# HYDROGEOLOGIC ASSESSMENT REPORT

Kwik Kleen Site Spill

Saratoga County, Town of Moreau

New York

Site No. 885323

Submitted to:

New York State Department of Environmental Conservation Region 5 - Environmental Quality Hudson Street Warrensburg, New York 12885

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#### 1.- INTRODUCTION

#### 1.1 Background

Environmental Oil, Inc. of Albany was requested by the New York State Department of Environmental Conservation (NYS DEC) - Region 5, to perform a hydrogeologic assessment relating to a spill in the autumn of 1988involving approximately 300 gallons of methylene chloride and unknown quantities of toluene and acetone at the Kwik Kleen furniture stripping shop. This site is located at the intersection of Fawn Road and Route 9 in the Town of Moreau, Saratoga County, New York (Figs. 1A and 1B). The approximate site geographic coordinates are  $^607^{000m}$ .E. and  $^{47}88^{500m}$ .N. Since the spill the shop has been out of operation due to a fire.

Water for residential domestic use is obtained from private wells which are mostly screened in the upper unconsolidated aquifer.

#### 1.2 Site Characteristics

### 1.2.1 Physiography, Topography and Drainage

The Kwik Kleen site lies in the northern Hudson Lowlands which form part of the northern Appalachian Region and only 1.5 miles to the east of the Palmertown Range (Adirondack Mountains) (Fig. 2).

The topography at the site and immediate surroundings is essentially flat with an approximate elevation of 340 feet above Mean Sea Level (Fig. 1A). The site is situated about 500 feet to the west of the uppermost reaches of an intermittent stream which deepens to the south and drains to the North Branch which is a perennial tributary stream of the Hudson River (Fig. 7A).

#### 1.2.2 Regional Geology

Geologically, the area of study has been the location of deposition of Late Cambrian fluvial clastics (Potsdam Sandstone), Late Cambriam (Beekmantown Group) and Late Ordovician (Black River and Trenton Groups) marine shelf carbonates which deepen in depositional facies upward into marine black shales (Trenton Group) (Fisher and others, 1970; Fisher, 1977; Roma-Hernandez, 1987) (Figs. 3 and 4).

These deposits have been slightly affected by compressional deformation in the continental foreland by an arc collision during the Taconic Orogeny (Chapple, 1973; Rowley and Kidd, 1981). This orogeny was followed by a period of relaxation which is evidenced by tensional (normal) faults (Fisher, 1977) (Figs. 2 & 4). Later on, the area has

been variably affected by uplift and erosion during the Cenozoic Era and glacial erosion and deposition during the more recent Pleistocene Epoch (Fisher, 1973).

The surficial geology of the Hudson Lowlands in Saratoga County is dominated by Pleistocene unconsolidated lacustrine, well sorted, stratified sands that were deposited during or after the last period of glaciation (Cadwell and Dineen, 1987) (Figs. 2 and 5).

#### 1.2.3 Regional Hydrogeology

Groundwater occurs in the surficial unconsolidated sediments and presumably in the deeper bedrock deposits. Groundwater receives recharge from the infiltration of snowmelt and rainwater through the soil to the saturated zone. Discharge occurs mainly in streams, lakes or ponds and topographically low wetlands.

The Kwik Kleen Site and its vicinity has been reported to lie over an unconfined aquifer with a potential yield of water of 10 to 100 gallons per minute and it consists of sand and gravel with a saturated zone that frequently is less than 10 feet thick, or thicker but with less permeable silty sand and gravel (Bugliosi and others, 1988) (Fig. 6). This information appears to be consistent with a previous Environmental Oil, Inc. investigation (below) which revealed subsurface soils consisting of predominantly medium to coarse grained sand. Data generated from this phase of work shows that groundwater flow appears to be in a general southerly direction.

#### 1.3 Previous Work

The initial response to the spill, as requested by the NYS DEC, was intended to determine the hydrogeologic conditions of the site and the extent of contamination. As a result one (1) recovery well and five (5) monitoring wells were installed by Domermuth Environmentla Services on September 24 and 25, 1988. This Phase-I Investigation provided data for defining the hydrogeologic characteristics of the site (Section 3.1). Methylene chloride contamination was observed in monitoring wells MW-1, MW-2, and the recovery well RW-1 (Adirondack Environmental Services, 1988). An air stripper and water table depression pump recovery system was placed on site as an emergency remediation action by a remediation contractor.

A remedial investigation proposal was submitted to the NYS DEC-Region 5 on December 19, 1988 by Environmental Oil, Inc. This proposal was intended to characterize the hydrogeological conditions and the extent of contamination at the site as well as the effectiveness of the recovery system. Environmental Oil Inc. was retained to conduct this second phase investigation.

# 1.4 Objective

As stated in the previous Remedial Investigation Proposal submitted to the NYS DEC Region 5 the purpose of this hydrogeologic assessment was to:

- 1) Characterize the local hydrogeological conditions.
- 2) Determine the impact of the spill and extent of the contaminant plume involving chlorinated hydrocarbons such as methylene chloride in addition to toluene and acetone.
- 3) Evaluate the effectiveness of the existing recovery system and provide recommendations where changes are warranted.

#### 2.- SITE INVESTIGATIONS

#### 2.1 Literature Review

Geologic and hydrogeologic information obtained from the previous investigation and from publicly available sources was collected and reviewed as part of the investigation to develop an understanding of the local geology and hydrogeology. This information included publicly available soil surveys, geologic reports and publications, USGS 1:24,000 scale topographic maps, aerial photographs, surficial and bedrock geology maps, climatological data, and other publicly available documents or publications relating to the site.

#### 2.2 Monitoring Well Installation

Prior to the commencement of this Phase-II Investigation, one (1) recovery well and (5) monitoring wells were installed at the site. For test and construction logs on these monitoring wells, reference Domermuth Environmental Services (1988). Four additional groundwater monitoring wells were installed during January 9 to January 27, 1989 in the site area to further characterize the hydrogeological conditions and the contaminant plume. Monitoring well locations are shown on Figures 1B and 7. Subsurface test boring and monitoring well construction logs are presented in Appendix A.

#### 2.2.1 Decontamination Methods

A decontamination area was set up for all drilling equipment and well materials prior to the commencement of drilling activities. A portable steam cleaning unit was utilized to decontaminate the drill rig between each boring. Split spoon samplers were decontaminated after each use.

The decontamination pad consisted of an excavated area which was banked to a sump which collected the rinse water. The area was lined with plastic to prevent infiltration into the ground. The sides were diked to enhance containment. Rinse water was pumped from the collection area and run through the air stripper prior to discharge back into the ground, as per agreement with NYS DEC officials.

#### 2.2.2 Well Drilling Methods

A Canterra CT 400 drill rig with 6 1/4 inch hollow stem augers, owned and operated by Environmental Oil, Inc. began the advancement of the first boring on January 9, 1989. At a depth of approximately 30 feet, drilling by this method was no longer possible due to heaving sands characteristic of the surficial sediments. An air rotary drill rig owned and operated by the Hansen Well Drilling and Pump Co., Inc. arrived on site the morning of January 11, 1989. This air rotary drilling method was selected as it is better suited to

control the soft, heaving sand and prevent cave in. The rig was equipped to drive casing during drilling operations, as is sometimes necessary for softer unconsolidated deposits prone to cave in.

Drilling continued at the same location at which the augers had been advanced previously. Upon reaching a total depth of approximately 55 feet, the installation of well MW-6 was begun. Heaving sands once again hindered well installation efforts, as a plug had developed at the bottom of the casing. This plug prevented the well from being properly set as the casing was removed. The hole was re-drilled twice in an effort to remove this plug, but after several unsuccessful attempts to install the well, it was decided to switch to a mud-rotary drilling method. A mud mixture injected into the boring during drilling operations would provide adequate pressure to minimize cave-in of the soft sand sediment, and would facilitate well installation. Drilling operations were temporarily shut down on January 12, 1989.

A hydrogeologist from the consulting firm of Clough, Harbour & Associates was retained as a specialist of the mud drilling method. Drilling operations resumed on January 17, 1989 with the arrival of the mud rotary rig on site, owned and operated by the Hansen Well Drilling and Pump Co. A "Revert" mud mixture was applied to each boring. Drilling by means of this method facilitated the installation of monitoring wells MW-6 through MW-9.

## 2.2.3 Geologic Sampling

Soil samples were collected by means of a split spoon sampler during drilling operations and were inspected in the field by a hydrogeologist. Subsurface logs were prepared based upon this sample evaluation, and are presented in Appendix A. The careful inspection of all soil samples took place in order to identify a suspected underlying clay layer. The importance of identifying this layer rests upon the tendency of methylene chloride to pool on top of relatively impervious boundaries. An underlying clay layer, therefore, would provide a vertical migration limit of the spill.

# 2.2.4 Well Design

Monitoring wells were constructed of 4 inch I.D. PVC well screen (0.01 inch slots) and riser. Four inch wells were selected over a smaller diameter in the event that these wells are to be used for recovery purposes. The total depths of wells MW-6, MW-7, MW-8, and MW-9 are 40, 60, 70 and 70 feet, respectively. The length of well screen for wells MW-6 and MW-7 were selected such that the top of the screen for MW-7 was below the bottom of MW-6 (i.e. screened sections do not intersect on a horizontal plane). This design has some degree of similarity to that of a well cluster and is done in order to provide data on water quality with depth (Fig. 8).

Following the installation of the well screen and riser in each borehole, a select silica sand pack (4Q grade) material was placed in the annulus between the screened section and

the borehole. This sand pack was extended no less than one foot above the top of the well screen. A two foot bentonite seal was placed above the sand pack to prevent the access of surface water into the wells. The remaining space was backfilled with sand and topped off with a cement seal. A protective curb box was bolted in place at ground level for each well (Appendix A).

#### 2.2.5 Well Development

Wells MW-6 through MW-9 were developed with a submersible pump in order to 1) repair damage to the geologic deposits by the drilling operation so that the natural hydraulic properties are restored, 2) alter the basic physical characteristics of the aquifer near the well screen so that water will flow more freely to the well and 3) provide to the maximum extent water free of suspended solids for sampling.

Wells were developed to less than 50 NTU as measured by a portable Nephthlametric Turbidity Meter. Groundwater evacuated from the wells during development was run through the air stripper prior to discharge.

