonite will be placed above the sand filter to provide a seal from the overlying overburden conditions. A mixture of cement/bentonite grout will extend from the bentonite seal to approximately 3-feet bgs.

The monitoring wells will be completed by placing either a flush-mounted road box or stick-up protective casing over the riser. Concrete will be placed in the boring around the protective casing and sloped away from the casing.

The monitoring wells will be developed to remove the fines and develop the sand filter pack. Hydraulic conductivity testing, using either rising or falling head test method, will be done to assess whether the monitoring well is functioning and provide hydrologic information that will aid in evaluating subsurface conditions. Water level measurements will be collected to interpret groundwater flow direction.



Water generated during development and purging prior to sampling will be containerized until the analytical results of the groundwater samples are received. If analytical results are non-detect, the drummed water will be discharged to the ground surface at the Site. If minor contaminants are present but meet the requirements of the Village of Endicott wastewater treatment facility, drummed water will be discharged to the sanitary sewer. If analytical results do not permit discharge to the sanitary sewer, drummed water will be sampled and characterized for proper disposal. The drummed water will be staged at the Site until the disposal method is determined.

Groundwater Sampling Procedure

Prior to accessing the monitoring wells, field staff will make observation about the general exterior conditions of the monitoring wells (i.e., condition of the surface seal, damage to the protective casing, etc.). These observations will be noted on the monitoring well sampling log which will be used to record notes and data at each monitoring well sampling location.

Prior to the start of the monitoring and purge event, a static water level will be measured from the top of the monitoring well riser and recorded on the monitoring well sampling log. New polyethylene tubing will be lowered into the monitoring well and positioned at the approximate center of the well screen intake zone. Information about the well screen intake depth and depth of well will be taken from the monitoring well logs generated by GZA.

The peristaltic pump will be started and operated at a flow rate that minimizes draw down of the water column within the well. Groundwater will be directed to a water quality meter equipped with a flow through cell to record water quality readings (i.e., pH, conductivity, dissolved oxygen (DO), oxygen reduction potential (ORP) and turbidity). The first set of water quality readings will be collected when the flow through cell is completely full and water begins to flow out. Readings will be recorded every three to five minutes once a constant head has been established and will continue until water quality readings stabilize for three successive readings. These three successive readings should be within ± 0.2 for pH, $\pm 3\%$ for conductivity, ± 10 mV for oxidation reduction potential (ORP) and $\pm 10\%$ for turbidity and dissolved oxygen (DO). If readings stabilize prior to removing one well volume, purging/monitoring will continue until one well volume is removed while maintaining a constant head. Once a constant head is established, pumping flow rates should not be altered. Sampling flow rates will be kept consistent with purging/monitoring flow rates. Altering the flow rates will likely change the chemistry within the well (i.e., stagnant water within the well will mix with formations water coming into the well).

Once the water quality readings have stabilized and at least one well volume has been removed after a constant head has been established, groundwater analytical samples will be collected. The polyethylene tubing from the peristaltic pump to the water quality meter will be disconnected from the input to the water quality meter and used to fill the appropriate groundwater sample jars, provided by the laboratory. After the appropriate

sample containers have been filled, the pump will be shut off and the tubing removed from the monitoring well and pump head and will be disposed of as solid waste.

Once the groundwater monitoring and sampling is completed at each location, the depth of the well will be measured and compared to the well construction data. This step will be done at the end to minimize agitation and suspension of sediment prior to the monitoring. If significant sediment has accumulated within the well, a bailer will be used to remove additional water and sediment from the well.

Water generated during the purging/monitoring and equipment decontamination will be containerized.

BUILDING INTERIOR SUBSLAB SOIL VAPOR SCREENING & SOIL SAMPLING INVESTIGATION

GZA proposes to perform an interior soil vapor screening survey to field screen soil vapor from soil beneath the lowest floor slab present within the three on-Site buildings. The survey will be done on a grid like system using an approximate 25 foot spacing (see Figure 4). The actual locations will be based on access and conditions in the sampling area. A soil vapor probe will also be placed in the vicinity of the sub-slab vapor intrusion samples collected from within Buildings 1 and 2 in February 2006.

