

MID-HUDSON GEOSCIENCES 1003 Route 44/55 P.O. Box 32 Clintondale, NY 12515-0032

Phone (845) 883 5726 rockdoctor@optonline.net May 9, 2017

Mr. Parag Amin, P.E. NYS Department of Environmental Conservation Division of Env Remediation, Remedial Bureau C 625 Broadway Albany, NY 12233-7014

RE: American Cleaners @ Middletown VCP Site No. V00461-3, Orange County
Amendment to Work Plan to Install Replacement Monitoring Wells

Dear Parag,

This letter provides an amendment to earlier Monitoring Well Installation Work Plans for the replacement of two paved-over monitoring wells and a third well to try to identify the end of the PCE plume at the American Cleaners Middletown site (see attached location map).

We have a tentative date for drilling for Monday or Tuesday, May 15 or 16. The driller is Core Down Drilling, the company, which purchased Todd Syska's Geoprobe rig and he trained them on the use of it. The driller's name is Andrew Bellucci and phone number is (845) 625 3401.

The monitoring well locations may be adjusted to avoid utilities. If the subsurface is impenetrable with the Geoprobe, the rig will be moved to another location and a new boring will be installed. The locations on the parking lot are not likely to have any penetration problems, but the well on the grassy area to the southwest may be problematic. Boulder fill and infrastructure could present a problem in that area. If after four attempts, the third well cannot be installed with a Geoprobe, we will remobilize with a soils rig with roller bit capabilities.

The Geoprobe will collect the plastic encased cores at 4-foot intervals for at least one location.

The well specifications include, boring at least five feet into the shallow water zone. Materials will all be one-inch diameter schedule 40 PVC. 5-feet of 0.010 inch slotted screen in the most saturated section of the boring with sand placed in the annular space over the screen section and up to 1 to 3 feet above the top of the screening depending on the lithology. If muddy fine material is above the water-bearing zone, the sand will be minimal. Above the sand, a three foot bentonite seal will be place in the annular space. Concrete will be used to install the small manhole in place level with the top of the pavement.

For the one well in the grass, a small 18 by 18-inch concrete pad will be installed around the mini-manhole, set at the level of the grass, so mowing can take place without disturbing the wellhead.

**Health and Safety.** A health and safety meeting will occur on-site prior to beginning work. The Health and Safety Plan will be updated, if it has not been already changed to reflect the new hospital location.

If additional information is need, I will be ready explain, clarify or supplement this plan.