#### 2.3 Site Survey

A location and elevation survey of the project area was performed on February 8, 1989 by Environmental Oil, Inc. personnel. The survey included the determination of the top of well casing elevation for all site wells, both previously existing and new. All elevations were referenced to an arbitrarily selected point which was assigned an elevation of 100 feet.

Data generated from this elevation survey, along with the measured locations of the wells and site structures, were used to prepare the base and water table maps shown in Figures 1B and 7. The depth to groundwater was measured in each well and was converted to a groundwater elevation value based on the established datum of 100 feet.

#### 2.4 Groundwater Sampling and Analysis

Groundwater samples were obtained from each monitoring well on March 18, 19, and 20, 1989, by an Environmental Oil, Inc. sampling technician. Three to five well volumes of water were removed prior to obtaining the sample in order to ensure that the sample was representative of water within the aquifer. Sampling was accomplished by using a clean PVC bailer in wells MW-1 through MW-5.

For the deeper wells MW-6 to MW-9 a submersible Teel pump was used to remove an initial two to three volumes because of the larger volume of water in these wells. The final two to three volumes were removed manually to negate the effects of the pumping, which would tend to strip the contaminants from the water, thereby rendering laboratory

results invalid. This purging method was confirmed with NYS DEC officials prior to commencement of sampling.

All groundwater samples were collected in 40 ml. glass vials and placed on ice. Samples were delivered to NET Laboratories in Syracuse, New York, by Environmental Oil, Inc. personnel, and were analyzed as per EPA Method 624. Results of laboratory analysis are included in Appendix B of this report.

The pump used to purge the deep wells was decontaminated as described in Section 2.2.1 between each well location. Dedicated bailers have been placed in each well for sample collection.

### 2.5 Recovery System Effluent Monitoring

Environmental Oil, Inc. is currently filing for a State Pollution Discharge Elimination System (SPDES) Permit with the NYS DEC. This permit would require the submission of monthly Discharge Monitoring Reports (MDMR's) to the appropriate state office to monitor the air stripper effluent for contamination.

#### 3.- SITE ASSESSMENT

### 3.1 Site Geology

Drilling activities revealed the site to be underlain by medium to coarse grained sands which become gradually finer with increasing depth. The sand continues to a depth of approximately 60-70 feet, and is underlain by a minimum of two feet of silty clay (Appendix A; Figure 8). The observation of these sands is consistent with the surficial lacustrine sands that have been mapped and interpreted by Cadwell and Dineen (1987) in the site area. The thickness of the underlying silty clay unit is unknown.

The silty clay unit is of particular interest to this investigation because of its low permeability character which would provide for vertical containment of the methylene chloride spill. It was suspected prior to drilling operations that this underlying layer was present. This hypothesis was based upon subsurface data on file with the NYS DEC which showed other sites in the region as being underlain by silty clay, and a NYS Geological Survey map which shows surficial silt and clay for outlying areas. Subsurface logs for the deeper wells do in fact indicate the presence of silty clay at approximately 70 feet (Appendix A; Figure 8).

The overburden unconsolidated deposits are underlain presumably by the Snake Hill Shale (Trenton Group) of Late Ordovician age. This interpretation is based on reviewed publicly available geological data. The Snake Hill Shale is laterally correlative with the Canajoharie or Utica Shale to the west.

# 3.2 Site Hydrogeology

#### 3.2.1 Groundwater Occurrence and Flow

The principal water-bearing geological unit in this area is the surficial layer of sand. The depth to groundwater was found to vary from approximately 15 to 20 feet across the site (as per February 9, 1989) (Figs. 7 and 8).

The initial local groundwater flow direction as determined on October 10, 1989, prior to the commencement of pumping activities, appears to be to the south (Domermuth Environmental Services, 1988). This direction of flow was expected from the surface drainage and geological characteristics of the site (Section 1.2.1). The current groundwater flow pattern accross the site has been slightly modified because of 1) the pumping activity of the recovery well with the formation of a cone of depression and 2) the formation of a local groundwater mound related to treated effluent discharge (Fig. 7). The inferred site groundwater flow pattern shown in Figures 7 and 8 indicates that the general direction of flow is to the south and that the radius of influence of the recovery well has expanded almost or entirely across the site area. The estimated dimensions of the cone of depression

are 90 x 3 feet (max. diameter x drawdown in recovery well).

Additional investigation would be needed for knowing if the cone of depression will continue to enlarge. However, it is likely that near drawdown equilibrium conditions have been achieved because it is thought that a cone of depression of these dimensions in relatively permeable sands intercepts enough of the flow in the aquifer to equal the pumping rate of the recovery well (3-5 gal/min). Other factors may also influence drawdown equilibrium conditions (Driscoll, 1987).

A quantitative determination of hydraulic characteristics of the aquifer via field permeability testing was not possible during this phase of the investigation due to cold weather conditions which threatened to freeze the lines to the air stripper should the pump be shut down, as would be necessary for such a test. However, the presence of drinking water wells in the vicinity of the site would indicate a fairly high yield aquifer. Also, it is noted that the current air stripper/groundwater recovery pump system operates continuously at approximately 3-5 gallons per minute, with an apparent cone of deppression of dimensions 90 x 3 feet (above). Thus, the aquifer is well-suited for remediation by means of the existing type of recovery system.

#### 3.2.2 Groundwater Quality

The laboratory results presented in this report (Appendix B) reflect the quality of groundwater samples collected from all the monitoring wells which were obtained on March 18-20, 1989. These samples were analyzed for the parameters outlined EPA Method 624. The results revealed acetone in the groundwater ranging from less than 5 ppb (parts per billion) to 15 ppb across the site. Toluene was detected in concentrations ranging from 3 to 8 ppb. Methylene chloride was not detected in any concentration greater than the lower detection limit of 1 ppb.

#### 4.- CONCLUSIONS

The investigation described herein revealed the following results concerning the project site:

- 1) The site is underlain by sand, presumably of glacio-lacustrine origin, which form a relatively high yield aquifer. This sand is medium to coarse grained in the upper portion of the aquifer and grades downward to a fine or very fine silty sand. This sandy unit is underlain by a silty clay at a depth of approximately 70 feet. The silty clay deposit is believed to form a relatively impervious lower boundary of the aquifer.
- 2) The depth to groundwater is approximately 15 to 20 feet (date), and groundwater flow is to the south.
- 3) Laboratory analysis of groundwater samples revealed the presence of acetone and toluene. Concentrations ranged from non-detectable to 15 ppb for acetone and non-detectable to 8 ppb for toluene. Methylene Chloride was not detected in any concentration greater than the 1 ppb lower detection limit.
- 4) The air stripper/groundwater recovery system is operating continuously at a rate of approximately 5 gpm.

#### 5.- RECOMMENDATIONS

Based on the above conclusions, the following recommendations are provided:

- 1) The recovery system should continue to operate at the same recovery point. The permanent location of this system would be determined by the results of future sampling rounds. A SPDES permit has been filed by Environmental Oil, Inc. for the continued operation of the system. It is believed that the groundwater recovery pump and air stripper are compatible with the aquifer yield.
- 2) Future rounds of groundwater samples should be collected monthly at each well, including the recovery well (influent and effluent). These samples should be analyzed as per EPA Method 624.
- 3) Drinking water from wells on adjacent properties should be sampled monthly and analyzed as per EPA Method 624.
- 4) Groundwater levels should be measured monthly, and groundwater contour maps prepared from this date.

#### 6 .- REFERENCES

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**TABLES** 

Table I

Groundwater Table Elevations (ft.)

Well <u>Number</u>	Top of Casing <u>Elevation</u>	Depth to Groundwater	Groundwater <u>Elevation</u>
MW-1	96.65	16.06	80.59
MW-2	96.19	14.43	81.76
MW-3	96.80	14.19	82.61
MW-4	100.77	19.57	81.20
MW-5	100.57	19.77	80.80
MW-6	96.07	15.93	80.14
MW-7	96.62	16.27	80.35
MW-8	99.21	18.05	81.16
MW-9	96.61	16.48	80.13
RW	96.83	19.18	77.65

Note:

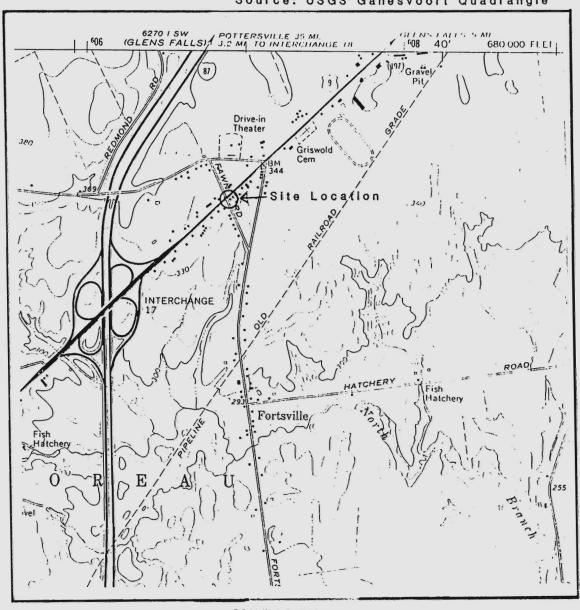
All elevations have been referenced to an arbitrary datum having an assumed elevation of 100 feet.