A hammer drill will be used to drill approximate ½-inch holes in the floor slab. Soil vapor samples will be collected by driving galvanized steel probes with a removable tip to the desired depth (approximately 3 to 4 feet below ground surface at sample location) with a slide hammer through the ½-inch hole. The probe will then be pulled back slightly to free the removable tip and a clay seal will be placed between the ground surface and the probe to avoid the collection of ambient air. New HDPE tubing will be inserted to the bottom of the probe. Clean, dedicated polyethylene tubing will be placed into the steel probe and sealed at the top of the probe with a swage lock fitting. An air pump (i.e., MSA or equivalent) will be used to draw air up from the subsurface and direct the air towards an OVM via tubing, which will record the highest sustained total organic vapor concentration observed. A vacuum meter will also be attached to the screening system to assist in determine that air is properly flowing from the subsurface. If vacuum readings are noted, this may indicate that the sampling system is plugged with soil, or the water table is restricting the collection of soil vapors.

Based on the results of the soil vapor screening, soil samples will be collected from “hot spot” or potential source areas. Soil samples will be collected by coring a 3 to 4-inch diameter hole in the floor and retrieving soil via a stainless steel hand auger. The hand auger will be advanced to around 4 feet or refusal, whichever ever comes first. At a minimum, ten soil samples (not including QA/QC) will be collected from beneath the three structures on the property to evaluate the correlation between sub-slab soil vapor screening results and soil sample analytical results and attempt to determine if additional source areas are present beneath the buildings. Of the 10 soil samples to be collected, three of the sample



locations will be from the sub-slab soil vapor sampling locations previously completed within Buildings 1 and 2. Soil samples will be analyzed for VOCs via EPA Method 8260.

ANALYTICAL PROGRAM

Analytical testing will be performed by Mitkem Corporation, a New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP) certified laboratory. Table 1 is a summary of the proposed analytical testing for the various environmental media to be collected as part of this supplemental investigation.

DATA ANALYSIS/REPORT PREPARATION

Upon receipt of the validated data, GZA will finish preparing the RI report summarizing the work conducted as part of the on-site and off-site investigations.

COST ESTIMATE

The attached Table 2 provides our estimated costs to complete the scope of work discussed above and revise and complete the required RI Report and Remedial Alternatives Report.

We look forward continuing our association with Broome County on this project. Please call if you should need any additional information or have any questions.

Sincerely,

GZA GEOENVIRONMENTAL OF NEW YORK



Christopher Boron
Project Manager



Ernest R. Hanna, P.E.
Principal

Attachments: Table 1 – Proposed Analytical Testing Program Summary
Table 2 – Cost Estimate
Figure 1 – Proposed Air Sampling Locations
Figure 2 – Proposed Soil Probes on Railroad Property
Figure 3 – Proposed Monitoring Well Installation Locations
Figure 4 – Proposed Interior Soil Sampling and Soil Gas Sample Locations

cc: Gary Priscott – NYSDEC



Table 1
 Supplemental Remedial Investigation Work Plan
 Proposed Analytical Testing Program Summary
 312 Maple Street
 Endicott, New York

Location	Matrix	TCL VOCs	TO-15 VOCs
Off-site Subsurface Soil Probe Samples			
Various ¹	Soil	7	0
Duplicate	Soil	1	0
MS/MSD	Soil	2	0
Rinsate	Water	1	0
Total		11	0
On-Site Sub-slab Soil Samples			
Various ¹	Soil	10	0
Duplicate	Soil	1	0
MS/MSD	Soil	2	0
Rinsate	Water	1	0
Total		14	0
Off-site Test Boring Soil Samples			
Various	Soil	6	0
Duplicate	Soil	1	0
MS/MSD	Soil	2	0
Rinsate	Water	1	0
Total		10	0
Vapor Intrusion Air Samples			
Sub-slab	Air	0	13
Indoor Air	Air	0	24
Outdoor	Air	0	3
Duplicate	Air	0	2
MS/MSD	Air	0	4
Trip Blank	Air	0	1
Total		0	47
Monitoring Well Groundwater Samples			
Existing Monitoring Wells	Groundwater	5	0
New Monitoring Wells	Groundwater	3	0
Duplicate	Groundwater	1	0
MS/MSD	Groundwater	2	0
Rinsate Blank	Water	1	0
Trip Blank	Water	1	-
Total		13	0
TOTAL		48	47

Notes:

- 1) Actual sample location to be selected based on field observation.
 MS/MSD - Matrix Spike/Matrix Spike Duplicate.
 TCL VOCs - Target Compound List Volatile Organic Compounds.

