

Geology

Hydrology

Remediation

Water Supply

May 14, 2001

Mr. Ramanand Pergadia Mr. John Rashak NYSDEC - Region 3 21 South Putt Corners Road New Paltz, New York 12561-1696

Re:

Revised Ground Water Monitoring Plan

New Paltz Plaza Site No. 356021

Dear Gentlemen:

Alpha Geoscience (Alpha) has prepared this Revised Ground Water Monitoring Plan (the "Plan") on behalf of New Paltz Plaza Properties, L.P. (NPPP) as part of a Voluntary Cleanup Agreement (Index No. W3-0782-97-10) with the New York State Department of Environmental Conservation (NYSDEC). A Ground Water Monitoring Plan was initially prepared and submitted to the NYSDEC on June 1, 1999. The Plan has been revised based on subsequent correspondence with NYSDEC personnel, and discussions between representatives of the NYSDEC and NPPP on October 8, December 17, December 21, 1999 and January 24, 2001. This Plan includes a commitment to submit a contingency plan within six (6) weeks of NYSDEC approval of this Plan The purpose of the contingency plan will be to define the remedial actions which might be employed if monitoring criteria are exceeded. Submission and approval of the contingency plan as a separate document will allow timely approval and implementation of this revised ground water monitoring plan.

One year of post-remedial ground water monitoring was completed on February 25 and 26, 1999 when fourth quarter ground water samples were collected at the site. Completion of the fourth quarter monitoring satisfied the ground water monitoring requirements specified in the October 27, 1997 approved Remediation Plan. The approved Remediation Plan states that "a continued long term monitoring plan will be proposed which identifies sampling locations, sampling frequency, analytical methods, and reporting requirements" after the first year of monitoring. This Plan addresses the requirements for continued long term monitoring and constitutes an addendum to, and is made part of the October 27, 1997 approval Remediation Plan which is Exhibit C of the Voluntary Cleanup Agreement.

The continued monitoring will include sampling and measurements to document horizontal and vertical ground water gradients and to monitor the long term ground water quality. The objective of the monitoring will be to evaluate changes in ground water quality due to site remediation. Site remedial activities completed in January 1998 included the removal and disposal of soil which may have acted as a continuing source of ground water contamination.

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Ground water quality is expected to improve as a result of remediation due to the removal of contaminated soil and natural attenuation. Improvements in ground water quality may not be apparent for several years due to low permeability of site soil and the time necessary for residual contaminants to naturally degrade and attenuate.

Sampling Locations

Ground water samples will be collected from each of the existing site monitoring wells including overburden wells MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-8 and MW-9, and bedrock wells BR-1, BR-2 and BR-3. The location of these wells is shown on Figure 1. Monitoring well logs for these wells are provided in Attachment 1. Ground water samples will also be collected from a new well pair (MW-10/BR-4) on the same schedule as the existing wells, after the new wells are installed.

Sampling Frequency and Duration

Ground water samples will be collected on a quarterly basis for one additional year to evaluate changes in the ground water quality. The last round of samples were collected on February 25 and 26, 1999. The future quarterly sampling events will commence within two weeks of approval of this Plan. The sampling results will be evaluated at the end of the quarterly monitoring period. An annual sampling schedule will be selected based on the review of the quarterly monitoring data.

Monitoring will be suspended at any well where concentrations of the analyzed volatile organic compounds (VOCs) meet the respective New York State ground water standards for three consecutive annual monitoring events. A final round of ground water samples will be collected from all eleven site monitoring wells and analyzed for VOCs after ground water standards have been achieved in all wells over three consecutive monitoring events. The objective of the final round of samples will be to confirm that concentrations of VOCs do not exceed the applicable New York State ground water standards in the site wells, including those wells which may have been suspended from the monitoring program. Once the New York State ground water standards are met in the site wells, as confirmed by the final round of ground water monitoring, the investigation remediation and monitoring obligations of the owner will cease, the NYSDEC will provide a release to the owner as specified in the Voluntary Agreement, and the site will be delisted from the New York State Registry of Inactive Hazardous Waste Sites.

Sampling Methods and Analysis

Ground water samples will be collected using the same methods specified in the approved Remediation Plan. A copy of the ground water sampling protocol from the approved Remediation Plan is presented in Attachment 2. Ground water generated during purging will be temporarily containerized and subsequently transported off site for disposal. Samples will be

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analyzed at a NYSDOH-approved laboratory for VOCs by EPA Method 8260. Laboratory reporting will be according to NYSDEC ASP Category B deliverables.