**FIGURES** 

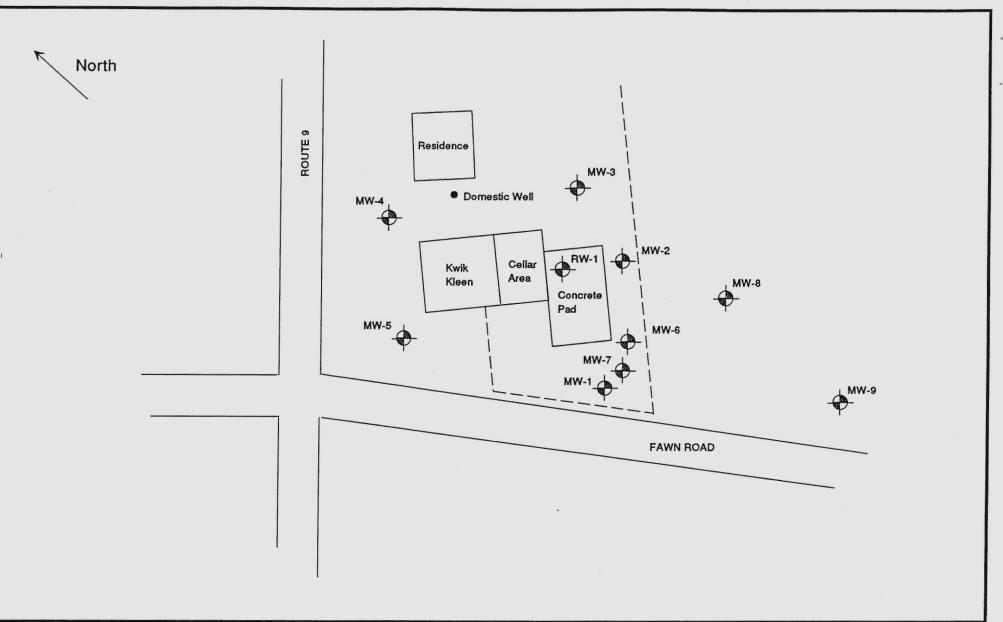
FIG-1A - LOCATION OF KWIK KLEEN
SPILL SITE



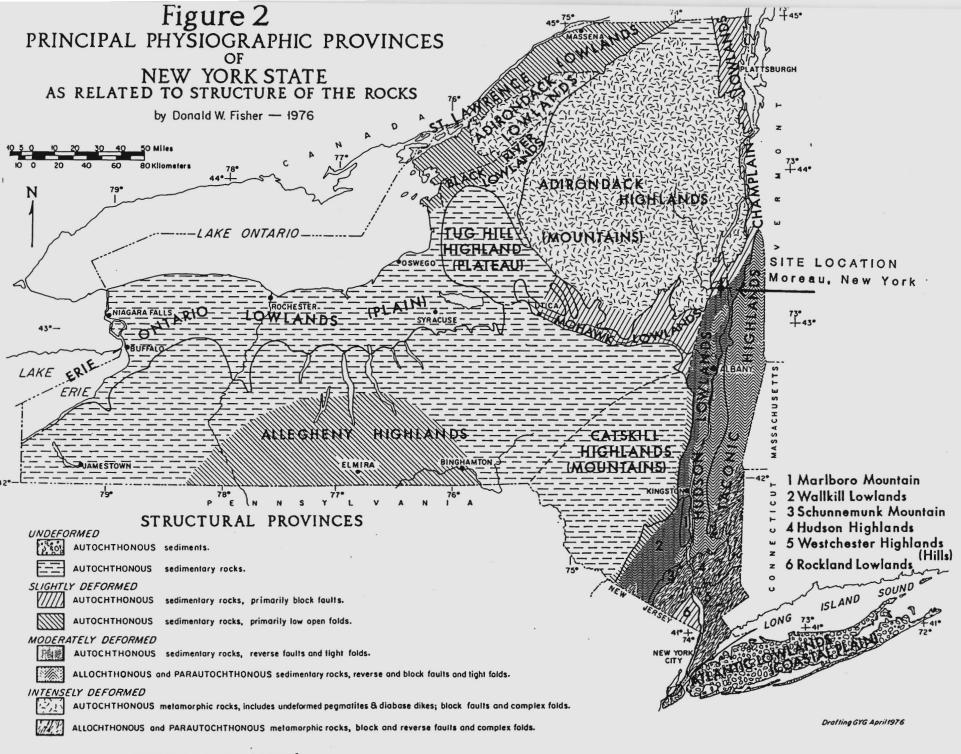
Source: USGS Ganesvoort Quadrangle



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	1000	0	1000	2000	3000	4000	5000	6000	7000 FEET	_
		1	5		0			1 8	III OMETED	



ENVIRONMENTAL OIL	, INC.	Syracuse, NY	DATE: 2/09/8		PROJECT NO.: A8030
DACEMAD	Kwik Kleen Site		SCALE: 1" = 5	50'	FIGURE NO.: 1b
BASE MAP	Route 9 South Glens Fa		DRAWN BY:	Roe/Potts	LOCATION: South Glens Falls, NY



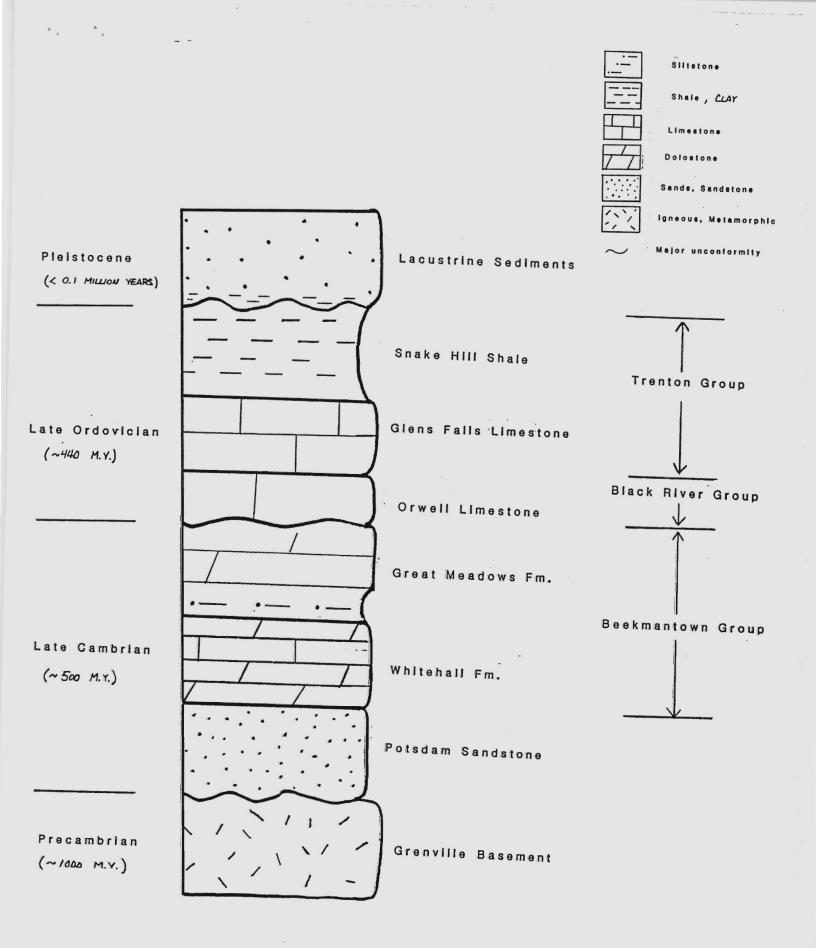
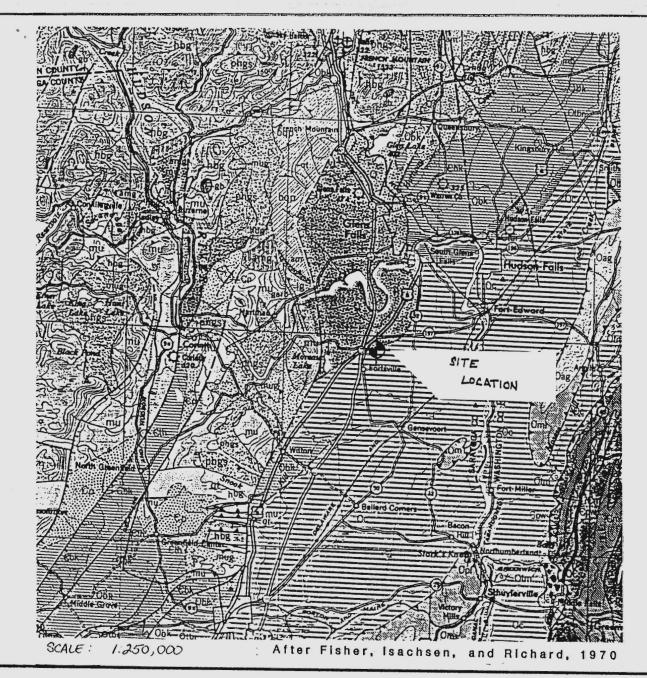


Fig. 3 - Generalized stratigraphy of the Glens Falls area, New York



GLACIAL AND ALLUVIAL DEPOSITS Underlying bedrock geology unknown.

Oa

LORRAINE, TRENTON, AND BLACK RIVER GROUPS up to 4,500 ft. (1400 m.)

Oo Oswego Sandstone

Pulaski and Whetstone Gulf Formations-shale, Opw siltstone.

Frankfort Formation-shale, siltstone.

Schenectady Formation-graywacke, sandstone, siltstone, shale.

Oag Austin Glen Formation-graywacke, shale.

Utica Shale.

Ot

Canajoharie Shale.

Normanskill Shale-minor mudstone, sandstone. Walloomsac Formation-slate, phyllite, schist, metagraywacke.

Trenton Group. Denley, Sugar River, Kings Falls, and Rockland Limestones.

Obr Black River Group: Chaumont Limestone-chert: Lowville Limestone; Pamelia Dolostone. Othr

Mohawk Valley: Trenton and Black River Groups-Dolgeville, Denley, Sugar River, Kings Falls, Glens Falls, Rockland, Amsterdam, and Lowville Lime-Washington County: Glens Falls and Orwell Limestones.

Obk

Balmville Limestone. Vermont: Whipple Limestone. bainville Limestone, vermont: whippie Limestone.

Taconic Mélange—chaotic mixture of Early Cambrian
thru Middle Ordovician pebble to block-size angular
to rounded clasts in a pelitic matrix of Middle
Ordovician (Barneveld) age. Rims and floors earlier
submarine gravity slides of Taconian Orogeny.

Cambrian thru Middle Ordovician (Barneveld) carbonate rocks occurring as slivers caught along thrusts of later allochthones, or carbonate blocks in Taconic Mélange.

**O€**h Horses along normal faults.

BEEKMANTOWN AND STOCKBRIDGE GROUPS, POTSDAM SANDSTONE, AND VERMONT VALLEY SEQUENCE

up to 3,500 ft. (1100 m.)

Beekmantown Group. Mohawk Valley: Chuctanunda Creek Dolostone; Tribes Hill Formation—limestone, dolostone; Gailor Dolostone.