TABLE 2
Supplemental Investigation
Cost Estimate
Remedial Investigation/Remedial Alternative Report
312 Maple Street
Endicott, New York

	Units	Direct	ON-SITE			OFF-SITE			OFF-SITE			OFF-SITE			ON-SITE			ON-SITE			ON-SITE			ON-SITE				
			Supplemental Work Plan Preparation, Project Coordination, Preparation, Site Meeting			Vapor Intrusion Sampling			Subsurface Soil Delineation on Railroad Property			Test Boring, Monitoring Well Installation & Groundwater Sampling of New Wells			Resample On-Site Existing Wells			Interior Building Soil Vapor Screening & Soil Sampling Investigation			Public Meetings			Revisions and RI/AAR Report Preparation				
			Quantity	Price	Unit Rate	Quantity	Price	Unit Rate	Quantity	Price	Unit Rate	Quantity	Price	Unit Rate	Quantity	Price	Unit Rate	Quantity	Price	Unit Rate	Quantity	Price	Unit Rate	Quantity	Price	Unit Rate	Quantity	Price
LABOR																												
PRINCIPAL (NSPE Level VIII)	hr.	\$54.00	5	\$270		2	\$108		2	\$108		2	\$108		2	\$108		2	\$108		8	\$432		28	\$1,512.00			
PROJECT MANAGER (NSPE Level IV)	hr.	\$25.00	60	\$1,500		50	\$1,250		4	\$100		4	\$100		4	\$100		1	\$25		16	\$400		198	\$4,950.00			
SENIOR FIELD GEOLOGIST (NSPE Level III)	hr.	\$20.00	40	\$800		50	\$1,000		30	\$600		40	\$800		10	\$200		36	\$720		40	\$800		246	\$4,920.00			
ENGINEER I (NSPE Level II)	hr.	\$18.00																36	\$648					56	\$1,008.00			
DRAFTER (NSPE Level III)	hr.	\$21.00	8	\$168		3	\$63																24	\$504				
WORD-PROCESSING *	hr.	\$13.00	8	\$104		3	\$39																9	\$117				
Salary Estimate																												
Indirect Costs (1.70%)																												
Fixed Fee (10%)																												
LABOR Estimate			121	\$8,441		108	\$7,306		36	\$2,400		46	\$2,994		11	\$668		76	\$4,446		24	\$2,471		583	\$39,753.45			
EMPLOYEE/TRAVEL EXPENSES																												
Transportation (\$/mile)	mi.	0.485	400	\$194		400	\$194		400	\$194		800	\$388					400	\$194		300	\$146		2700	\$1,309.50			
Per Diem	day	150				10	\$1,500		3	\$450		3	\$450					2	\$300		2	\$300		20	\$3,000.00			
Tolls	ea.	4				1	\$4		1	\$4		1	\$4					1	\$4		1	\$4		6	\$24.00			
Subtotal																												
Contingency Costs		10.0%		\$20			\$170			\$65			\$84						\$50			\$45				\$4,333.50		
Subtotal with Contingency Costs				\$218			\$1,868			\$713			\$926						\$548			\$494				\$4,766.85		
SUBS/SERVICES/EXPENSES w/ Contingency Costs																												
Postage/Shipping	ea.	\$15.00	5	\$75		4	\$60		4	\$60		4	\$60		3	\$45		4	\$60		2	\$30		32	\$480.00			