Ground water samples from wells MW-2, MW-3, MW-4, MW-6 and BR-1 were analyzed for base-neutral compounds by EPA Method 8270 during each of the four previous quarterly monitoring events. No base-neutral compounds were detected in the samples collected from these wells during the one year of quarterly monitoring. Analysis for base-neutral compounds will be discontinued based on these results.

Quality Assurance/Quality Control

Analyses which are part of this monitoring plan will be performed according to SW-846 protocols with NYSDEC ASP Category B deliverables. Samples will be analyzed by a NYSDOH-ELAP-approved and ASP-certified laboratory. Laboratory reports will include the results of analysis of matrix spike/matrix spike duplicates, method blanks and blank spikes. Quantitation reports will be provided for each sample analyzed and for analysis of laboratory standards.

Field duplicate samples will be used to assess the variability of a matrix at a specific sampling point and to assess the reproducibility of the sampling method. Field duplicate samples will be defined as a second sample collected from the same location, at the same time, in the same manner as the first, and placed into a separate container (with no prior mixing). Field duplicate samples will be analyzed at a frequency of one per round of ground water samples. Each duplicate sample will be analyzed for VOCs by EPA Method 8260. Thus, both total and component (field vs. lab) variability can be determined.

Trip blanks will be utilized for ground water samples at a frequency of one for each round of samples sent to the laboratory for analysis. The purpose of the trip blank will be to place a mechanism of control on sample bottle preparation and blank water quality, as well as sample handling. The trip blank is transported to the site with the empty sample bottles and back from the site with the ground water samples, thus duplicating sample handling conditions.

Field quality control will include calibration of the pH, specific conductance and turbidity field instruments. The instruments will be calibrated prior to each sampling event and the results of the calibration will be documented on the field log or instrument log book. The pH meter will be calibrated using commercially prepared buffers of pH 4.0, pH 7.0 and pH 10.0 to obtain readings which are \pm 0.5 pH units. Specific conductance and turbidity will be calibrated to \pm 10 percent of the calibration standard. The specific conductance standard will be a 0.01 M or 0.1 M potassium chloride solution. The turbidity will be calibrated to 0.5 and 5.0 NTU commercially prepared standards.

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A Data Usability Summary Report (DUSR) will be completed for each sampling event and will be included with corresponding reports. Category B deliverables from the laboratory will be held in reserve for full data validation, if necessary.

Reporting

An annual report will be prepared for submittal to the NYSDEC following the completion of each year of monitoring. The annual report will be submitted within three months of the sampling event. The report will contain a detailed description of the sampling methods, a summary of analytical results, applicable data usability summary reports, ground water contour maps for the overburden and bedrock, and field documentation relevant to the sampling event. The report will include interpretations and conclusions based on the results of each round of monitoring.

Contingency Plan

A contingency plan will be prepared and submitted to the NYSDEC within 6 weeks of approval of this Plan. The purpose of the contingency plan will be to present the feasible technologies which could be implemented, subject to NYSDEC approval, in the event that concentrations of VOCs in ground water do not attenuate within an acceptable period of time. Tables and graphs of total VOCs for each of the eleven wells will also be provided in the contingency plan to show the trend of the concentration of total VOCs since the completion of the remedial excavation in January, 1998.

The decision to implement the contingency plan will be based on the trend of the total volatile organic compounds in the ground water, as demonstrated by concentration curves prepared for wells MW-2 and MW-9 (Attachment 3). The month selected for annual monitoring will be based on the monitoring results. The month selected for annual monitoring will be based on one year of quarterly monitoring conducted in accordance with this Plan. One month during the quarter producing the highest concentration of total VOCs in MW-2 (during the one year of quarterly monitoring) will be chosen as the month for all subsequent annual monitoring. The contingency plan will be implemented only if the concentrations specified by the curves are not met for three consecutive annual monitoring events (beginning with the date of agreement by both parties and agency approval of this Revised Ground Water Monitoring Plan, which for the purpose of this sentence does not include the contingency plan). If the annual data for total VOCs for three consecutive years exceeds the "maximum allowable concentration" curve for either MW-2 or MW-9, the contingency plan will be implemented within one month of notification by the NYSDEC.