Washington County: Providence Island Dolostone; Fort Cassin Formation—limestone, dolostone; Fort Ann Formation—limestone, dolostone; Cutting Formation-dolostone, local chert, limestone at top, siltstone at base.

Columbia County: Copake Formation—limestone, dolostone: Rochdale Limestone: Halcyon Lake Formation—chert, calc-dolostone.

Stockbridge Formation-calcitic and dolomitic

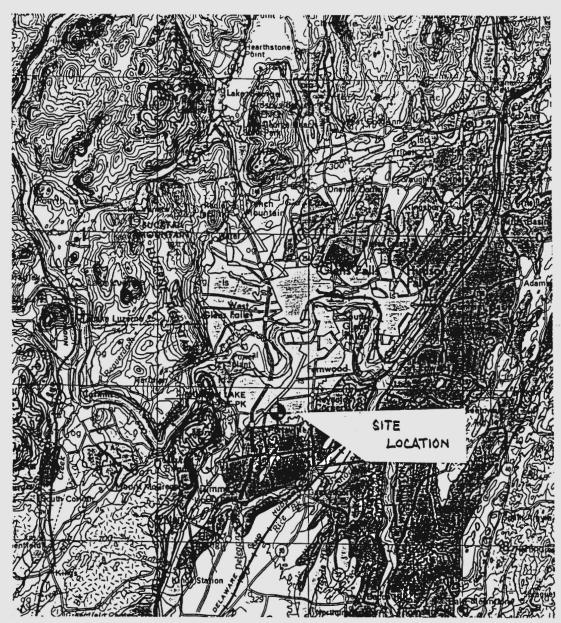
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TENSIONAL (NORMAL) FAULTS



1:250,000

After Cadwell and Dineen, 1987

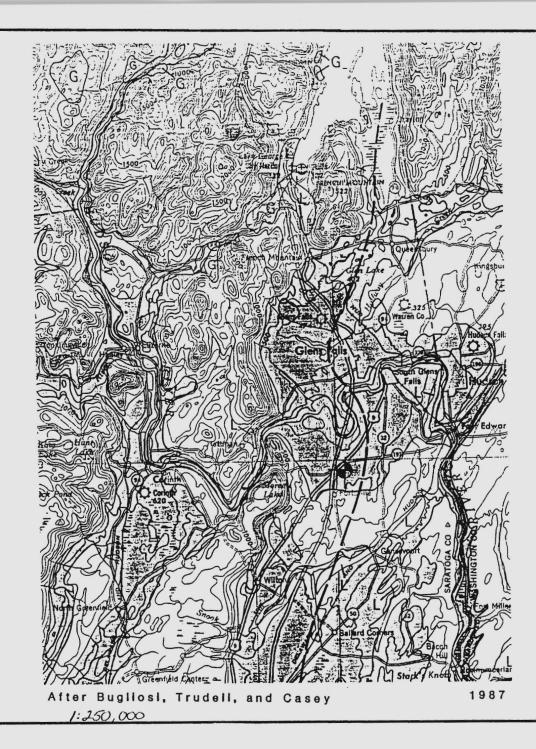


Isc — Lacustrine silt and clay Generally laminated silt and clay, deposited in proglacial lakes, generally calcareous, potential land instability, thickness variable (up to 100 meters).



Is — Lacustrine sand
Sand deposits associated with large bodies of water, generally a near-shore deposit or near a sand source, well sorted, stratified, generally quartz sand,

thickness variable (2-20 meters).



#### **EXPLANATION**

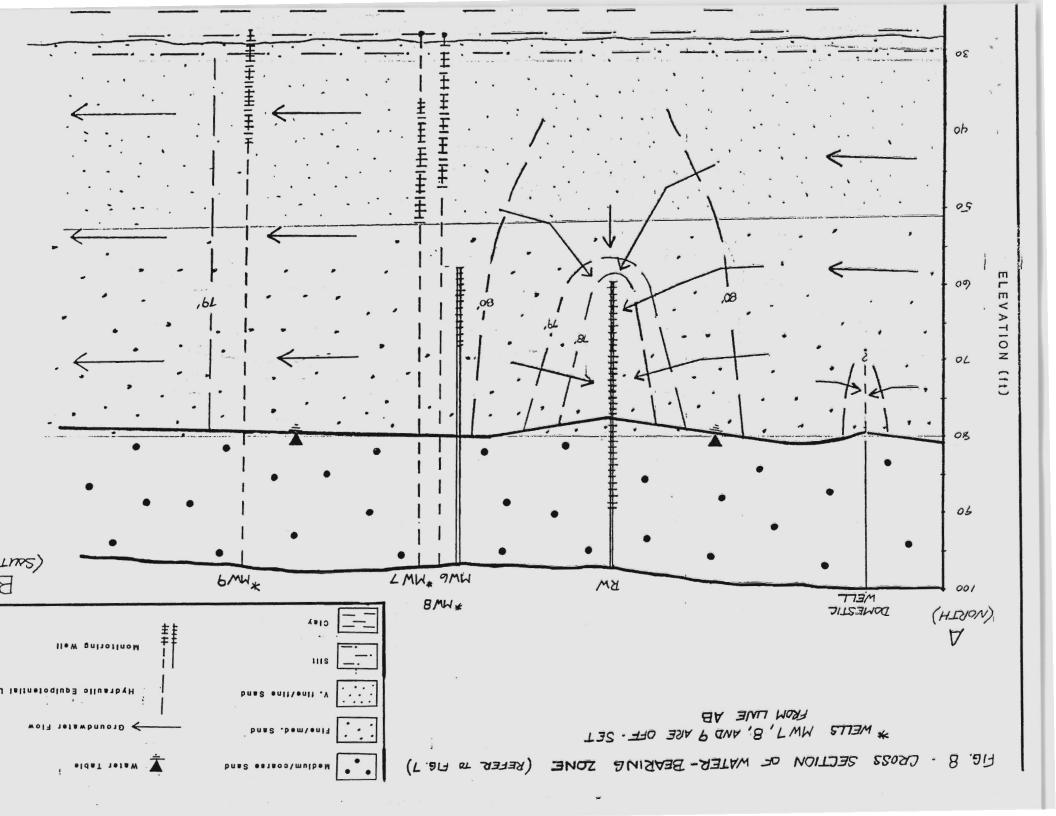
POTENTIAL YIELD OF WATER TO WELLS IN UNCONSOLIDATED AQUIFERS



UNCONFINED AQUIFERS, 10 to 100 GALLONS PER MINUTE--Sand and gravel with saturated zone generally less than 10 ft thick, or thicker but with less permeable silty sand and gravel. Yields in areas adjacent to streams may exceed 100 gal/min through pumping-induced infiltration, but these areas are too small to show at this scale.



UNCONFINED AQUIFERS, MORE THAN 100 GALLONS PER MINUTE--Sand and gravel of high transmissivity and with saturated thickness greater than 10 ft. Many such areas are associated with surface-water sources that can provide additional water pumping-induced recharge.



APPENDICES

# APPENDIX A

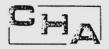
Subsurface Test Boring

and

Monitoring Well Construction Logs

				V								
ENV	IRC	ONME JSE, N	NTAL C	IL, INC.		SUBSURF	ACELOG	Well No.:				
			South Glen	e Falle MV			PLER	Sheet 1 c		,		
		/S/DEC	Jodin Glen	s rails, ivi	Type	: 2' Split Spoo	n	Groundwater Depth 15' Date 1/09/89				
			onmental O	il Inc	Ham	mer: 140 lbs.	Fall: 30 inches	Project No	o.: 8030			
Projec	ct Co	oordinate : Dan O	or: Bruce B urs	ell			Driller: J. Burgan Ground Elevation: Date Started: 1/09/	/89 Ended: 1/10/89				
D1-	Sample					Sample			Stratum Change			
Depth	No.	Depth	Blows /6"	Penetr/ Recovry	"N" Value	1	cription	General Descrip.	Ohaamusti – "/D.			
0								Descrip.	Installed	Observations/Remarks		
										Grain size becomes finer with increasing depth.		
5	1	5' - 7'	6,8,12,19		20	Brown medium/ organics, moist,	coarse SAND, trace			Auger refusal at 32'.		
						- : garnos,						
				-								
10	2	10' - 12'	6,12,12,19		24	Brown medium/o	coarse SAND, moist,					
						uriii,						
15	3	15' - 17'	3,6,6,10		12	Brown fine/med	ium SAND, trace slit,	15'				
						wet, loose.	ioni oand, tace sii,	▽				
20	4	20' - 22'	17,21,25,35		46	Brown fine/med	lum SAND, trace silt,					
						wet, firm.	,					
25	5	25' - 27'	1,5,10,15		15	Brown fine/medi	um SAND, little silt,					
						wet, firm.	,					
30	6	30' - 32'	3,8,12,12		20		um SAND, little silt,					
Additio		Remark				wet, firm.		Auger S	poils	Bentonite		
						K	EY:			Sand		

ENV SYR	IRC ACL	DNME USE, N	NTAL C	IL, INC.		SUBSURF	ACELOG	Well No.: Sheet 2 d		
Projec	t Lo	cation: S	outh Glens	s Falls, NY	T		PLER	Groundwa	ter Depth	Date 1/11/89
		S/DEC			Hami	: 2' Split Spoor mer: 140 lbs.	Fall: 30 inches	Project No.: 8030		
Projec	ct Co		r: Bruce B	illing and Pu Bell	imp Co	ompany	pany Driller: Roy Mason Ground Elevation: Date Started: 1/11/6		Ende	d: 1/12/89
0.00.0	9.01.		Samp	le				Stratum		
Depth	No.	Depth	Blows /6"	Penetr/ Recovry	"N" Value		nple ription	Change General Descrip.	Equipment Installed	Observations/Remarks
35	7	35' - 37'				Brown fine/meditrace clay, wet.	um SAND, little silt,			Grey clay at 40'.
						trace clay, wet.				
	_									
40							um SAND, trace silt,			
						trace clay, wet.				
						1				
	-			-		-				
	-					Brougish arou (	Ine SAND, some silt,			
45	-					trace clay, wet.	ille SAND, some siii,			
	-					-				
						-				
						1				
50						Brown fine/med	ilum SAND, little silt,			
						wet.				
						1				
55						Brown fine SAN	D, some silt, wet.			
	L					1				
	_									
	-			-		Boring terminate	ed at 57'.			
	-					-				
60	-	-				-				
	-									
	-					-				
	-					1				
Addit	iona	Remark	s:	1			(EV.	Auger	Spoils	Bentonite
							KEY:			Sand



# CLOUGH, HARBOUR & ASSOCIATES

ENGINEERS & PLANNERS

PARTNERS

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DAVID O. KELLY

JOHN M. KRUEGLER, P.E.