Yours truly,

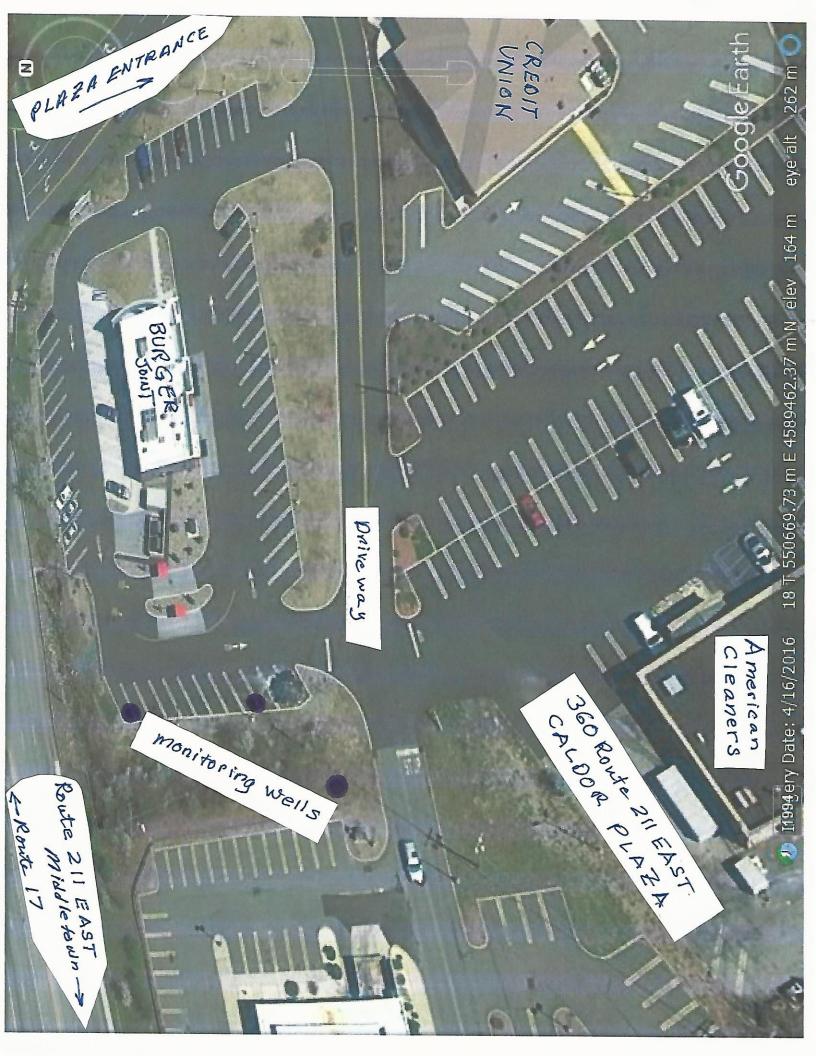
Katherine J. Beinkafner, Ph.D.