The starting point for the curves are the concentration of total volatile organic compounds (VOCs) for the last round of ground water samples collected at the site (February, 1999). The endpoint for the curves assumes that the ground water standard of 5 parts per billion (ppb) will

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be met after 15 years for the five VOCs historically detected in these wells (ie., 25 ppb total VOCs). The curves also allow a 20 percent exceedance at any given point during the monitoring period, as represented by the "maximum allowable concentration" curve. The data used to generate the curves is also presented in Attachment 3.

This Revised Ground Water Monitoring Plan addresses the comments and issues raised by the NYSDEC, with regard to long term monitoring at the New Paltz Plaza site. The contingency plan will be prepared and submitted within six weeks of approval of this Revised Ground Water Monitoring Plan. The contingency plan will evaluate the need for further remediation, if any, based on the monitoring data, and will analyze the applicable technologies which may be used as contingency measures, for site appropriateness.

Please provide your written approval to proceed with this proposed ground water monitoring plan, so that the monitoring can proceed according to the proposed schedule.

Sincerely,

Alpha Geoscience

Thomas M. Johnson Hydrogeologist

TMJ/dt

cc:

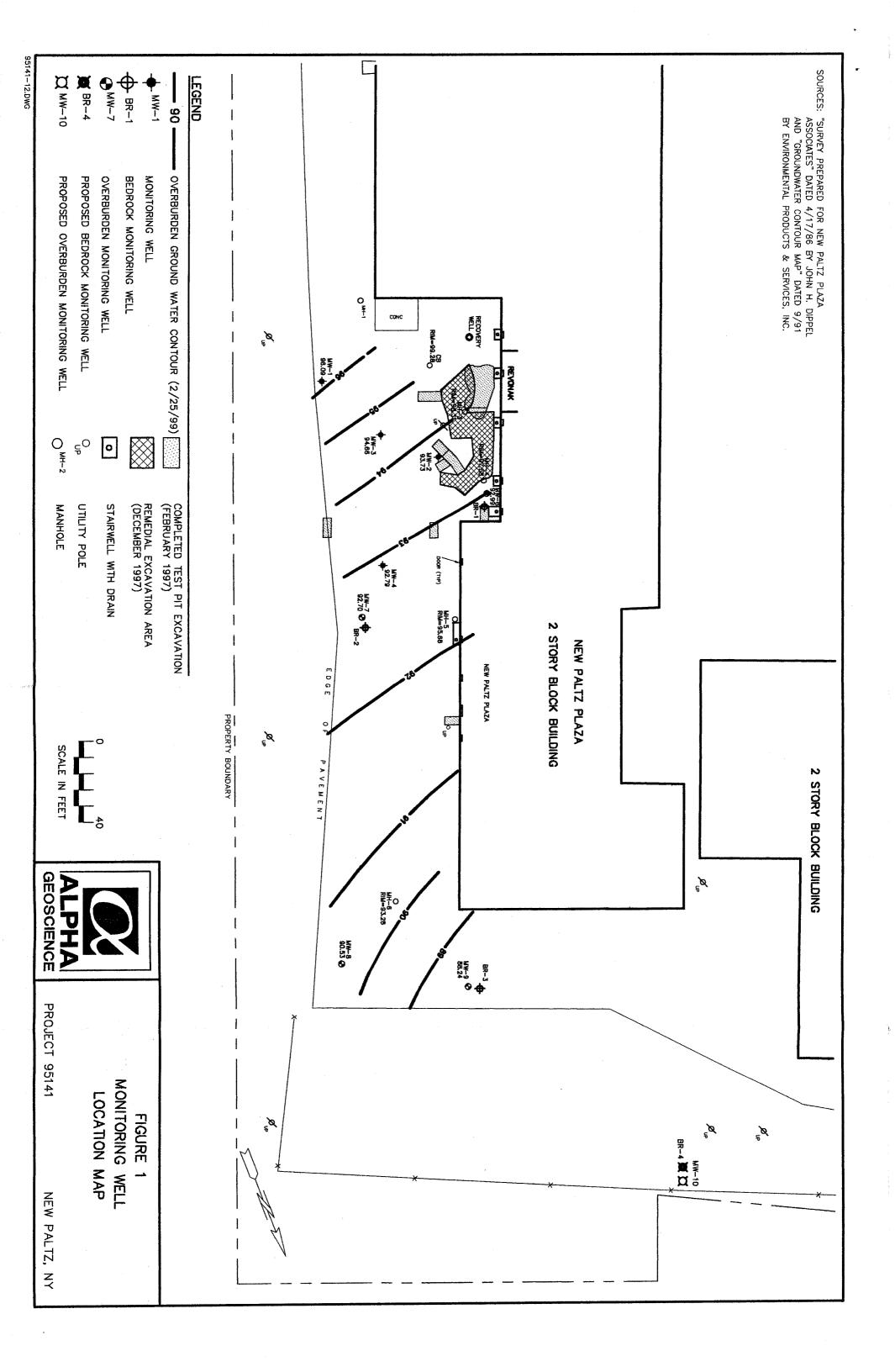
P.K. Kempner

G.A. Carlson

R.K. Rusinko

G.J. Laccetti

K. M. Young, Esq.



ATTACHMENT 1

Monitoring Well Logs

					T				Well No.:	1		
Environmental PRODUCTS & SERVICES, INC.					Sheet 1 of 1							
Project Location: New Paltz, NY					Groundwater Depth: Date:							
111			Type: 2' Split Spoon Hammer: 140 lbs. Fall: 30 inches		Project N	o.: 45N1827	7					
			rick Drilling		1		\Box_1	Driller:				
Projec	nt Co	ordinato	r:					Ground Elevation: Date Started:		Ende	d:	
Geolo	gist:	Robert					_1'	Date Clarton	Stratum			
			Sampl	Γ		1	Sam	•	Change General	Equipment		