Reproduction	ea.	\$0.10	1000	\$100		200	\$20			\$10		100	\$10								200	\$20		2500	\$250.00			
Analytical Laboratory	Ea.	\$70.00					\$16,450			\$770			\$910						\$980			\$146				\$19,810.00		
VOC 8260	Ea.	\$350.00				47	\$16,450		11	\$770		13	\$910		10	\$700		14	\$980			\$300		48	\$3,360.00			
Contingency Cost		10.0%					\$1,645			\$77			\$91						\$98			\$450		47	\$16,450.00			
Data Validation	L.S.	\$4,000.00				0.5	\$2,000		0.25	\$1,000		0.25	\$1,000		0.25	\$1,000		0.25	\$1,000			\$450		1.5	\$6,000.00			
Contingency Costs		10.0%					\$200			\$100			\$100						\$100			\$494				\$600.00		
Drilling Subcontractor (Monitoring Well Installation)	L.S.	\$600.00								\$2,802			\$6,679									\$30		1.67	\$948.00			
Mob/Demob Rig	Per Ft.	\$18.00				0.67	\$402			\$402		1	\$600						\$600			\$90		1.7	\$1,002.00			
Auger Drilling	Each	\$18.00								\$684		38	\$684						\$684			\$300		75	\$1,350.00			
Split Spoon Samples	Per Ft.	\$25.00								\$1,875		75	\$1,875						\$1,875			\$750		38	\$840.00			
2" Diameter Well Install	Each	\$200.00								\$800		4	\$800						\$800			\$450		4	\$800.00			
Protective casing	L.S.	\$150.00								\$150		1	\$150						\$150			\$450		1	\$150.00			
Decom Pad	Per Hr	\$200.00								\$600		3	\$600						\$600			\$450		3	\$600.00			
Decom Time	Each	\$55.00								\$220		4	\$220						\$220			\$450		4	\$220.00			
55-Gallon Drum	Per Hr	\$200.00								\$400		2	\$400						\$400			\$450		2	\$400.00			
Stand By Time	Per Day	\$1,200.00								\$668			\$668						\$668			\$450		2	\$2,400.00			
Direct Push Soil Probe	Contingency Costs	10.0%								\$12,000			\$668						\$668			\$450			\$2,400.00			
Rental Equipment	Per Day	\$324				5	\$300			\$130			\$286						\$319			\$55				\$13,667.90		
OVM	Per Day	\$60				2	\$120			\$60		1	\$60						\$60			\$55		12	\$720.00			
Low Flow Pump	Per Day	\$75								\$75		1	\$75						\$75			\$566		2	\$150.00			
Tubing	Per Foot	\$90.00								\$30		200	\$60						\$60			\$209		300	\$900.00			
Horiba U-22	Per Day	\$92.80								\$100		1	\$100						\$100			\$209		2	\$200.00			
Sales Tax		8.00%								\$24			\$21						\$24			\$209				\$92.80		
Subtotal with Contingency Costs				\$1,193			\$20,739			\$16,958			\$9,840						\$2,270			\$55				\$53,720.98		
EXPENSE Estimate				\$1,410			\$22,607			\$17,670			\$10,766						\$3,006			\$566				\$58,881.33		
TOTAL Estimate				\$9,851			\$29,913			\$20,070			\$13,760						\$7,452			\$3,037				\$98,634.78		



