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SUBMITTED VIA ELECTRONIC MAIL

May 12, 2016

Mr. Richard H. Dana
Engineering Geologist 2
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7014
Richard.dana@dec.ny.gov

Subject: SVI Investigation Work Plan for 36 South Transit Street

New York State Electric and Gas Corporation

Lockport Transit Street Former Manufactured Gas Plant Site, Lockport, NY

Dear Mr. Dana,

AECOM Technical Services, Inc. (AECOM), on behalf of New York State Electric and Gas Corporation (NYSEG), submits for your review this Soil Vapor Intrusion (SVI) Investigation Work Plan for the residential building located at 36 South Transit Street. This property is located adjacent to and south of the above-referenced NYSEG Lockport Transit Street Former Manufactured Gas Plant (MGP) Site (New York State Department of Environmental Conservation (NYSDEC) Site #932098).

INTRODUCTION

A Subsurface Site Investigation (SSI) Work Plan for the residential properties located at 36 South Transit Street/68 Saxton Street Properties was submitted to NYSDEC on December 16, 2015 and approved by NYSDEC on December 23, 2015. The first phase of the SSI was completed on January 21, 2016. As part of this first phase of the SSI, three test pits were completed and two soil samples were collected for chemical analysis. The resulting test pit soil data indicate that potential for MGP-related impacts may exist based upon observation of physical characteristics (odor, sheen) and comparison of analytical detections against the MGP constituents listed in the Record of Decision for the adjacent NYSEG Lockport Transit Street former MGP Site.

The purpose of this SVI Investigation Work Plan is to evaluate the potential for MGP-related volatile organic compound (VOC) vapor intrusion in the 36 South Transit Street residential building. AECOM proposes the following scope of work to complete this evaluation.

SCOPE OF WORK

Task 1 - Soil Vapor Sampling

AECOM will perform an SVI sampling program to assist NYSEG in determining the presence of potential MGP-related VOCs at the 36 South Transit Street residential building. Per the building's owner, the building has two apartments on the first floor and a basement/crawlspace with a dirt floor. Based on this information AECOM proposes to collect five air samples to evaluate SVI as follows:



- One basement/crawlspace air sample will be collected in the center of the basement/crawlspace. The actual location will be dependent on the layout and access of the basement/crawlspace during the sampling event. The sample will be collected from an elevation equal to the height of the canister placed on the dirt floor.
- One indoor air sample will be collected from each apartment from the first floor. The indoor
 air samples will be located in a central area of each apartment at a height approximately
 three feet above the floor to represent a height at which occupants normally are seated.
- One outdoor air sample will be collected. Ideally, an upwind air sample should be collected.
 However, because there is no secure location for the canister near the 36 South Transit
 Street building, an outdoor air sample will be located inside the southerly fence of the NYSEG
 Lockport Transit Street Former MGP Site, north of the 36 South Transit Street building.
 Actual placement along the fence will be determined based on the wind direction at the start
 of sampling.
- One field duplicate air sample will be collected from either the basement/crawlspace or in one
 of the apartments.

The air samples will be submitted for VOC analysis using Environmental Protection Agency (EPA) Method TO-15, as further discussed below.

Field Methodology

Installation and collection of associated SVI samples will be conducted in accordance with the Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, October 2006).

At each location, sample collection will be performed using a 6.0-liter stainless steel, laboratory-provided Summa[®] canister equipped with a 24-hour regulator. AECOM will request standard 10-day turn-around time for analytical samples. The attached NYSDEC Structure Sampling Questionnaire and Building Inventory form will be completed and subsequently provided in the summary report discussed below. The field scientist will record the sample identification, canister and regulator identification, date and time of sample collection, sample location and height, and the sampling method and device on a field log sheet. In addition, the purge volume, sample volume, canister vacuum pre- and post-sampling, and sampler name will be recorded.

Weather conditions (i.e., precipitation, outdoor temperature, barometric pressure, wind speed and direction) will be noted for the 24- to 48-hour period prior to sampling. Weather condition data from the period prior to sampling will be downloaded from the Internet at the following web site; http://www.wunderground.com/weatherstation/WXDailyHistory.asp?ID=KNYLANCA3. Pertinent field observations (i.e., odors or readings from field instrumentation, personal materials or other items of concern in the area of the sample [e.g., work bench, aerosols, etc.]) will be noted during sampling.