Depth (ft.)	No.	Depth (ft.)	Blows /6*	Penetr/ Recovry	"N" Value	De	scri	ption	Descrip.	Installed	Observation	s/Remarks
0						3" Asphalt, cru	ushe	d stone, dark brown any pebbles (gravel).				ļ
						Jane, Oler III						
2											5' of .020 4" P	VC riser
												1
4						Same, moist,	som	e clay.				
						Pebbbles.						
6						Gray brown social, moist.	andy	y soll, many pebbles,				
					<u> </u>	day, moist.					10' of .020 4"	
8						Layer of pea	size	d smooth gravel.			10° of .020 4	SCI 8011
	Π					Sandy gravel	l, silt	, day, moist.				
10												
						4					Bolders en∞ 13'.	untered 10' -
12												
					<u> </u>	_						
14				1		_					Boring termin	nated at 15'.
						_						
16		<u> </u>				_						
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Add	lition	al Rema	ırks:					KEY:		er Spoils		Bentonite
1.						4	11		Cem	ent		Sand

								Well No.:	2	I
Environmental SUBSUF		SUBSURF	-ACE LOG	Sheet 1	of 1					
SAN SAN			IPLER	1	iter Depth:	Date:				
Type: 2' Split Splient: Victory Markets, Inc. Type: 2' Split Spli			ner: 140 lbs.	Fall: 30 Inch	es Project No	o.: 45N1827				
rilling	Co.	.: Kend	rick Drilling or:				Driller: Ground Elevatio Date Started:	n:	Endec	j:
eolo	gist:	Hobert	Hulihan Samp	le	<u> </u>			Stratum Change		
epth (ft.)	No.	Depth (ft.)	Blows /6*	Penetr/ Recovry	"N" Value		ample scription	General Descrip.	Equipment Installed	Observations/Remarks
0						6° Asphait, crus sand), dry.	shed stone (pea gravel,			Very hard drilling
						Said, Gy.				(copples)
2						Sand, fine grav	el, silt, dry.			3' of 4" PVC riser
							obbles, sand, clay, silt,	į		
4						dry.				
	\vdash									
6	1					1				
	1					Brown SAND,	many pebbles and	▽	z 📗	
8	╁╾	 		1		cobbles, clay.	siit, moist.			10' of .020 4" screen
-	+-			1						
	+	 		+		1				
10	╁╌	<u> </u>	-		1	1	•			
	+			-	 	-				
12	+	 	-		-	-				Boring terminated at 13'.
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								777777	- Spoils	Bentonite
Ad	ditio	nai Rem	arks:						er Spoils	Sand
			•					Сеп	ient	Carlo