STRUCTURE SAMPLING LEGEND:

STRUCTURES TO BE RESAMPLED:

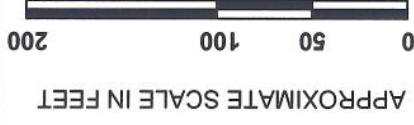
- 1A 314 MAPLE STREET
- 1B 314 MAPLE STREET
- 2 323 MAPLE STREET
- 3 4 SOUTH DUANE AVENUE
- 4 323 MAPLE STREET

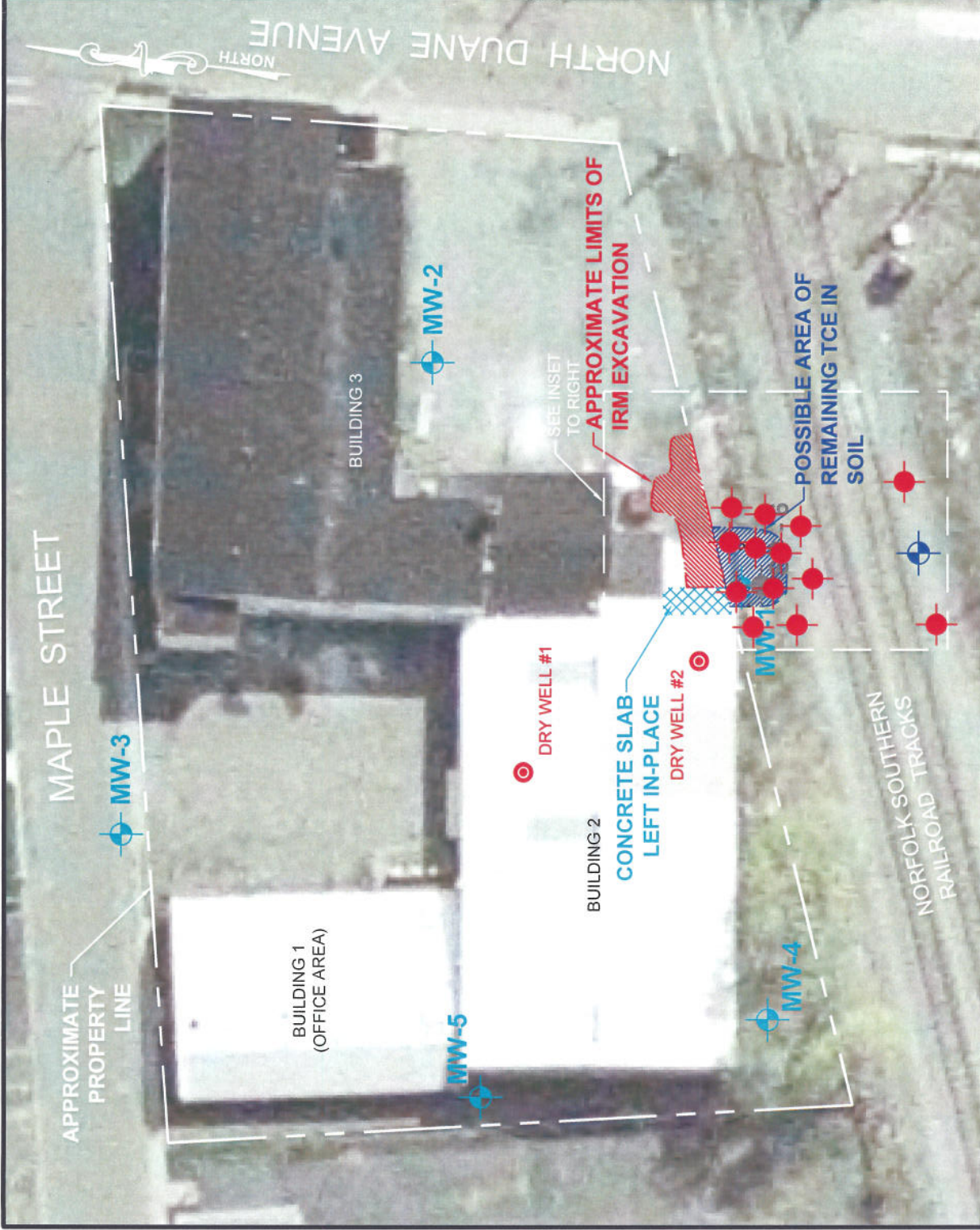
STRUCTURES TO BE SAMPLED 1st TIME:

- 5 312 JENNINGS STREET
- 6 326 JENNINGS STREET
- 7 325 MAPLE STREET
- 8 401 MAPLE STREET
- 9 408 MAPLE STREET
- 10 109 DWIGHT AVENUE
- 11 107 DWIGHT AVENUE
- 12 103/105 DWIGHT AVENUE

NOTES:

1. BASE MAP ADAPTED FROM A 2002 AERIAL PHOTOGRAPH DOWNLOADED FROM http://www.nysgis.state.ny.us/gateway/mg/interactive_main.html AND FIELD OBSERVATIONS.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.