KEITH F. LASHWAY, P.E.

JOHN R. REINEMANN

February 13, 1989

Mr. Bruce Bell District Manager Environmental Oil, Inc. 105 Old Mill Road Schenectady, New York 12306

Re: NYSDEC South Glens Falls, Test Boring and Monitoring Well Logs. CHA Project No. 1452-07.

Dear Bruce:

Enclosed are the test boring and monitoring well construction logs for the NYSDEC - South Glens Falls Project. I hope you find them satisfactory.

I look forward to working with you in the future and if you have questions, please call anytime. I hope the project goes well for you.

Very truly yours,

CLOUGH, HARBOUR & ASSOCIATES ENGINEERS & PLANNERS

Thomas A. Butler Hydrogeologist

TAB:cms enc. 666-11

CHA	) Cron	PH, H.	OCIV.	フレド		TEST	ВО	RIN	G LOG		HOLE I	vo	-	MW-6	
ROJE	CT: I	EC -	Sout	h G	lens	Falls					PROJEC	T NO.		1452-0	
LIENT	Г:	Envir	onmen	tal	Oil	Inc.					SHEET			OF 1	
ONTR	ACTOR:_	Hanso	on We	11	Drill	ling & H	Pump (	Co. I	nc.		LOCATI				
IEASUR.	EMENT:	DEPTH T	ס	DEPTH OF EQUIPMENT: CA				CASIN	G SAMPLER	CORE	INCLINATION Vertical				
DATE	TIME	WATER		LE	CASING			8"ID			START	DATE	1/17/	89	
./18	9:00	15.15			30'	SIZE 1.0.					FINISH	DATE 1	/18/8	9	
./10	2:20	13.3	+0		40	HAMMER HAMMER			_		DRILLE	RK	Butla	r/D. 0	170
	7 9		+			Bit Si		7 7/	81		INSPEC	IUNI	Ducte	1/0. 0	
DEPTH	STRATA CHANGE AND	E SA	MPLE NO.	BL	SPT .OWS	RECOVERY	TES	TS		TIELD I	DESCRIPT	ION AN	D REM	IARKS	
FEET	DESCRIPT			PEI	R 6"		EQUIPI	MENT					•		
-									NO SAMPI	LES TA	KEN. END	OF BO	ORING	AT 43.	0,
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BLOWS/		NSITY		BLO	OWS/FT.		TENCY		SAMPLE II		ATION	CHECKED	BY:	TAB	
0-4 VERY LOOSE 4-10 LOOSE 10-30 MEDIUM COMPACT 30-50 COMPACT					0 - 2 2 - 4 4 - 8 8 - 15	VERY SON SOFT MEDIUM STIFF			S - SPLIT T - THIN U - UNDIS O - OPEN	WALL TU TURBED	PISTON	DATE		4-69	

PROJECT: NYSDEC - S. GLENS FALLS CLIENT: ENVIRONMENTAL OIL INC. CONTRACTOR: HANSON VELL BRILLING AND PUMP CO. INC.  DRILLER: ROY MASON  CECHOGIST: T. BUTLER  TOTAL DEPTH - 43'  DEPTH TO WATER ELEVATION OF GROUNDWATER AT COMPLETION:  DEPTH TO WATER FIPE SCH. 40 PVC  TYPE OF WELL PROTECTION:  FILE NO:  1	CHA CL	OUGH, HARBOUR & ASSOCIATES	GROUNDWATE	ER MONITORING WELL REPOR	₹T
DEPTH TO WATER ELEVATION OF GROUNDWATER AT COMPLETION:	CLIENT: CONTRACTOR: _	ENVIRONMENTAL DIL IN	IC. G AND PUMP CO. INC.	SHEET NO.: 1 OF 2 WELL NO.: MW-6 BORING NO.: MW-	-6
HEIGHT OF RISER PIPE ABOVE GROUND LEVEL — ELEV. OF DATUM POINT: —— DRILLING METHOD: 7 7/8" AIR RIGTARY/REVERT MUD DRILLING WITH BY LID. CASING: N/A TYPE OF WILL PROTECTION: FLUSH MUDIKED PROTECTIVE. STEEL CAP		TOTAL DEPTH - 43'		DATE: 1 / 18 /89	
SCREEN LENGTH:  10' SIZE OF SCREEN SLOT: J010' SLO. OF SCREEN: 4' FILTER PACK: U.S. SILICA 30-RDK SCALL SEAL BENTONITE PELLETS BACKFILL: NATIVE SAND/FILTER WELL CONSTRUCTION SCHEMATIC  GRADE  DEPTH SOIL DESCRIPTION  SEE TEST BORING LDG FROM ENVIRONMENTAL DIL INC. FOR DETAILS  10 -  10 -  20 -  30 -  LEGEND:	HEIGHT OF RISI DRILLING METHO TYPE OF WELL	ER PIPE ABOVE GROUND LOD: 7 7/8" AIR ROTAR PROTECTION: FLUSH MOL	LEVEL RY/REVERT MUD DRILLIN UNTED PROTECTIVE STE	ING WITH 8' I.D. CASING  EEL CAP I.D. OF CASING: N/A	
FILTER PACK: U.S. SILICA 30-ROK SEAL: BENTONITE PELLETS BACKFILL: MATIVE SAND/FILTER WELL CONSTRUCTION SCHEMATIC  GRADE  DEPTH  SOIL DESCRIPTION  - SEE TEST BORING LOG FROM ENVIRONMENTAL DIL INC. FOR DETAILS  10	SCREEN LENGT	H:10'	SIZE OF SCREEN SLO	OT:010'   I.D. OF SCREEN:4"	
SEE TEST BORING LOG FROM ENVIRONMENTAL DIL INC. FOR DETAILS  10  20  25  30  LEGEND:	WELL CONSTRUCTI	ON	SEAL:BENTONITE F	PELLETS BACKFILL: NATIVE SAND/FIL  * MEASURED FROM PAC TOP OF PVC	TER CK
10			DEPTH	SOIL DESCRIPTION	
20			5 -		
20 - - - - - - - - - - - - - - - - - - -			15		-
25 - - - - - - - - - - - - - - - - - - -			- - - -		-
30 - - - - - - - - - - - - - - - - - - -	ı-		20		-
LEGEND:			25 <del>-</del> - - - -	•	-
LEGEND:			-		
WELL FILTER BENTONITE MATIVE BACKFILL CEMENT	LEGEND:	Limit Limit			

Ću.	CLOUGH, HARBOUR			
CHA	CLOUGH, HARBOUR & ASSOCIATES ENGINEERS & PLANNERS	GROUNDWATER	MONITORING WELL REPORT	
PROJECT:	NYSDEC S. GLENS FALLS ENVIRONMENTAL OIL INC.		FILE NO.: 1452-07  SHEET NO.: 2 OF 2  WELL NO.: MW-6 BORING NO.: MW-6	-
WEI CONSTR SCHEM	LL UCTION MATIC GRADE	<u>DEPTH</u>	SOIL DESCRIPTION	
		35		_
		40	END OF TEST BORING AT 43'	
		45 -		
		50 -		
		55 -		
		60 -		
		65 <del>-</del> - - - -		
		70 -		-
		75 -		-
LEGEN		80-L		
SCE ACE	LL FILTER PACK	BENTONITE SEAL	NATIVE BACKFILL CEMENT	

CHA	& AS	HARBOUR SSOCIATES FRS & PLANNERS	GROUNDW	ATER MON	NITORING	WELL F	REPORT	
PROJECT:	NYSDEC	- S. GLENS FAL	LS		FILE N	0.: 1452	-07	
CLIENT:	ENVIR0	INMENTAL DIL INC	С.			NO.:1	OF2	
CONTRACTOR: _			AND PUMP CD. I			10.: MW-7 BOR		
DRILLER:	ROY MA	ZUN	GEOLOGIST:J	. COBB/T. BUTLE	ER LOCATION: SEE SITE MAP			
	TOTAL	DEPTH - 73'			DATE:	1/ 20	/89	
DEBTH TO WAT	ED ELEV	ATION OF CROUND	WATER AT COMPLI	ETION:				
		ABOVE GROUND L	WATER AT COMPLI		V. OF DATUM F	POINT.*		
			Y/REVERT MUD D			OIIV1.		
			NTED PROTECTIV		I.D. OF	CASING:	N/A	
TYPE OF RISER	PIPE:_S	SCH. 40 PVC	TYPE OF SCREE	N: SCH. 40 PVC		RISER PIPE:	4"	
SCREEN LENGTH	d:	15′	SIZE OF SCREE			SCREEN:	4'	
	U.S.	SILICA 3Q-ROK	SEAL:BENTO	NITE PELLETS			SAND/FILTER	
WELL	ONL				* MEASU	RED FROM	PACK	
CONSTRUCTION SCHEMATIC		GRADE	DEF	PTH	SOIL DESC			
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LEGEND:			35 -			,		
WELL SCREEN		FILTER PACK	BENTO SEAL	NITE -	IATIVE DACKE	III See cent	INT	
SCREEN		PACK	SEAL		NATIVE BACKF	TEME	INT	