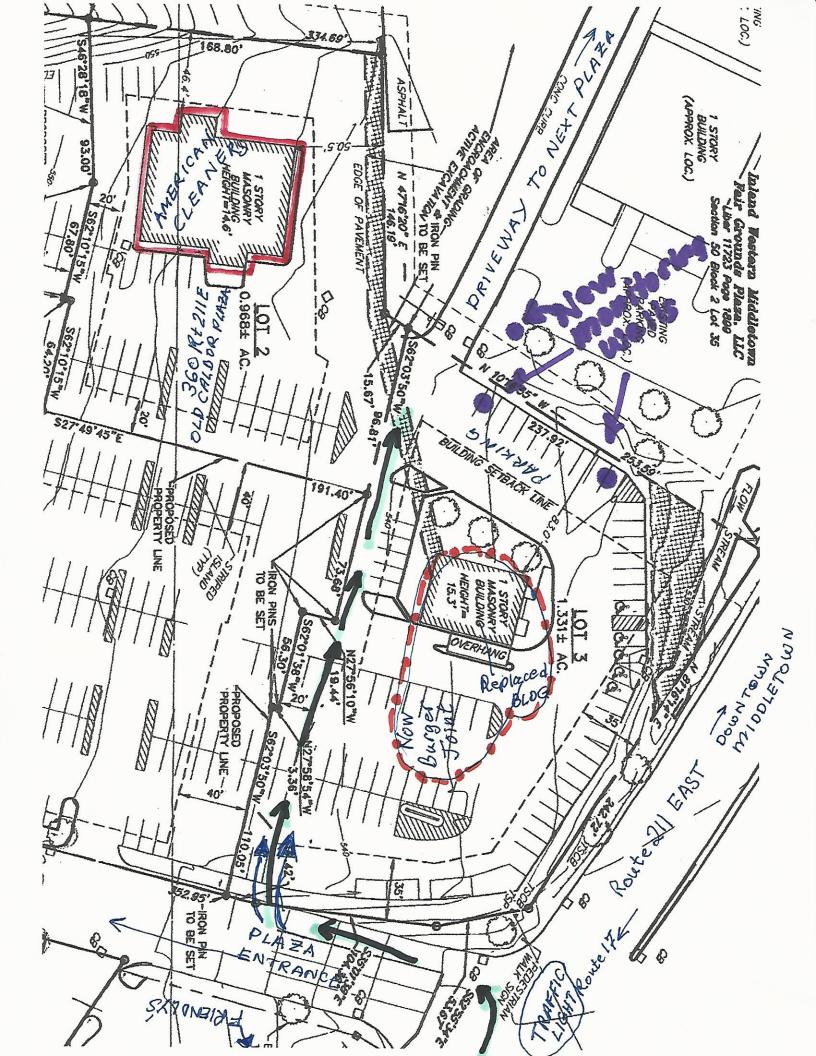
Certified Professional Geologist #6611

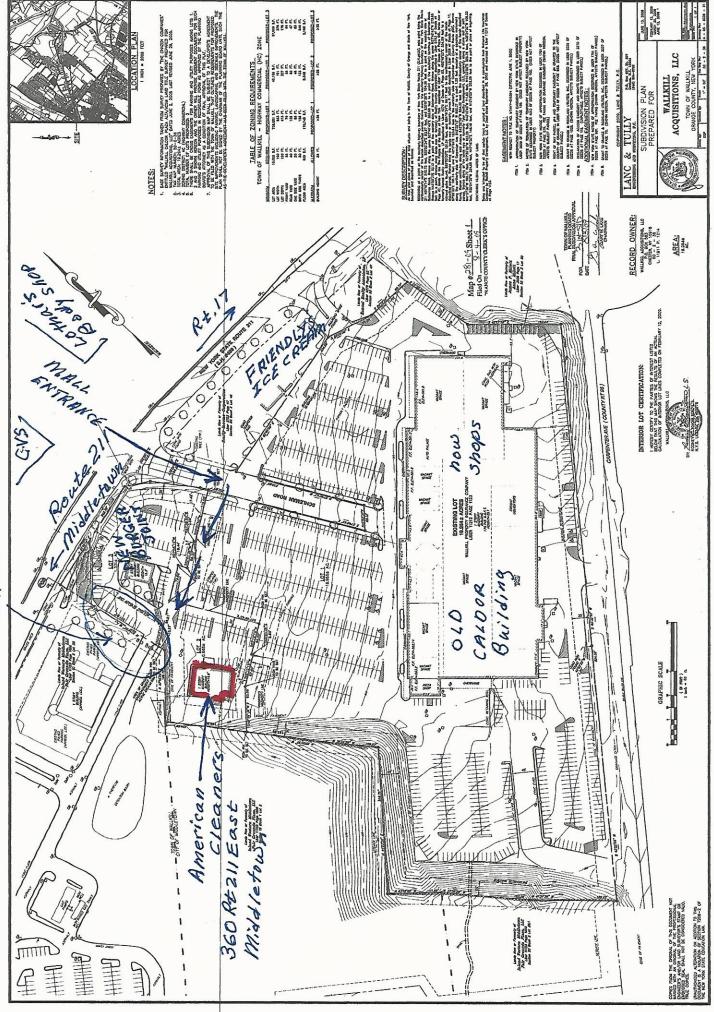
Katherine JBeinkaper

Cc: Erez Halevah, American Cleaners

David Crosby, NYS DEC Jolanda G Jansen, P.E.