The SVI samples will be analyzed for VOCs listed in Table 1 using EPA Method TO-15 by Alpha Analytical, (Mansfield, MA), a NYS Department of Health Environmental Laboratory Approval Program (ELAP)-certified laboratory. Reporting limits will meet NYSDOH requirements of 1 microgram per cubic meter (µg/m³) for all VOCs, 0.25 µg/m³ for trichloroethene, and 0.25 µg/m³ for carbon tetrachloride unless the sample is found to contain VOC concentrations above those reporting limits. The laboratory will provide a Category B data report in the event that a data usability summary report would need to be completed in the future. The data deliverable package will include the following elements: analytical report; QA/QC summary; chain of custody; method blank; laboratory control samples – control limits; reporting limits; and, surrogate recoveries for GC/MS analysis with control limits.



SCHEDULE

Per the NYSDOH SVI guidance document, indoor air samples are typically collected during the heating season because SVI is more likely to occur when a building's heating system is in operation and doors and windows are closed. The 2015/2016 heating season is over as the temperatures in the greater Lockport area are expected to frequently be above 60 degrees Fahrenheit (http://www.accuweather.com/en/us/lockport-ny/14094/may-weather/334658). Therefore the SVI sampling proposed herein should be conducted in November or December 2016 once the 2016/2017 heating season has begun.

LETTER REPORT

Upon completion of the scope of work outlined above, a letter-report summarizing the results of the sampling activities will be prepared. The letter-report will be submitted to NYSDEC within 45 days of completion of the field work.

If you have any questions regarding this submission, please do not hesitate to contact me at (716) 923-1113 or via email at tamara.raby@aecom.com.

Very truly yours,

AECOM Technical Services, Inc.

Jamara M. Raby

Tamara Raby Manager II, Project Manager 716.923.1113 tamara.raby@aecom.com

Attachment - Table 1

cc: Chris Keipper (NYSEG) Scott Underhill (AECOM) Project File 60446268

Table 1 - SVI Sample Analytes and Reporting Limits SVI Investigation Work Plan for 36 South Transit Street NYSEG Transit Street Former MGP Site, Lockport, NY

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	Compound	Reporting Limit	Units	Method ID
NY DMC	1,1,1-Trichloroethane	1.09	μg/m3	TO-15
	1,1,2,2-Tetrachloroethane	1.37	μg/m3	TO-15
	1,1,2-Trichloroethane	1.09	μg/m3	TO-15
	1,1-Dichloroethane	0.809	μg/m3	TO-15
NY DMC	1,1-Dichloroethene	0.79	μg/m3	TO-15
1,2,3-Trimethylbenzene		0.98	μg/m3	TO-15
	1,2,4,5-Tetramethylbenzene	14	µg/m3	TO-15
	1,2,4-Trichlorobenzene	1.48	μg/m3	TO-15
	1,2,4-Trimethylbenzene	0.983	µg/m3	TO-15
	1,2-Dibromoethane	1.54	µg/m3	TO-15
	1,2-Dichlorobenzene	1.2	µg/m3	TO-15
	1,2-Dichloroethane	0.809	μg/m3	TO-15
NY DMC	cis-1,2-Dichloroethene	0.79	μg/m3	TO-15
	trans-1,2-Dichloroethene	0.793	μg/m3	TO-15
	1,2-Dichloropropane	0.924	μg/m3	TO-15
	1,3,5-Trimethylbenzene	0.983	μg/m3	TO-15
	1,3-Butadiene	0.442	μg/m3	TO-15
	1,3-Dichlorobenzene	1.2	μg/m3	TO-15
	1,4-Dichlorobenzene	1.2	μg/m3	TO-15
	1,4-Dioxane	0.721	μg/m3	TO-15
	1-Methylnaphthalene	15	µg/m3	TO-15
	2,2,4-Trimethylpentane	0.934	µg/m3	TO-15
	2,3-dimethylheptane	TIC	µg/m3	TO-15
	2,3-dimethylpentane	TIC	μg/m3	TO-15
	2-Butanone	1.47	μg/m3	TO-15
	2-Ethyl thiophene	0.92	μg/m3	TO-15
	2-Hexanone	0.82	μg/m3	TO-15
	2-Methylnaphthalene	15	μg/m3	TO-15
	2-Methylthiophene	0.80	μg/m3	TO-15
	3-Chloropropene	0.626	μg/m3	TO-15
	3-Methylthiophene	0.80	µg/m3	TO-15
	4-Ethyltoluene	0.983	µg/m3	TO-15
	4-Methyl-2-pentanone	2.05	µg/m3	TO-15
	Acetone	2.38	µg/m3	TO-15
	Benzene	0.639	µg/m3	TO-15
	Benzothiophene	14	μg/m3	TO-15
	Benzyl chloride	1.04	μg/m3	TO-15
	Bromodichloromethane	1.34	μg/m3	TO-15
	Bromoform	2.07	μg/m3	TO-15
	Bromomethane	0.777	μg/m3	TO-15
	n-Butane	0.48	μg/m3	TO-15
	butylcyclohexane	TIC	μg/m3	TO-15
	Carbon disulfide	0.623	μg/m3	TO-15
NY DMC	Carbon tetrachloride	1.26	μg/m3	TO-15
	Chlorobenzene	0.921	μg/m3	TO-15
	Chloroethane	0.528	μg/m3	TO-15
	Chloroform	0.977	μg/m3	TO-15
	Chloromethane	0.413	μg/m3	TO-15
	Cyclohexane	0.688	μg/m3	TO-15
	Decane	1.2	μg/m3	TO-15
	Dibromochloromethane	1.7	µg/m3	TO-15