		-					
CHA	CLOUC & ENGIN	H, HARBOUR ASSOCIATES NEERS & PLANNERS	GROUNDW	ATER	MONITOR	ING WELL	REPORT
PROJECT:		S. GLENS FALLS				FILE NO.: 1452-0	17
CLIENT:	ENVIRON	MENTAL OIL ING.				SHEET NO.: 2 WELL NO.: MW-7 BO	_ OF   DRING NO.: <u>MW - 7</u>
WEI	LL						
CONSTR SCHEM	UCTION	GRADE	<u>DEP</u> 35—	Н	SOIL	DESCRIPTION	
	••••						_
	****						-
	<u> </u>		40				_
	<u> </u>		40				_
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			45	•			-
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			50	•			_
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				-			_
			55 -	NOTE	: STARTED SPLI	T SPOON SAMPLIN	IG AT 55.0' -
			55	_	FINE TO VERY	FINE SAND, SOME	SILT -
			ŀ	-	GRAYISH	BROWN, WET. (SP)	
			,	-			
			60	•			-
				-			-
			ŀ	-			-
			65			65.0'	
			Į	-	SILTY VERY FINE	SAND, GRAY, WE	T. (SM) –
			-	-			_
	X	ENOVANAS	70	_		70.0'	-
		K. W. W. C.	, ,	CLAY,	TRACE OF FINE	SAND, DARK GRA	AY, WET. (CL)
	120	STANDARD STANDARD		_	END OF TE	ST BORING AT 73	.0' _
			75		•		_
				-			-
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			80	_			_
LEGEN							
SCR VEL	LL REEN	FILTER PACK	BENTON SEAL	ITE	NATIVE B	ACKFILL CEN	MENT

CHA CLOUGH, HA	CIATES	GROUNDW	/ATER	MONITOR	RING WELL	REPORT
7 110000		AND PUMP CD. I	NC. J. CDBB		FILE NO.: 145 SHEET NO.: 1 WELL NO.: MW-8 BI LOCATION: SEE	OF2 DRING NO.: MV-8
TOTAL DEPTI	H - 70'				DATE: 1/	25 / 89
DEPTH TO WATER ELEVATION HEIGHT OF RISER PIPE ABOV DRILLING METHOD: 7 7/8'  TYPE OF WELL PROTECTION: TYPE OF RISER PIPE: SCH. 4 SCREEN LENGTH: 20' FILTER PACK: U.S. SILIC WELL CONSTRUCTION SCHEMATIC	/E GROUND LE AIR ROTARY, FLUSH MOUN 40 PVC	VEL /REVERT MUD D ITED PROTECTIV _ TYPE OF SCREE _ SIZE OF SCREE _ SEAL: BENTO	RILLING WI E STEEL CEN: SCH. 4	ITH 8' I.D. C CAP 0 PVC 010'	DATUM POINT:* ASING  I.D. OF CASING: I.D. OF RISER PIP I.D. OF SCREEN: BACKFILL: NATIVE  * MEASURED FROM TUP OF PVC DESCRIPTION	E: 4"
		5 10 15 20 25	COARSE SAN	TO FINE GR ID, TRACE CO ANNISH-BROV	STLY MEDIUM SANI RAVEL TO COARSE DARSE TO FINE GR VN, SOME FINE BE ATIONS PRESENT.	TO MEDIUM _ RAVEL,
LEGEND:  WELL SCREEN	FILTER PACK	BENTO SEAL	NITE	<b>■</b> NATI∨E	BACKFILL AIR	-ENTRAINED ÆNT

CHA	රිර	ASSC	ARBOUR OCIATES	GROUNDW	/ATER	MONITOR	RING WELL	REPORT
PROJECT:_ CLIENT:			NS FALLS L OIL INC.			-	FILE NO.: 1452-0 SHEET NO.: 2 WELL NO.: MW-8 BO	_OF2
WEL CONSTRU SCHEM	JCTION		<u>GRADE</u>	DEF 35- <sub>T</sub>	ŽΤΗ	SOIL	DESCRIPTION	
				40	<ul><li>GRAVEL,</li></ul>	TANNISH-BRO	FROM TRACE COADWN, TO FINE SAND GRAYISH-BROWN, W	, SOME SILT, -
				45	- - - -		50.0'	-
				50	— MEDIUN —	1 TO FINE SAN	ND, GRAYISH—BROW	N, WET. (SW) —
				55	<del>-</del>			  
* 11				60	- FINE	SAND, TRACE	60.0' SILT, LIGHT TO DA WET. (SP)	RK BROWN, _
				65	-		66.9'	
				70	SILTY	FINE SAND, T	RACE CLAY, BROWN	I, WET. (SM)
-				75			CLAY, BROWN, WET.	_
LEGENI	D:			80-	_			
WEL SCR	L	Andrew Control of the	FILTER PACK	BENTO SEAL	NITE	NATIVE	BACKFILL SS CEM	ENT

CHA CLOUGH, HARBOUR & ASSOCIATES	GROUNDWATER MC	NITORING WELL REPORT										
PROJECT: NYSDEC - S. GLENS FAI CLIENT: ENVIRONMENTAL DIL IN CONTRACTOR: HANSON WELL DRILLING	LLS C. AND PUMP CD. INC.	FILE NO.:1452-07  SHEET NO.:1 OF2  WELL NO.: MW-9 BORING NO.: MW-9  LOCATION:SEE SITE MAP										
DRILLER: RUY MASUN GEOLOGIST: J. COBB LOCATION: SEE SITE MAP  TOTAL DEPTH - 70'  DATE: 1 / 27 /89												
DEPTH TO WATER ELEVATION OF GROUND LEIGHT OF RISER PIPE ABOVE GROUND LEIGHT DRILLING METHOD: 7 7/8" AIR RUTAR	EVEL EI	EV. OF DATUM POINT:*										
TYPE OF WELL PROTECTION: FLUSH MOL	JNTED PROTECTIVE STEEL CAP	I.D. OF CASING: N/A										
TYPE OF RISER PIPE: SCH. 40 PVC SCREEN LENGTH: 15'												
FILTER PACK: U.S. SILICA 3Q-ROK	SIZE OF SCREEN SLOT:010' SEAL:BENTONITE PELLETS	I.D. OF SCREEN: 4" BACKFILL: NATIVE SAND/FILTER										
WELL		* MEASURED FROM PACK TOP OF PVC										
CONSTRUCTION GRADE	<u>DEPTH</u>	SOIL DESCRIPTION										
	_	_										
	- NOTE: NO	- COLUT CORDON CAMPLES VEDE TAKEN										
\$\frac{1}{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag{2}\tag	_ NUTE NO	SPLIT SPOON SAMPLES WERE TAKEN _ FROM THIS BORING _										
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LEGEND:	35											
WELL FILTER	BENTONITE E	NATIVE BACKFILL AIR-ENTRAINED										

CLOUGH HARBOUR  REMANDERS & PLANNERS & GROUNDWATER MONITORING WELL REPORT  PROJECT ENVISOR S. GLESS FALLS  CLENT. ENVIRONMENTAL OIL INC.  WELL  CONSTRUCTION  SCHEMATIC  GRADE  PEPIH SOIL DESCRIPTION  NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS WELL DUE TO ANNULUS SIZE  NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS WELL DUE TO ANNULUS SIZE  155	. ,		*			
SHEET NO. 2 OF 2 WELL NO. MW-9 BORNIC NO. MW-9  WELL CONSTRUCTION SCHEMATIC  GRADE  DEPTH  NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS WELL DUE TO ANNULUS SIZE  NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS WELL DUE TO ANNULUS SIZE  TO THE NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS BOTH NOTE: NO BEN	CHA	CLOUGH, HARBO & ASSOCIAT ENGINEERS & PLANN	GROUNDW	ATER MONITO	RING WELL REF	PORT
WELL CONSTRUCTION SCHEMATIC  GRADE  DEPTH SOIL DESCRIPTION  NOTE: NO PENTONTE SEAL WAS EMPLACED IN THIS WELL DUE TO ANNULUS SIZE  NOTE: NO PENTONTE SEAL WAS EMPLACED IN THIS WELL DUE TO ANNULUS SIZE  150					SHEET NO.:2 OF	
SCHEMATIC GRADE  JSD  NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS  NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS  WELL DUE TO ANNULUS SIZE  1  45  60  65  70  END OF TEST BORING AT 70.0'  75  1  1  1  1  1  1  1  1  1  1  1  1  1	WE	LL				
NOTE: NO BENTONITE SEAL WAS EMPLACED IN THIS WELL DUE TO ANNULUS SIZE  45 -  50 -  60 -  END OF TEST BORING AT 70.0'  TO BENTONITE SEAL WAS EMPLACED IN THIS WELL DUE TO ANNULUS SIZE  1	CONSTR SCHEN	UCTION MATIC GRAI		TH SOIL	DESCRIPTION	
55			-	- NOTE: NO BENTONITE WELL DUI	: SEAL WAS EMPLACED IN E TO ANNULUS SIZE	THIS
60	·		50	- - - - -		- - - - -
65 — END OF TEST BORING AT 70.0'  75 — END OF TEST BORING AT 70.0'  LEGEND:	, ,,		55	- - - -		-
70 END OF TEST BORING AT 70.0'  75			60	- - -		-
70 ————————————————————————————————————			65	- - - -		- - -
LEGEND:			70	END OF 1	TEST BORING AT 70.0'	
LEGEND:						
				NITE	[:02:]	

CH,	Cronc	SH, HAI	RBOUI CIATE:	3 3	TEST	- B0	RIN	G LOG		HOLE N	NOMW-7
CLIENT	CT:I T:I ACTOR:_	Enviror	menta	1 0il	Falls	Pump (	Co. 1	Inc	•	PROJEC SHEET LOCATION	
		ОЕРТН ТО		TH OF	EQUIPMEN		CASIN		CORE		ATION Vertical
DATE	TIME	WATER	HOLE	CASING	SIZE I.D.		HW 8"	SS 1 3/8'		FINISH	DATE 1/18/89 DATE 1/20/89
					HAMMER HAMMER	FALL					R Roy Mason TOR Tom Butler
DEPTH IN FEET	STRATA CHANGE AND DESCRIPTI	SAMP	LE B	SPT LOWS TR: 6"	Bit S RECOVERY	ize TES ANI EQUIPA	D		TIELD L	DESCRIPT	TION AND REMARKS
55 -		S-1			1.5'			F-VF <u>SAN</u> WET.	D, SON	Æ SILT	, GRAYISH-BROWN (5P)
								,			
. 60	SP								·	•	
-		S-2	2 -	•	NO RECOVER	Y					•
-		S-:	3 -		NO RECOVER	Y					
, 	65										
_	,	S-4	4 -	•	1.0'			SILTY VF	SAND	, GRAY,	WET. (SM)
-	SM								RED I		EN TO 80' CLAY NGS AT 69.0 - 70.'
-	CL	s-	5 .		.7'			CLAY, TR	ACE O	F F-SAN	D, DK. GRAY, WET.(CL)
- -											
BLOWS/FT. DENSITY . BLOWS/FT. CONSISTENCY						TENCY		SAMPLE II	DENTIFICA	ATION	CHECKED BY: 793
0-4 4-1 10-3 30-5	O LOOSE	M COMPAC	т	0 - 2 2 - 4 4 - 8 8 - 15	VERY SOI SOFT MEDIUM STIFF			S - SPLIT T - THIN U - UNDIS O - OPEN	WALL TO TURBED	PISTON	DATE: 2-9-89