3 New Well Locations 7/17/12 PCE=ND CE=ND TCE+ND TCE=ND cisDCE=1. cisDCF=4 MW28 PCE=270 TCE=24 disDCE=25 7/17/12 PCE=250 Cheeseburger Paradise TCE=ND 1600cisDCE=32 -200 Restaurant 200 Lloyds Lane Abdnd SDwell PCE=47 **Not Sampled** TCE=4J ND MW24 7/17/12 cisDCE=24 1800 PCE=2200 7/17/12 TCE=58 ND ND PCE=340 cisDCE=64 TCE=14 MW26 VC=3J sDCE=43 PCE=2600 T8 T3 TCE=64 o ND PCE=18 TCE=2 cisDCE=64 DCE = VC=2 340 clsDCE=1J GEND PCE 7/17/12 **MW25** PCE=1300 PCE=910 toring Wells TCE=17 TCE=19 Interval as cisDCE=15 cisDCE=22 ı lines. MVVZ T2 PCE=69 Not Sampled TCE=7 ISDCE=3J water MW3 PCE=430 TCE=10J ction cisDCE=15J American MTBE=6.1 Cleaners MW5 entrations are in PCE=240 ns per Liter (ug/L) MW22 MW6 PCE=280 TCE=11 Results for cisDCE=5J idlent monitoring Wells MW2 PCE=110 PCE & PCE=110 other VOCs in ug/L MW4° ND SCALE IN FEET ND **MW21** 5-18. PCE Plume in January 2010 showing American Cleaners at Caldor Lloyds Mail Mid-Hudson Geosciences nd 2012 VOC concentrations for 5 down-340 Route 211 East, Middletown, NY 10940 Katherine J. Beinkatner, PhD, CPG #6611 nt wells, shown in circles. 1003 Route 44/55, PO Box 332 Clintondale, NY 12515-0332 NYSDEC DER VCP V-00461-3, Feb 2010 n Engineering, PLLC (845) 883-5866 4/13/17 results for mw25, mw26, 75 rockdoctor@optonline.net

Mid-Hudson Geosciences		Subsurface Soil Boring		Well ID:	MW25	D	Date Started:			11/10/09		
			Log		Sheet	Date Finished:						
			can Clear					stigation: Geoprobe				
Location: Caldor Plaza, Middle Project Manager: Drilling				g Co: Todd J. Syska, Inc. Driller:					Weather:			
							Geoprobe				Weather.	
		' Sampl				<u> </u>					Groundwater	
Depth			Recovery		Sample		PID		Vell		and Other	
(ft.)	No.	(feet)	(inches)		Description		ppm	De	etails	П	Observations	
	1	0-4	41	0-0.2' Black to	•		0.0		- III	$\parallel$	FlushMountTop	
				1	oist dk gray-black san			 		 888	Concrete	
				1	np silt & clay some ro	ck frags						
2				1	ners @ 2' & 2.4"						1-2.5'	
				3.7-4" Damp (	dk gray brown clay, sl	igntly silty	0.0				Bentonite	
4											0-5' Sch40 PVC	
┢╌	2	4-8	36.0	4-4 5' Damn v	yell-brown-gray silt, w	rinkled heds	0.0				1" ID Riser	
		4.0	00.0	1	pact yell-brown-gray s		0.0				1 15 Table	
				1	gray rock channer	,,						
6				1	o yell-brown gray silt							
				1	own sandy silt, trace o	lay	0.0					
				Rock channe	-	,					2.5-15'	
				1	_						#00 Sand	
8				<u> </u>								
	3	8-12	42	8-9.3' Saturat	ted soupy loose sand,	, silt, rx frags						
				9.3-10.9' Mois	st subcompact sand,	silt, rx frags						
				10.9-11.6' Da	mp compact sand, sil	t rx frags						
10				11.6-12' Whit	e rock channer, Shaw	angunk Cong						
				ļ								
											3.5-8.5'	
				ļ							1" ID Screen PVC	
12		10.10		40.40.01.0							Sch40 slot=0.01"	
	4	12-16	23	12-13.6' Souր	,	- 114						
				12 4 14 6' \\/	w yell brown sand &							
14				1	et yell brown clayey si imp gray silty clay	II						
				14.0-15.5 Da	imp gray silty clay							
											Bottom Plug	
					End of Boring = 15.2	feet					_ouom riug	
16				1	12.2.20							
				1								
				]								
				<u> </u>								
	le Туре						Back					
		Spoon:		nelby Tube:			Cemer	ıt 🊃		8	Fine Sand	
II .		k Core:	0 =	2 ft contiuc	ous sampler		Sand				Bentonite	
N = ASTN	л D1586					[0000000000000000000000000000000000000	Saliu	888	000000	H	הבווטווופ	