Project Location: New Paltz, NY Client: Victory Markets, Inc. Diffiling Co.: Kendrick Drilling Project Coordinate: Geologist: Robert Hullian Sample Depth (H.) No. Dapth Bewe Parestri (H.)	Environmental SUBSUR PRODUCTS & SERVICES, INC.		RFACELOG Sheet 1 of 1									
Client: Victory Markets, Inc. Hammer: 140 lbs. Fall: 30 Inches Project No.: 45N1827 Drillier: Geologist: Robert Hufflian Project Coordinator: Geologist: Robert Hufflian Geolog	Project Location: New Paltz, NY SAI					Groundwater Depth: Date:						
Project Coordinator: Geologist: Robert Hullhan Sample Sample Depth Semple Sample Depth Recovry Value Frequency Frequenc	Type: 2" Split Spc			on	Fall: 30 Inches	Project No	o.: 45N1827	,				
Sample Depth Blow Perett/ TY (ft.) No. (ft.) Blow Recovry Value Sample Description Sample Description A Asphal, crushed stone Dark brown sand, sit, first clay, petoles, dry. Shale boulder, moist Shale boulder, moist Shale boulder, moist 13.5; Black gray shale, solid sandstone, petoles and stone, petoles and sandstone, petoles and sands	Projec	t Co	ordinato	r:		_		- 10	Ground Elevation:		Ende	d:
Depth (ft.) No. (ft.) Blows Penetry TV value Description General Equipment Description Observations/Remarks. 4 A physic towns and, elit, little clay, pabbles day. 5 Doubler Doubler	Geolo	gisi.	Hobert		ө							
4 Apphalt, crushed stone Dark trown sand, six, little clay, pebbles,dry, pebbles,dry, Boulder Shale boulder, molet 11.5°: Black gray shale, solid sandstone, pobbles 14 PVC steen 15 Oring terminated at 15°. Auger Spoils Bentonite										General	Equipment Installed	Observations/Remarks
2 Debbles, dry. Boulder Shale boulder, moiet Shale boulder, moiet 10 Debbles, dry. 11 Debbles							4" Asphalt, cru	ushe	d stone		[
2 Boulder Boulder Shale boulder, moist State boulder, moist								and,	siit, little clay,			
Shale boulder, moist Shale boulder, moist	2											5" of 4" PVC riser
8	4						Boulder					
8												
10 10 13.5": Black gray shale, solid sandstone, pebbles 13.5": Black gray shale, solid sandstone, pebbles Boring terminated at 15". Additional Remarks:	6						Shale boulder	r, mo	ist			
10 10 13.5": Black gray shale, solid sandstone, pebbles 13.5": Black gray shale, solid sandstone, pebbles Boring terminated at 15".		-				 	4					
13.5: Black gray shale, solid sandstone, pebbles 14.	8		ļ	 		 	1			×		
13.5: Black gray shale, solid sandstone, pebbles 14. 14. 15. 16.	10	\vdash				1	1					10' of 020 4" PVC screen
13.5': Black gray shale, solid sandstone, pebbles Boring terminated at 15'. Boring terminated at 15'. Additional Remarks:	<u> </u>	 					1		•			10 01:020 4 : 10 00:000
Pebbles Boring terminated at 15. 16 Additional Remarks: Bentonite	12]					
Boring terminated at 15. 16 Additional Remarks: Boring terminated at 15. Boring terminated at 15.								gray	shale, soild sandstone,	ŀ		
Additional Remarks: Auger Spoils Bentonite Bent	14	-	-									Boring terminated at 15°.
Additional Remarks: KEY: Marger Spoils Bentonite		-	-	<u> </u>	-	-		-				
Additional Remarks:	16	╫		-		 						
Additional Remarks:		-										
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Additional Remarks:	-	+	1				7					
Additional Remarks:												
II KEV:									777777	777 A.v.	Spoils	Bentonite
	Add	itiona	ai Hema	rks:				1	← γ· ———			Sand

Environmental su			SUBSURF	SUBSURFACELOG Well No.: 4 Sheet 1 of 1							
PRODUCTS & SERVICES, INC.				SAM	PLER	Groundwa	ter Depth:	Date:			
Project Location: New Paltz, NY Type: 2' Split Hammer: 140											
			rick Drilling		1		Driller:				
Projec	xt Co	ordinato	r:				Ground Elevation: Date Started:		Ended	d:	
Geolo	gist:	Robert	Hulihan Sampl				Date Vision	Stratum			
						1	elqm	Change General	Equipment		İ
Depth (ft.)	No.	Depth (ft.)	Blows /6"	Penetr/ Recovry	"N" Value	Desc	cription	Descrip.	Installed	Observations	:/Remarks
0						4" Asphalt, crust	ned stone		101		
								•			
2						Brown sand, sitt	, pebbles, some clay,				1
						loose, dry				5' of 4" PVC ris	ser l
	-					Same					1
4	-					1		又			
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6	<u> </u>		 	 		-					
					├	4					
8	<u> </u>				 	4					
		<u> </u>			<u> </u>	_		İ			
10				<u> </u>						10' of 0.020 4' screen	PVC
					<u> </u>		athered, pebbles, semi-				
~12	1					competent					
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-14	╁╌	 				Gray black sha	ile, competent , many				
14	╀	 			1	pebbles				Boring termin	ated at 15'.
	┼		 	-	 						
16	-	-			 	-					
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Add	Hon	al Rema	orke:				V////	//// Auger	Spoils		Bentonite
	iitiOt l	a i willo	u No.				KEY:				Sand