PROJECT CLIENT:			BOUF		TEST	· RO	RING	100		HOLEN	10 MW-8		
	-	PROJECT: DEC - South Glens Falls  TEST BORING LOG  HOLE NO. MW-8  PROJECT NO. 1452-07											
		DEC -	Sout	h Gle	ns Fall	S			PROJEC	T NO1452-07			
CLIENT .		Envir	onmen	tal O	il Inc.					SHEET	NO. 1 OF 4		
CONTRAC	TOR:_	Hanso	n Wel	1 Dri	lling &	Pump	Co.	LOCATIO					
WE 4 6 W D E W	- I o	cmu m	0507	05	Teamous		CASING	SAMPLER	CORE	ELEVAT			
MEASUREME DATE		WATER	HOLE	H OF	EQUIPMEN		STEEL		CORE	INCLINA	ATION <u>Vertical</u> DATE 1/23/89		
DAIL		WATER	HOLL	CAGIIIO	SIZE I.D.		8"	1 3/8"		1	DATE 1/24/89		
					HAMMER			2 3/ 0			R Roy Mason		
					HAMMER	FALL				•	TOR J. Cobb		
					Bit		7 7/	'8''					
IN	STRATA CHANGE AND ESCRIPTION	SAMPLE NO.	BL	SPT .OWS R 6"	RECOVERY	TES AN EQUIPA	D	F	TIELD (	DESCRIPT	ION AND REMARKS		
					·								
-	••												
5									,				
-													
						•			¥.				
-													
10"						a.							
-													
_					•						+		
15													
		S-1			1.0'				D, TRA	CE F. C	GRAVEL, TANNISH BRO		
	SW							DRY.  NOTE; CO  18.0, RI			(SW) SH SPOON FROM 15.0		
20													
BLOWS/FT.	DEN	ISITY .	BL	OWS/FT.	CONSIS	TENCY		SAMPLE IL	ENTIFICA	TION			
0-4 4-10 10-30	VERY L LOOSE			0 - 2 2 - 4 4 - 8	VERY SOFT SOFT MEDIUM	T		S - SPLIT T - THIN U - UNDIS	SPOON WALL TU	IBE	CHECKED BY: 7713  DATE: 2-9-89		

CHA	CLOUGH	, HARBO	OUR FES	TEST	BORING	G LOG	HOLE NO	MW-8
PROJEC				- Sout	h Glens F	alls	PROJECT NO.	1452-07
CLIENT	: En	vironme	ntal Oil				SHEET NO.	2 OF 4
CONTRA	ICTOR: Ha	nson We	II Drill	ing & P	ump Co. I	nc	ELEVATION	
DEPTH IN FEET	STRATA CHANGE AND DESCRIPTION	SAMPLE NO.	SPT BLOWS PER 6"	RECOVERY	TESTS AND EQUIPMENT	FIELD C	DESCRIPTION AND	REMARKS
20 .		S-2	-	1.0'		M-SAND, TRACE WET. FINE BE		IONS PRESENT
–						NOTE: COULD OF		(SP) N FROM 20.0'
25								
_		\$ <b>-</b> 3	-	1.1'		M- <u>SAND</u> , TANNI LAMINATIONS.		FINE BEDDING USAL AT 26.5'. (SP)
_								
_								
30	SP	S-4	-	1.5'		M- <u>SAND</u> , TRACE WET. SS REFU		TANNISH-BROWN,
·	51	,		12				
_			a .					
35						NOTE: DRILLED	BEYOND 35.0	- 37.0 SAMPLE.
_						NOTE: PROBABL	E CHANGE AT 3	8.0 TO SILTY
_								
40 40								
_		S-5	-	1.2'		F- <u>SAND</u> , SOME SS REFUSAL AT	SILT, GRAYISH	BROWN, WET.
-								
-								
45								

СНД	CLOUGH	, HARBO	DUR FES INERS	TEST	BORING	GLOG	HOLE NO. MW-8
PROJEC	CT:E : En	nvironm	ental Oi	1 S. G1	ens Falls		PROJECT NO1452-07 SHEET NO3
CONTRA	ACTOR: H	anson W	ell Dril	ling &	Pump Co.		ELEVATION
	-						
DEPTH IN FEET	STRATA CHANGE AND DESCRIPTION	SAMPLE NO.	SPT BLOWS PER 6"	RECOVERY	TESTS AND EQUIPMENT	FIELD (	DESCRIPTION AND REMARKS
45 <b>—</b>		S-6	-	1.0'			E SILT, GRAYISH-BROWN, WET. AT 47.0' (SP)
· ·_	SP		,				
_							
, <del>-</del>							
50	50.0				-	M-F SAND CD	AYISH BROWN, WET. SS
-		S-7	-	1.0'		REFUSAL AT 5	
-						•	
-							
-						×	,
55	SW	s-8	-	1.0'	,	SAME. SS RE	FUSAL AT 56.5'. (SW)
g							
-					9	CASING TO 70	.0'.
-							
60	60.0	,			PIN	E GAND MD16	
"-		S-9	-	1.1'	HNu 3 ppm	ss refusal @	E SILT, L-D BROWN, WET.(SP)
-						- LET COMP (G	
-	SP						
_							
65		S-10	_	0.6'	HNu 3 ppm	SAMPLE TO 67	.0' 2" GRADES TO SILTY F-SAND,
	66.9					TRACE CLAY,	
_						CASING TO 75 WASH YIELDS	.0' SANDY CLAY @ 70.0'.
_	SM						
70							

. . . . .

CHA	CLOUGH & A ENGIN	i, HARBO	TES NEAS	TEST	BORING	G LOG	HOLE NO. MW-8
ROJE	CT:Er	vironme	ental O	il, S. G	lens Falls		PROJECT NO. 1452-07
ONTRA	. Er	ivironme Hanson V	ental O Well Dr	il illing &	Pump Co.	Inc.	SHEET NO. 4 OF 4 ELEVATION
DEPTH IN FEET	STRATA CHANGE AND DESCRIPTION	SAMPLE NO.	SPT BLOWS PER 6"	RECOVERY	TESTS		DESCRIPTION AND REMARKS
70	SM 71.5'	S-11	-	2.0'	HNu 2 ppm	SAME - @ 71. CLAY, BROWN,	5' CHANGE TO <u>SILT</u> , SOME WET. (ML)
	ML 					BOTTOM OF BO CASING TO 75	
-							
- -							
-							
_						-	
-							

CHA	CLOUR	3H, HA A880 GINEERS 6	RBOUI CIATE PLANNER	R B S	TEST	- BO	RIN	G LOG	,	HOLE I	VO. MW-8A
PROJE	CT:	Enviro	nment	al Oil	, S. F1	ens F	alls			PROJEC	T NO1452-07
CLIENT	• •	Enviro	nment	al Oil						SHEET	NO. 1 OF 3
CONTRA	ACTOR:_	Hansor	ı Well	Dril1	ing & P	ump C	o. I	nc			ON
WEASURE	usur : I	DEPTH TO	050	TH OF	EQUIPME	v T *	CASIN	IG SAMPLER	CORE	ELEVAT	ATION <u>Vertical</u>
DATE	TIME	WATER	HOLE	CASING		<u> </u>	CASII	IO SAMPLEA	CONE	START	DATE 1/25/89
			11000	-	SIZE I.D.						DATE 1/25/89
					HAMMER	WT.				DRILLE	R Roy Mason
					HAMMER	FALL				INSPEC	TOR J. Cobb
				1	Bit		6''			<u> </u>	
DEPTH IN FEET	STRATA CHANGE AND DESCRIPTION	SAM	0 8	SPT LOWS ER: 6"	RECOVERY	TES AN EQUIPA	D	F	TELD I	DESCRIPT	TION AND REMARKS
										•	
_						*					
											•
			Ì								
_		`									
5											
_								CASING	TO 10	0.0'.	•
				*							
									•		
· · · ·			1								
											,
-								6" ROI	LER B	IT WITH	MUD FROM 10.0' -
10								20.0'.			
								NO SAN	IPLING	•	
_		ł									
								*: -			
-											
20											
_											*
_											
15	*									·	
10											• .
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		1									
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20			4		l	L	·	<u> </u>			1
BLOWS/F	FT. DE	NSITY	. 8	LOWS/FT.	CONSIS	TENCY		SAMPLE II	ENTIFIC.	ATION	CHECKED BY:
0-4 4-10 10-3	D LOOSE	N COMPA	ст	0 - 2 2 - 4 4 - 8 8 - 15	VERY SON SOFT MEDIUM STIFE			S - SPLIT T - THIN U - UNDIS	WALL TO TURBED	UBE PISTON	DATE:

· · ·	· ,						
	CLOUGH				BORIN		HOLE NO. MW-8A
PROJE	CT: Er	nvironme	ental Oi	1, S. G	lens Falls	3	PROJECT NO1452-07 SHEET NOOF3
CONTR	· EI	vironme	ental Oi	1	Pump Co.		SHEET NO. 2 OF 3
CONTIN	HOTON. H	anson We	ell Dril	ling &	Pump Co.	Inc	ELEVATION
DEPTH IN FEET	STRATA CHANGE AND DESCRIPTION	SAMPLĘ NO.	SPT BLOWS PER 6"	RECOVERY	TESTS AND EQUIPMENT	FIELD (	DESCRIPTION AND REMARKS
20							
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						·	
-							
						140	
_							
25							
23	,						·
-						·	
-							
_							
,,							
20							
30 ·						6" ROLLER BI	T WITH MUD 20.0' - 45.0'
-						NO SAMPLING.	
_							
35							
-				,			
-							
40					**		
_							
'_							

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CHA	CLOUGH	, HARBO	DUR TES NNEAS	TEST	BORIN	G LOG	HOLE NOMW-8A
PROJEC	CT: En	vironme	ntal Oil	, S. G1	ens Falls		PROJECT NO1452-07 SHEET NO3
CONTRA	En:	vironme anson W	ntal Oil ell Dril	ling &	Pump Co.	Inc	ELEVATION
-	STRATA						
DEPTH IN FEET	CHANGE AND DESCRIPTION	SAMPLE NO.	SPT BLOWS PER 6"	RECOVERY	TESTS AND EQUIPMENT	FIELD (	DESCRIPTION AND REMARKS
45							
-		*					
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		,					
50							
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_	(81					·	
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·,···							¥
55					,	6" ROLLER BI	T WITH MUD FROM 45.0 - 70.0'.
_						NO SAMPLING.	
. –							
_							
_							
						,	
60					^		
_							
_							
_							
65							
0.5							
-							
-							
_				7			
						BOTTOM OF BO	RING 70.0'.