Mid-Hudson Geosciences		Subsurface Soil Boring		Well ID:	Well ID: MW26			Sta	11/10/09		
				Sheet 1 of 1				ite I	Finis	11/10/09	
Ι.			can Clear		stigation: Geoprobe						
				etown, NY	I Sveka Inc	Driller:	Todd				Weather:
				, ,			Geoprobe				vveatilei.
		' Sampl		3		<u> </u>					Groundwater
Depth			Recovery		Sample		PID		Wel		and Other
(ft.)	No.	(feet)	(inches)		Description		ppm		Deta III	ils IIIII	Observations
	1	0-4	36	0.0.0.7! Maia	م معادل المعادد المعاد		0.0				FlushMountTop
					dk brown gray sand ell gray clayey silt			₩	▦		Concrete 1-3'
2				3.2-3.3' Rock							Bentonite
<u> </u>				3.3-4' Gray gi			0.0				Bontonito
				3.0							0-3' Sch40 PVC
											1" ID Riser
4									_		
	2	4-8	32.0	4-4.3' Dry yel	l gray silt, wrinkled be	ds	0.0				3-14'
				4.3-4.7' Rock	channers & dk gray o	lay					#00 Sand
				· ·	soft yell brown silt						
6					red-yell iron staining						4-14'
					mpact yell brown silt		0.0				1" ID Screen PVC
				w large rock f	ragments						Sch40 slot=0.01"
8											
0	3	8-12	40	8-10 5' Soun	/ silt & rock frags						
	3	0-12	40	0-10.5 Soups	siit & rock irags						
				10.5-12' Drv	yell brown silty clay						
10				,	,						
12											
	4	12-14	22		own silt w few rock fra	igs					
				soft at top, co	mpact at bottom						
											5 5.
14					Defined of 44 for						Bottom Plug
					Refusal at 14 feet						
16											
. ,											
	Іе Туре						Back	_			
		Spoon:		elby Tube:			Cemer	nt 🖁	***	<b>***</b>	Fine Sand
II		k Core:	0 =	∠ π contiuc	ous sampler		Sand				Bentonite
N = ASTN	שאפועוי					000000000000000000000000000000000000000	Janu	i d	00000	2000	שפוונטווונכ

Mid-Hudson Geosciences		Subsurface Soil Boring		Well ID:	Well ID: MW28		ate	Sta	11/12/09				
				og	Sheet	1 of 1	Da	te F	inis	hed:	11/12/09		
		-	can Clear					stigation: Geoprobe					
Location: Caldor Plaza, Middle Project Manager: Drilling					I Sveka Inc	Driller:	Todd				Weather:		
				, ,			Geoprobe				vveatilei.		
		' Sampl				<u> </u>					Groundwater		
Depth			Recovery		Sample		PID		We		and Other		
(ft.)	No.	(feet)	(inches)		Description		ppm	]	Deta ⊓⊓	ils IIIII	Observations		
	1	0-4	30	0-0.7' Wet dk			0.0				FlushMountTop		
				1	l brown silt w gravel-s						Concrete		
2				, 	ock frags, wrinkled be	edding							
							0.0	₩			2-7.5'		
											Bentonite		
4											0-9.5' Sch40		
	2	4-8	30	4-4.7' Sticky \	wet silt, clay, rock frag	js	0.0				PVC 1" ID Riser		
		4.5	sample	4.7-5.1' Dam	gray stained, sandy	& silty clay							
					petroleum odor								
6				1	o, soft gray clay								
				5.5-8' Dry yel	l brown silt		0.0						
8									**				
	3	8-12	34	8-8 3' Wet sti	cky yell gray sand, sil	t & clav					7.5-14.5'		
		<u> </u>	<u> </u>	8.3-8.7' Wet o		· c. c.c.y					#00 Sand		
				1	yell brown silty clay w	sand & rxf							
10				10.8-12' Satu	rated sopupy sand, si	ilt & rock frags							
											9.5-14.5'		
											1" ID Screen PVC		
12											Sch40 slot=0.01"		
	4	12-16	45	1	rated sticky brown si								
				1	rated soupy yell brow rated yell brown silt	n siit & sanu							
14				1	mp yell brown silt								
				15.6-16' Dry							Bottom Plug		
				ĺ ,							Ŭ		
16													
	5	16-20			End of Boring = 16 t	feet							
Sama	le Type	.c.			1		Pool	fill \	Λ/οΙΙ	Kov			
		s. Spoon:	T= Sh	nelby Tube:		ППППППППППППППППППППППППППППППППППППППП	Back Cemer				Fine Sand		
11		k Core:		-	us sampler		2 0 1 1 1 0 1	`` <u>@</u>	****	****			
N = ASTN	1 D1586				-		Sand				Bentonite		