Table 1 SVI 36 S Transit.xlsx Page 1 of 2

Table 1 - SVI Sample Analytes and Reporting Limits SVI Investigation Work Plan for 36 South Transit Street NYSEG Transit Street Former MGP Site, Lockport, NY

	Compound	Reporting Limit	Units	Method ID
	Dichlorodifluoromethane	0.989	μg/m3	TO-15
	cis-1,3-Dichloropropene	0.908	µg/m3	TO-15
	trans-1,3-Dichloropropene	0.908	µg/m3	TO-15
	Dodecane	1.4	µg/m3	TO-15
	Ethanol	9.42	μg/m3	TO-15
	Ethyl Acetate	1.8	µg/m3	TO-15
	Ethylbenzene	0.869	µg/m3	TO-15
	Freon-113	1.53	µg/m3	TO-15
	Freon-114	1.4	μg/m3	TO-15
	Heptane	0.82	µg/m3	TO-15
	Hexachlorobutadiene	2.13	μg/m3	TO-15
	n-Hexane	0.705	μg/m3	TO-15
	Indan	0.97	μg/m3	TO-15
	Indene	0.95	μg/m3	TO-15
	isopentane	0.59	μg/m3	TO-15
	Isopropanol	1.23	μg/m3	TO-15
	Methyl tert-butyl ether	0.721	μg/m3	TO-15
	Methylene chloride	1.74	μg/m3	TO-15
	Nonane	1.0	µg/m3	TO-15
	Octane	0.93	μg/m3	TO-15
	n-Pentane	0.59	μg/m3	TO-15
	Styrene	0.852	μg/m3	TO-15
	Tertiary butyl Alcohol	1.52	μg/m3	TO-15
NY DMC	Tetrachloroethene	1.36	μg/m3	TO-15
	Tetrahydrofuran	1.47	μg/m3	TO-15
	Thiophene	0.69	µg/m3	TO-15
	Toluene	0.754	µg/m3	TO-15
NY DMC	Trichloroethene	1.07	µg/m3	TO-15
	Trichlorofluoromethane	1.12	µg/m3	TO-15
	Undecane	1.3	µg/m3	TO-15
	Vinyl bromide	0.874	µg/m3	TO-15
NY DMC	Vinyl chloride	0.51	μg/m3	TO-15
	o-Xylene	0.869	μg/m3	TO-15
	p/m-Xylene	1.74	μg/m3	TO-15
Indo	or Air Reporting Limit prov	ided by the	lab via TO-	15 SIM
NY DMC	1,1,1-Trichloroethane	0.109	μg/m3	TO-15-SIM
NY DMC	1,1-Dichloroethene	0.079	μg/m3	TO-15-SIM
NY DMC	Carbon tetrachloride	0.126	μg/m3	TO-15-SIM
NY DMC	cis-1,2-Dichloroethene	0.079	μg/m3	TO-15-SIM
NY DMC	Tetrachloroethene	0.136	μg/m3	TO-15-SIM
NY DMC	Trichloroethene	0.107	μg/m3	TO-15-SIM
NY DMC	Vinyl chloride	0.051	μg/m3	TO-15-SIM