SITE PLAN

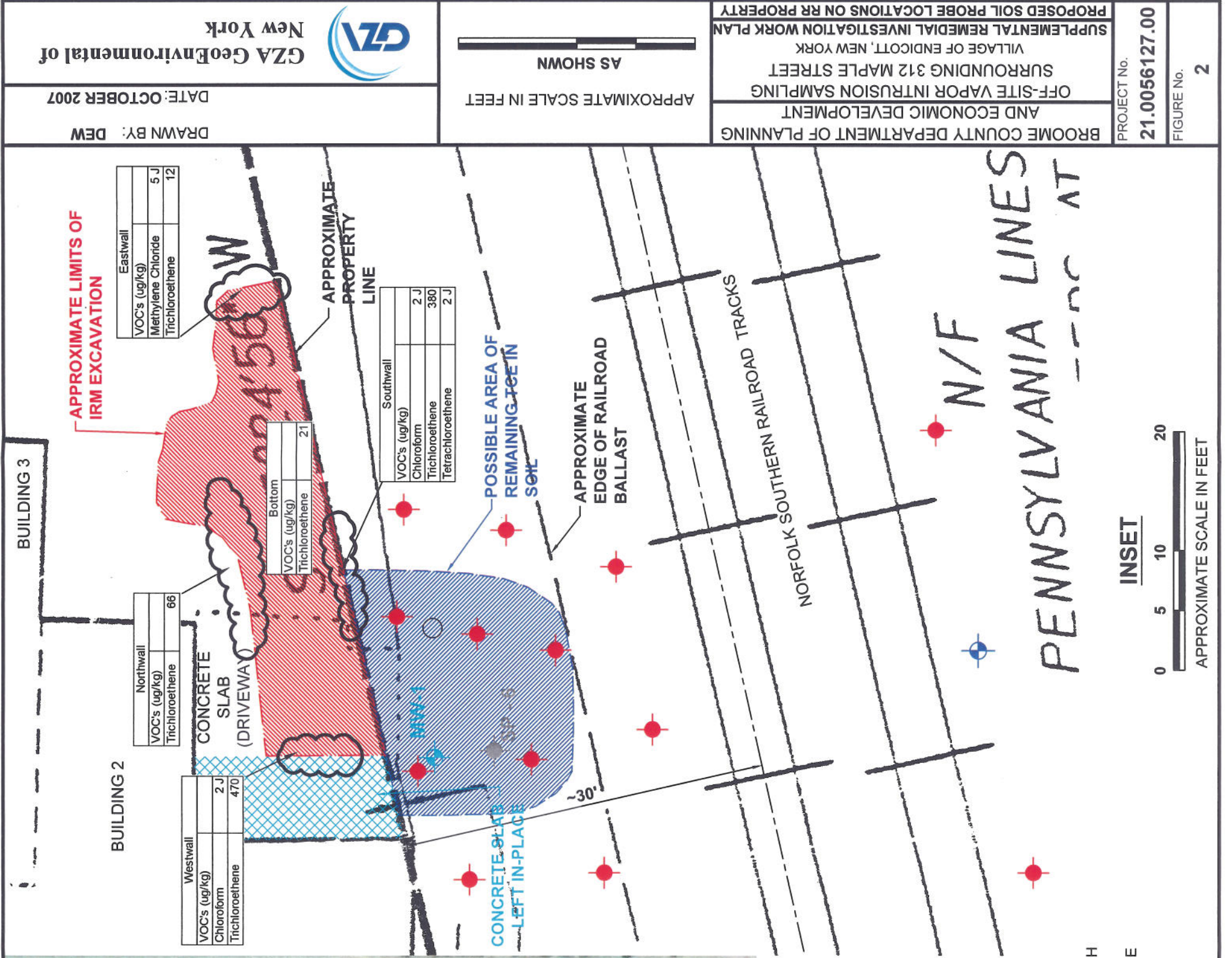


LEGEND:

- APPROXIMATE LOCATION OF PROPOSED SOIL PROBE
- APPROXIMATE LOCATION OF PROPOSED GROUNDWATER MONITORING WELL
- APPROXIMATE LOCATION AND DESIGNATION OF EXISTING MONITORING WELL
- APPROXIMATE LOCATION AND DESIGNATION OF EXISTING DRYWELL
- J - DATA QUALIFIER INDICATES ESTIMATED CONCENTRATION

NOTES:

1. BASE MAP ADAPTED FROM A 2002 AERIAL PHOTOGRAPH DOWNLOADED FROM http://www.nysgis.state.ny.us/gateway/mg/interactive_main.html. A SURVEY PLAN PROVIDED BY THE CLIENT, AND FIELD OBSERVATIONS.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.





LEGEND:

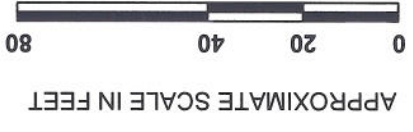
-  APPROXIMATE LOCATION OF PROPOSED MONITORING WELL
-  **MW-3** APPROXIMATE LOCATION AND DESIGNATION OF EXISTING MONITORING WELL