## Berninger Environmental, Inc. groundwater consultants, geologists 90 B Knickerbocker Avenue

Bohemia • New York • 11716

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Temp Well-03	85	,12 - 16 ft bgs	Saturated silty clay till with fine sand.	ML
Temp Well-03	90	16 - 20 ft bgs	Thin gravel and angular stone layer, wet. Saturated silty clay with very fine sand. Temp well-3 set with ten feet 0.10 screen from 10-20 ft bgs, 0-10 ft solid riser.	ML
Temp Well-04		0-20 ft bgs	Temp well-4 set with ten feet 0.10 screen from 10-20 ft bgs, 0-10 ft solid riser. Depth to groundwater was 11.17 ft bgs.	NA
Temp Well-05	V.	0-20 ft bgs	Temp well-5 set with ten feet 0.10 screen from 10-20 ft bgs, 0-10 ft solid riser. Depth to groundwater was 19.8 ft bgs.	NA
Temp Well-06	90	0 - 4 ft bgs	2-inches of asphalt. Grey dense clay with fine sand and large angular gravel from 0-2 feet bgs; with plastic clay slightly wet from 204 feet bgs.	ML
Temp Well-06	85	4 - 8 ft bgs	Rock, grey-green silty fine sand interbedded with silty plastic clay; partially saturated.	CL/ML
Temp Well-06	90	8 - 12 ft bgs	8-9 feet bgs same clay as above; 9-11 fine sand in clay (wet); 11-12 feet bgs was grey clay dryer and brittle;	CL/ML
Temp Well-06	80	12 - 16 ft bgs	12-13 brown sandy layer saturated; 13-15 dark grey clay more plastic, less wet. 15-16 feet bgs, plastic more disturbed clay with red angular fragments, yellowish clay with angular dryer texture.	SM/CL
Temp Well-06	90	16 - 20 ft bgs	Grey very saturated silty fine sand, grading into tighter grey clay. Bedrock at 20 feet bgs - dark black colored shale. Temp well-1 set with ten feet 0.10 screen from 9-19 ft bgs, 0-9 ft solid riser.	CL/ML
Temp Well-07		0-18 ft bgs	Refusal at 18 feet bgs. Temp well-7 set with ten feet 0.10 screen from 8-18 ft bgs, 0-8 ft solid riser.	NA
Temp Well-08		0-18 ft bgs	Refusal at 18 feet bgs. Temp well-8 set with ten feet 0.10 screen from 8-18 ft bgs, 0-8 ft solid riser. Depth to groundwater was 16"9".	NA
Temp Well-09		0-20ft bgs	Temp well-9 set with ten feet 0.10 screen from 10-20 ft bgs, 0-10 ft solid riser.	NA
Storm Sewer Well		0-12 feet bgs	Five feet of 2-inch PVC 0.20 screen set from 7- 12 ft bgs. Saturated at 7 feet bgs. Dense grey till from 0-5 feet bgs; grading into sandy silty plastic clay (saturated).	NA