ALPHA GEOSCIENCE 400 Trillium Lane ALBANY, NY 12203 (518) 452-0096

Well No	MW-6				
Project _	New Paltz Plaza				
Client _	New Paltz Plaza Properties				
Project No	D 95141				
•	ed1/9/98				
Date Deve					

WELL CONSTRUCTION DETAIL

GREL			<u>Depth</u> 0.0
M.P. EL		· XXXX	
	XXXX	×××-	10
	XXXXXXXXII.		26
			31
			—— 7.1
	:		7.7

NOT TO SCALE

Inspector Michael S. Ralbovsky
Drilling Contractor Aquifer Drilling & Testing
Type of Well Monitoring
Static Water Level 3.31 Date 1/12/98
Measuring Point Top of PVC
Well Casing Depth
Riser Pipe
Material Sch 40 PVC Diameter 2 " I.D.
Length 2.9' Joint Type Flush Thread
<u>Screen</u>
Material Sch. 40 PVC Diameter 2 " I.D.
Slot Size 0.010" Length 4.0'
Stratigraphic Unit Screened Clayey Silt, Sand and Gravel
<u>Packing</u>
Sand Gravel Natural
Amount 125 bs Interval 2.6'-7.7'
Seal
Type Bentonite Interval 1.0'-26'
Type Interval
Locking Casing: Yes _X No
Diameter
Notes:

C 4
ALPHA GEOSCIENCE

ALPHA GEOSCIENCE 400 Trillium Lane ALBANY, NY 12203 (518) 452-0096

Well No	MW-7	-				
Project _	New Paltz Plaza					
Client _	New Paltz Plaza Properties					
Project No	D 95141					
•	ed1/7/98					
Date Dev						

WELL CONSTRUCTION DETAIL

GR EL	<u> </u>	<u>Depth</u> 0.0
M.P. EL		0.8
		2.5
		3.3
		9.3 10.0

NOT TO SCALE

Inspector Michael S. Ralbovsky Drilling Contractor Aquifer Drilling & Testing Type of Well Monitoring Static Water Level 210 Date 1/12/98 Measuring Point Top of PVC Well Casing Depth
Material Sch. 40 PVC Diameter 2 " I.D. Length 3.0' Joint Type Flush Thread
Material Sch. 40 PVC Diameter 2 " I.D.
Slot Size 0.010" Length 6.0' Stratigraphic Unit Screened Clayey Silt, Sand and Gravel Packing
Sand #1 Gravel Natural Amount 80 lbs Interval 2.5'-10.0'
Seal Type Bentonite Interval 0.8' - 2.5'
Locking Casing: Yes _ X No Diameter
Notes:

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ALPHA GEOSCIENCE

ALPHA GEOSCIENCE 400 Trillium Lane ALBANY, NY 12203 (518) 452-0096

Well No	MW-8	
Project _	New Paltz Plaza	
Client	New Paltz Plaza Properties	
Project No	95141	<u></u>
•	ed1/7/98	
Date Deve		

WELL CONSTRUCTION DETAIL

GR EL	Depth 0.0
M.P. EL	——————————————————————————————————————

NOT TO SCALE

Inspector Michael S. Ralbovsky
Drilling Contractor Aquifer Drilling & Testing
Type of Well Monitoring
Static Water Level 3.21' Date 1/12/98
Measuring Point Top of PVC
Measuring Point
Well Casing Depth
Riser Pipe
Material Sch. 40 PVC Diameter 2 " I.D. Length 3.9' Joint Type Flush Thread
Length 3.9' Joint Type Flush Thread
Longin
<u>Screen</u>
Material Sch. 40 PVC Diameter 2 " I.D.
Slot Size 0.010" Length 6.5'
Stratigraphic Unit Screened Clayey Silt, Sand and Gravel
<u>Packing</u>
Sand
Amount 120 bs Interval 0.8'-11.5'
<u>Seal</u>
Type Bentonite Interval 1.8'-3.8'
Locking Casing: Yes X No
Diameter
Notes:
Notes:



ALPHA GEOSCIENCE 400 Trillium Lane ALBANY, NY 12203 (518) 452-0096

Well No	MW-9	
Project _	New Paltz Plaza	
Client _	New Paltz Plaza Properties	
Project No	95141	
Date Drille		
Date Deve		

WELL CONSTRUCTION DETAIL

GR EL.		<u>Depth</u> 0.0
ON LL		0.0
M.P. EL		—— 1.0 —— 3.0
		4.0
	 	119

NOT TO SCALE

nspector Michael S. Ralbovsky
Drilling Contractor Aquifer Drilling & Testing
Type of Well Monitoring
Static Water Level 3.47 Date 1/12/98
Measuring Point Top of PVC
Well Casing Depth
Riser Pipe
Length 3.9' Joint Type Flush Thread
<u>Screen</u>
Material Sch. 40 PVC Diameter 2 " I.D.
Slot Size 0.010" Length 7.0'
Stratigraphic Unit Screened Clayey Sitt, Sand and Gravel
<u>Packing</u>
Sand Gravel Natural
Amount 1751bs Interval 3.0'-11.9'
01
Seal
Type Bentonite Interval 1.0' - 3.0'
Von V. No
Locking Casing: Yes <u>X</u> No Diameter
Diamotor
Notes:



ALPHA GEOSCIENCE 400 Trillium Lane ALBANY, NY 12203 (518) 452-0096

Well No	BR-1	
Project	New Paltz Plaza	
Client	New Paltz Plaza Properties	
Project No	96141	
Date Deve		
Date Dot	5.6P	

WELL CONSTRUCTION DETAIL

GR EL	<u>Depth</u>
M.P. EL.	0.0
Cement/Bentonite Seal 4" I.D. Steel Casing	
Top of Bedrock	9.0 101
4" O.D. Open Hole	
	20.0

INSPECTION NOTES

Inspector	1. Ralbovsky
Drilling Contractor	Aquifer Drilling and Testing
Type of Well	Monitoring
Static Water Level	<u>5.06</u> Date <u>1/12/98</u>
Measuring Point	Top of steel casing
Casing	Diameter 4.0 " I.D.
Open Bedrock Ho Interval 10.1'-20 Drill Method Air	le o Diameter 4.0 " O.D. Hammer Date Drilled 1/8/98
Seal Type Cement/Bei	ntonite Interval 0.0'-10.1'
Locking Casing:	Yes _X _ No
Notes: Flush mou	int road box protective casing

NOT TO SCALE



ALPHA GEOSCIENCE 400 Trillium Lane ALBANY, NY 12203 (518) 452-0096

Well No	BR-2	
Project _	New Paltz Plaza	
Client	New Paltz Plaza Properties	
Project No	95141	
	eloped	

WELL CONSTRUCTION DETAIL

GR EL	<u>Depth</u> 0.0
M.P. EL.	
Cement/Bentonite Seal ————————————————————————————————————	
Casing Top of Bedrock	8.0
	9.2
4" O.D. Open Hole	
	19.5

nspectorM. Raibovsky
Orilling Contractor Aquifer Drilling and Testing
Type of Well Monitoring
Static Water Level 1.57 Date 1/12/99
Measuring Point Top of steel casing
Casing
Material Steel Diameter 4.0 " I.D.
Length 9.0' Date Set 1.5/98
Lengin Bate det
O Dadrask Liolo
Open Bedrock Hole
Interval 9.2 - 19.5 Diameter 4.0 " O.D.
Drill Method Air Hammer Date Drilled 1/8/98
Seal
Type Cement/Bentonite Interval 0.0 - 9.2
Locking Casing: Yes _X No
Notes: Flush mount road box protective casing
• • • • • • • • • • • • • • • • • • • •



ALPHA GEOSCIENCE 400 Trillium Lane ALBANY, NY 12203 (518) 452-0096

Well No	BR-3			
Project	New Paitz Plaza			
Client	New Paltz Plaza Properties			
Project No. 95141				
Date Deve				

WELL CONSTRUCTION DETAIL

GR EL_	<u>Depth</u> 0.0
M.P. EL.—	
Cement/Bentonite Seal	
Casing	
Top of Bedrock	—— 12.0 —— 13.2
4" O.D. Open Hole	
	23.5