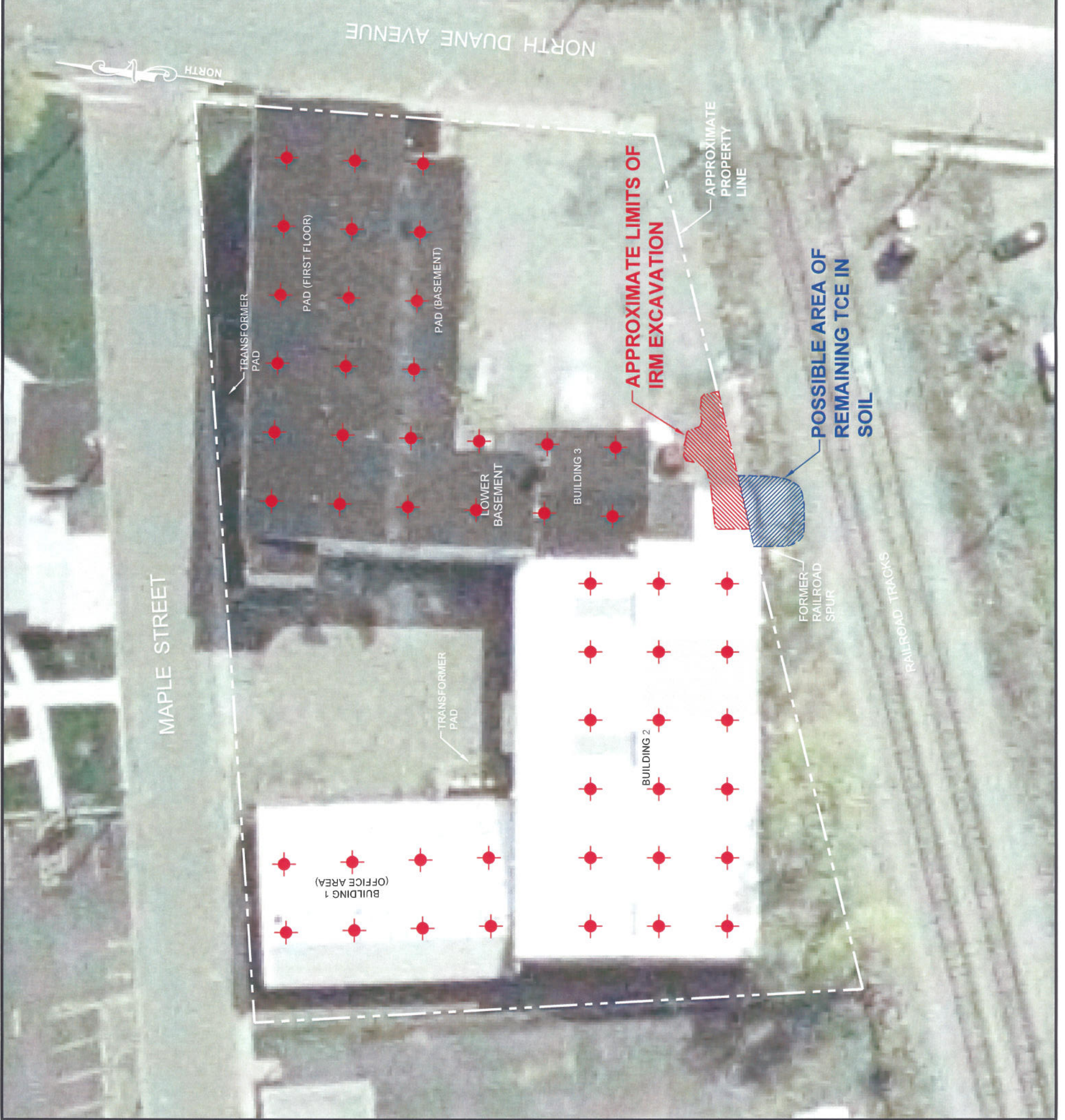
NOTES:

1. BASE MAP ADAPTED FROM A 2002 AERIAL PHOTOGRAPH DOWNLOADED FROM http://www.nysgis.state.ny.us/gateway/mg/interactive_main.html AND FIELD OBSERVATIONS.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

BROOME COUNTY DEPARTMENT OF PLANNING AND ECONOMIC DEVELOPMENT
 OFF-SITE VAPOR INTRUSION SAMPLING SURROUNDING 312 MAPLE STREET VILLAGE OF ENDICOTT, NEW YORK
 SUPPLEMENTAL REMEDIAL INVESTIGATION WORK PLAN
 PROPOSED OFF-SITE MONITORING WELL LOCATIONS

PROJECT No.
21.0056127.00
 FIGURE No.
3





LEGEND:

● APPROXIMATE LOCATION OF PROPOSED SOIL VAPOR SCREENING POINT

NOTES:

1. BASE MAP ADAPTED FROM A 2002 AERIAL PHOTOGRAPH DOWNLOADED FROM http://www.nysgis.state.ny.us/gateway/mg/interactive_main.html AND FIELD OBSERVATIONS.
2. THE SIZE AND LOCATION OF EXISTING SITE FEATURES SHOULD BE CONSIDERED APPROXIMATE.