NY DMC - New York Decision Matrix Compound

SIM - Select Ion Monitoring

TIC - To be reported as a Tentatively Identified Compound

SVI - Soil Vapor Intrusion

µg/m3 - micrograms per cubic meter

TO-15 - EPA Method TO-15, Determination Of Volatile Organic Compounds In Air Collected In Specially-Prepared Canisters And Analyzed By Gas Chromatography/ Mass Spectrometry

Table 1 SVI 36 S Transit.xlsx



Site Name:		Site Code:		Operable Unit:			
Building Code:	Building N	Name:					
Address:			Apt/Su	ite No:			
City:	State:	Zip:	County	<i>r</i> :			
Contact Information							
Preparer's Name:			Phone	No:			
Preparer's Affiliation:			Compar	ny Code:			
Purpose of Investigation:			Date of	f Inspection:			
			Affiliat	tion:			
Phone No:			Email:				
Number of Occupants (total):							
Occupant Interviewed?		r Occupied?		Owner Interviewed?			
Owner Name (if different):			Owner F	Phone:			
Owner Mailing Address:							
Building Details							
Bldg Type (Res/Com/Ind/Mixed):			Bldg Si	ze (S/M/L):			
If Commercial or Industrial Facility, Sel	ect Operations:	If Residential	Select Struc	ture Type:			
Number of Floors: Appr	rox. Year Construction:	☐ Bu	Building Insulated?				
Describe Overall Building 'Tightness' a	and Airflows(e.g., results of smol	ke tests):					
Foundation Description							
Foundation Type:		Foundation D	epth (bgs):_	Unit: FEET			
Foundation Floor Material:		Foundation Fl	loor Thickne				
Foundation Wall Material:		Foundation W	/all Thicknes	S:Unit: INCHES			
Floor penetrations? Describe Fl	oor Penetrations:						
Wall penetrations? Describe W	/all Penetrations:						
Basement is:	Basement is:	☐ Su	ımps/Drains?	? Water In Sump?:			
Describe Foundation Condition (crack	ss, seepage, etc.):						
Radon Mitigation System Installed	d? □ VOC M	itigation System In	stalled?	Mitigation System On?			
Heating/Cooling/Ventilation	Systems						
Heating System:	Heat Fuel Ty	pe:		Central A/C Present?			
Vented Appliances							
Water Heater Fuel Type:		Clothes Dryer I	Fuel Type:				
Water Htr Vent Location:		Dryer Vent Loc	ation:				



Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

		PI	RODUCT INV	ENTORY					
Building Name	e:		Bldg C	Code:	Date:				
Bldg Address:					Apt/Suite	No:			
Bldg City/State/Zip:									
Make and Model of PID: Date of Calibration:									
Location	Product Name/Description	Size (oz)	Condition *	Chemica	al Ingredients	PID Reading	COC Y/N?		

July 1 Todacts With Co	Product Inventory Complete?	Were there any elevated PID readings taken on site?	Products with COC
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^{*} Describe the condition of the product containers as **Unopened (UO)**, **Used (U)**, or **Deteriorated (D)**

^{**} Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.



Site Name:			Site Code:	Operable Unit:
Building Code:	Buildi	ing Name:		
Address:				_ Apt/Suite No:
City:		State:	Zip:	County:
Factors Affecting Indoo	or Air Quailty			
Frequency Basement/Lowest	Level is Occupied?:		Floor Material:	
☐ Inhabited?	HVAC System On?	☐ Bathro	oom Exhaust Fan?	Kitchen Exhaust Fan?
Alternate Heat Source:				s there smoking in the building?
☐ Air Fresheners?	Description/Location of Air Fre	shener:		
Cleaning Products Used R	ecently?: Description of Cleaning	g Products:_		
Cosmetic Products Used F	Recently?: Description of Cosmeti	ic Products:_		
New Carpet or Furniture?	Location of New Carpet/Furnit	:ure:		
Recent Dry Cleaning?	Location of Recently Dry Clean	ned Fabrics:_		
Recent Painting/Staining?	Location of New Painting:			
Solvent or Chemical Odor	s? Describe Odors (if any):			
Do Any Occupants Use So	lvents At Work? If So, List Solven	ts Used:		
Recent Pesticide/Rodention	cide? Description of Last Use:			
Describe Any Household Activ	rities (chemical use,/storage, unver	nted appliand	ces, hobbies, etc.) T	hat May Affect Indoor Air Quality:
Any Prior Testing For Rado	on? If So, When?:			
Any Prior Testing For VOC	s? If So, When?:			
Sampling Conditions				
Weather Conditions:		Outd	loor Temperature:	°F
Current Building Use:		Baro	metric Pressure:	in(hg)
Product Inventory Complete?	Building Que	estionnaire Co	ompleted?	