INSPECTION NOTES

M. Ralbovsky

Inspector M. Raibovsky					
ling Contractor Aquifer Drilling and Testing					
Type of Well Monitoring					
Static Water Level 3.28 Date 1/12/98					
	_				
Measuring Point	_				
Casing					
Material Steel Diameter 4.0 " I.D.					
Length 12.8 Date Set 1/5/98					
Lengur					
Open Bedrock Hole					
Interval 13.2'-23.5' Diameter 4.0 " O.D.					
Drill Method Air Hammer Date Drilled 1/8/98					
Drill Method At Hammer Bate Stried					
<u>Seal</u>					
Type Cement/Bentonite Interval 0.0 - 13.2					
Locking Casing: Yes X No					
Locking Casing. 103 110					
Notes: Flush mount road box protective casing					

ATTACHMENT 2

Ground Water Sampling Protocol

Ground Water Sampling Protocol

- Measure the depth to water and the bottom of the well. Calculate the volume of water in the well casing, and record all information on a Ground Water Sampling Record. Decontaminate the measuring device between each well, if necessary.
- 2. Account for the sand pack, as appropriate, in a low permeability unit, and purge three to five well volumes or until dry, using a dedicated disposable bailer, or clean dedicated tubing. After purging 5 well volumes, the turbidity of the water from the well will be measured. If the turbidity is 50 NTUs or less, samples will be collected for laboratory analysis, as described below. If the turbidity exceeds 50 NTUs, the NYSDEC on site representative will determine whether the sample is acceptable for laboratory analysis, or additional purging is warranted. Measurements of pH, temperature, and specific conductivity will be recorded during purging and/or sampling to assess the effectiveness of purging. Decontaminate monitoring probes or instrumentation between each well use, if necessary. Record purge start and stop time and actual volume removed from well. Don new latex gloves for each well, or more frequently, if necessary. Use clean ground plastic at each well.
- 3. Allow ground water to recover to 90% of original depth to water or for a maximum of 3 hours prior to sampling. Field personnel will document reason(s) for sampling prior to 90% recovery, if necessary. Measure and record depth to water at the time of sampling.
- Collect the water sample from the appropriate depth with as little agitation as possible, using the dedicated sampling equipment. Transfer the sample to a clean container which does not contain any preservative, again minimizing agitation. Ensure no air bubbles are present in the container. Record sample time, description (i.e., turbid, odor, sheen, etc.), and type of analysis required.
- Immediately place sample in a chilled cooler and keep properly chilled until delivery to the laboratory. Complete proper chain of custody forms to accompany samples during transport.

d:/project/npplaza/gwsamp.wpd

ATTACHMENT 3

Ground Water Concentration Criteria

Well MW-2 Volatile Organic Compounds Revonak Dry Cleaners Site No. 356021

Years*	Total VOCs	Maximum Allowable VOCs
0	2950	3540
1	2154	2584
2	1572	1886
3	1148	1377
4	838	1005
5	612	734
6	446	536
7	326	391
8	238	285
9	174	208
10	127	152
11	93	111
12	68	81
13	49	59
14	36	43
15	25	30

Notes: 1) * = Years since approval of the Revised Ground Water Monitoring Plan

²⁾ The final concentration of 25 mcg/l (ppb) assumes a maximum concentration of 5 ppb of the 5 compounds historically detected in well MW-9.

—◆—Total VOC Conc.
—■—Max. Allowable Conc. Years Since Plan Approval Total VOC Concentration

Well MW-2 Total VOCs

Well MW-9 **Volatile Organic Compounds** Revonak Dry Cleaners Site No. 356021

Years*	Total VOCs	Maximum Allowable VOCs
0	1500	1800
1	1140	1368
2	866	1040
3	658	790
4	500	601
5	380	456
6	289	347
7	220	264
8	167	200
9	127	152
10	96	116
11	73	88
12	56	67
13	42	51
14	32	39
15	25	30

- Note: 1) * = Years since approval of the Revised Ground Water Monitoring Plan
 - 2) The final concentration of 25 mcg/l (ppb) assumes a maximum concentration of 5 ppb of the 5 compounds historically detected in well MW-9.

■ Max. Allowable Conc. --- Total VOC Conc. Years Since Plan Approval S Total VOC Concentration

Well MW-9 Total VOCs