Building Code:		Address:								
Sampling Information										
Sampler Name(s):			Sampler Com	pany Code:						
Sample Collection Date	÷:		Date Samples	Sent To Lab:						
Sample Chain of Custo	dy Number:		Outdoor Air S	ample Location ID:						
SUMMA Canister Ir	nformation									
Sample ID:										
Location Code:										
Location Type:										
Canister ID:										
Regulator ID:										
Matrix:										
Sampling Method:										
Sampling Area Info	O									
Slab Thickness (inches):										
Sub-Slab Material:										
Sub-Slab Moisture:										
Seal Type:										
Seal Adequate?:										
Sample Times and	Vacuum Readings	;								
Sample Start Date/Time:										
Vacuum Gauge Start:										
Sample End Date/Time:										
Vacuum Gauge End:										
Sample Duration (hrs):										
Vacuum Gauge Unit:										
Sample QA/QC Rea	adings									
Vapor Port Purge:										
Purge PID Reading:										
Purge PID Unit:										
Tracer Test Pass:										
Sample start	and end times shou	ld be entered using	the following for	mat: MM/DD/YYY	/ HH:MM					



Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

LOWEST BUILDING LEVEL LAYOUT SKETCH

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						Design	Sketch								
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	the distanc									on the	ayout	Sketch			
	oom use (b														
Identify the	ne locations	of the fo	llowing fe	eatures o	n the	layout	sketch, u	sing the	e appro	priate s	symbols	3:			
B or F	Boiler or	Furnace		0			floor or v								
HW		er Heater		XXXX						e or out	tside ou	ıter wal	ls as appr	opriate)	
FP	·														
WS	•														
W/D	Washer	/ Dryer		• 1/-											
 S	Sumps Floor Dra			• 0/ • PFI			on & labe				ies ield tes	ا - امما ا			
@												LILLIAG			



	FIR	RST FLOOR I	BUILDING LAYO	OUT SKETCH		
	lick the box with the b				r of the building.	Clear Image
The ske	tch should be in a stand	dard image fo	rmat (.jpg, .png, .tiff)	<u> </u>	Cicui illiage
			Design Sketch			
	Design	Sketch Guide	lines and Recomme	ended Symbology		
	nd label the locations of all					
■ Measure	the distance of all sample	locations from ic	dentifiable features, and	d include on the layo	ut sketch.	+++++
■ Identify ro	om use (bedroom, living ro	oom, den, kitche	n, etc.) on the layout s	keto		
	e locations of the following				nls.	
B or F	Boiler or Furnace	0	Other floor or wall pe			to)
HW FP	Hot Water Heater Fireplaces	XXXXXXX ######	Areas of broken-up of		outer walls as appropria	iie)
ws	Wood Stoves	● SS-1	Location & label of s			
W/D	Washer / Dryer	• IA-1	Location & label of in	•		
S	Sumps	• OA-1	Location & label of o			+++++
	Floor Drains				set holes	
@	I IOOI DIAIIIS	• PFET-1	Location and label of	i any pressure neid te	331 HUICS.	



Structure Sampling Questionnaire and Building Inventory

New York State Department of Environmental Conservation

OUTDOOR PLOT LAYOUT SKETCH Please click the box with the blue border below to upload a sketch of the outdoor plot of the building as well as the surrounding area. The sketch should be in a standard image format (.jpg, .png, .tiff) Clear Image Design Sketch Design Sketch Guidelines and Recommended Symbology ■ Identify and label the locations of all sub-slab, indoor air, and outdoor air samples on the layout sketch. ■ Measure the distance of all sample locations from identifiable features, and include on the layout sketch. ■ Identify room use (bedroom, living room, den, kitchen, etc.) on the layout sketch ■ Identify the locations of the following features on the layout sketch, using the appropriate symbols: B or F Boiler or Furnace 0 Other floor or wall penetrations (label appropriately) HW Hot Water Heater XXXXXX Perimeter Drains (draw inside or outside outer walls as appropriate) FP ###### Fireplaces Areas of broken-up concrete WS Wood Stoves SS-1 Location & label of sub-slab samples W/D Washer / Dryer Location & label of indoor air samples IA-1 s Sumps Location & label of outdoor air samples OA-1 Floor Drains Location and label of any pressure field test holes. @ PFFT-1