HA	CLOUGH B & ENGIN	HAF	REPUBLICATION	3	TEST	- BO	RING	LOG		HOLE I				
POJE	CT:E	Envir	onment	al Oi	1, S. G	lens I	alls			PROJEC	T NO.	145	2-07	_
JENT	·	Envir	onment	al Oi	1					SHEET	NO.	1	0F_3	
ONTRA	ACTOR: 1	lansor	n Well	Dril	ling & 1	Pump (	Co. In	:		LOCATI				_
							,	,		ELEVAT				_
		РТН ТО		H OF	EQUIPME	VT:	CASING	SAMPLER	CORE	INCLINA				_
ATE		ATER	HOLE	CASING			STEEL			START				_
27	10:15	18.4"	20.0'	10.	0 SIZE 1.0.		8"			FINISH	DATEL	27/89		-1
				-	HAMMER					DRILLE				-1
				-	HAMMER	FALL	6"			INSPEC	10K_J.	Cobb		-1
	CTDATA				Bit	ı	1 0		L	L				-
IPTH IN EET	STRATA CHANGE AND DESCRIPTION	SAMPI NO.	LE B	SPT LOWS R 6"	RECOVERY	TES AN EQUIPI	D	F	FIELD (	ESCRIPT	ION AN	D REM	ARKS	
_							·							
-								CASING	G TO 10	0.0'.				
5														
					*.						MUD F	ROM 10	0.0 - 20.0	0'
_								NO SAP	1PLING.	•				
10														
_														
_														
5														
_										v				
_														
_	18.4													
20														
LOWS/F			BL	OWS/FT.	CONSIS			SAMPLE 10		TION	CHECKED	BY:	TAB	
0-4 4-10	VERY LOC LOOSE			0 - 2 2 - 4 4 - 8	SOFT			S — SPLIT T — THIN	WALL TU	N 100	DATE:	2-	9-89	

,	CLOUIGE	HAPP	ו פו ור					W01 5 W0 2011 0
	CLOUGH					BORING	LOG	HOLE NO. MW-9
PROJE	CT: Envi	ronment	al Oi	1, S 1	G. Glen	s Falls		PROJECT NO1452-07 SHEET NO2 OF _3
CONTRA	ACTOR: 1	lanson W	Vell ∙D	rill	ing &	Pump Co.	Inc	ELEVATION
DEPTH IN FEET	STRATA CHANGE AND DESCRIPTION	SAMPLE NO.	SPT BLOWS PER 6	S R	ECOVERY	TESTS AND EQUIPMENT	FIELD D	DESCRIPTION AND REMARKS
20								
_								
_	,							
25								
							6" DOLLED BI	T WITH MUD FROM 20.0'-
							45.0'. NO SAMPLING.	1 WITH MOD FROM 20.0 -
							NO SAMPLING.	
_								
30								
. –								
_								
_	,							•
_								
35								
-								
-								
_								
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40								
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_			*					
_								

СНД	CLOUGH	I, HARBO	DUR TES	TEST	BORING	GLOG	HOLE NO. MW-9
PROJE	CT: Envi	conmenta	al Oil,	S. Glens	s Falls		PROJECT NO. 1452-07
CLIENT	:_ Envi	conmenta	al Oil				PROJECT NO1452-07 SHEET NO3
CONTRA	ACTOR:	lanson V	Vell Dri	lling &	Pump Co.	Inc.	ELEVATION
DEPTH IN FEET	STRATA CHANGE AND DESCRIPTION	SAMPLE NO.	SPT BLOWS PER 6"	RECOVERY	TESTS AND EQUIPMENT	FIELD (	DESCRIPTION AND REMARKS
45			,				
_							•
_							
_							
50							
50   —							
_							
_							
_							
55						70.0'.	BIT WITH MUD FROM 45.0' -
_				8		NO SAMPLING	; . 
. –			-				
-							
60							
65_	,						
_	,						
_							
_							

BOTTOM OF BORING 70 0'

APPENDIX B

Groundwater Analytical Data



Fax: (315) 446-8795

To: ENVIRONMENTAL DIL INC.

THE OF SERVICE THE HORATERIST THE

P.O. BOX 315

SYRACUSE, NY 13209

Attention: MARK HANSON

Formerly CS Environmental Laboratory, Inc.
Date: Apr 06 1989

PURCHASE ORDER # :SPILL885323

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**SAMPLE #3323** 

PAGE 1 OF 2

SAMPLE SUMMARY

CLIENT : E

: ENVIRONMENTAL DIL INC.

DATE RECEIVED : 03/20/89

JOB #

: 405.099.00

DATE COLLECTED : 03/

: 03/18/89

LOCATION

: MW-1

TIME COLLECTED : NA

METHOD

:GRAB

PARAMETER	RESULTS	UNITS
ACETONE **	14.	ug/1
CHLOROMETHANE	(5.0	ug/l
BROMOMETHANE	⟨5₄Ø	ug/1
VINYL CHLORIDE	(5.0	ug/1
CHLOROETHANE	(5.0	ug/I
METHYLENE CHLORIDE	(1.0	ug/1
CHLOROBENZENE	(1.0	ug/l
1,1-DICHLOROETHYLENE	(1.0	ug/1
1,1-DICHLOROETHANE	(1.0	ug/l
TRANS-1, 2-DICHLOROETHYLENE	(1.0	ug/1
ETHYLBENZENE	(1.0	ug/l
CHLOROFORM	<1.0	ug/l
1.2-DICHLOROETHANE	(1.0	un/1



Fax: (315) 449-1611

Formerly CS Environmental Laboratory, Inc.

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**SAMPLE #3323** 

PAGE 2 OF 2

### LABORATORY ANALYSIS REPORT

*****	*****	*****	*****
PARAMETER	RESULTS	UNITS	
1, 1, 1-TRICHLOROETHANE	(1.0	ug/l	
CARBON TETRACHLORIDE	(1.0	ug/l	
BROMODICHLOROMETHANE	(1.0	ug/l	
1,2-DICHLOROPROPANE	(1.0	ug/1	
TRANS-1,3-DICHLOROPROPENE	(1.0	ug/l	
TRICHLOROETHYLENE	(1.0	ug/l	
DIBROMOCHLOROMETHANE	(1.0	ug/l	
CIS-1,3-DICHLOROPROPENE	(1.0	ug/1	
1,1,2-TRICHLOROETHANE	(1.0	ug/l	
BENZENE	(1.0	ug/l	
2-CHLOROETHYLVINYL ETHER	<1.0	ug/l	
BROMOFORM	(1.0	ug/l	
TETRACHLOROETHYLENE	(1.0	ug/l	
1, 1, 2, 2-TETRACHLOROETHANE	(1.0	ug/l	
TOLUENE	7.0	ug/l	
1,2 DICHLOROBENZENE	(1.0	ug/l	
1,3 DICHLOROBENZENE	(1.0	ug/l	
1,4 DICHLOROBENZENE	(1.0	ug/1	
TRICHLOROFLUOROMETHANE	10.	ug/1	

NOTE:

\*\*\*\*

Methyl Ethyl Ketone detected at a concentration of Sug/l.

NET warrants that any sampling and analyses conducted as part of this report are performed in accordance with the analytical industries recognized methodologies and professional standards. NET will not assume liability for any damages resulting from deficient work other than reperformance or cost of said work and will not accept any liability as a result of data interpretation by the client.

OCCUPATION BY O Service h. DOTE: 4/6/00

NYSDOH - FLOD #10067



Tel: (315) 446-8795 Fax: (315) 449-1611

Formerly CS Environmental Laboratory, Inc.

Date: Apr 06 1989

o: ENVIRONMENTAL DIL INC.

P.O. BOX 315

SYRACUSE, NY 13209

Attention: MARK HANSON

PURCHASE ORDER # :SPILL885323

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**SAMPLE #3324** 

PAGE 1 OF 2

LABORATORY ANALYSIS REPORT

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

SAMPLE SUMMARY

CLIENT : ENVIRONMENTAL DIL INC.

DATE RECEIVED : 03/20/89

JOB # : 405.099.00

DATE COLLECTED : 03/18/89

LOCATION : MW-2

TIME COLLECTED : NA

METHOD :GRAB

PARAMETER	RESULTS	UNITS
ACETONE	15.	ug/l
CHLOROMETHANE	(5.0	ug/l
BROMOMETHANE	(5.0	ug/l
VINYL CHLORIDE	(5.0	ug/l
CHLORDETHANE	(5.0	ug/1
METHYLENE CHLORIDE	(1.0	ug/l
CHLOROBENZENE	(1.0	ug/1
1,1-DICHLOROETHYLENE	(1.0	ug/l
1,1-DICHLORDETHANE	(1.0	ug/l
TRANS-1, 2-DICHLOROETHYLENE	(1.0	ug/l
ETHYLBENZENE	(1.0	ug/l
CHLOROFORM	(1.0	ug/l
1,2-DICHLOROETHANE	(1.0	ug/l



TRICHLOROFLUOROMETHANE

NET Northeast, Inc. 5854 Butternut Drive East Syracuse, NY 13057

Tel: (315) 446-8795 Fax: (315) 449-1611

Formerly CS Environmental Laboratory, Inc.

PAGE 2 OF 2

# LABORATORY ANALYSIS REPORT

**********	*** <del>*</del> **	**********	×
PARAMETER	RESULTS	UNITS	
1, 1, 1-TRICHLOROETHANE	(1.0	ug/l	
CARBON TETRACHLORIDE	(1.0	ug/I	
BROMODICHLOROMETHANE	(1.0	ug/l	
1,2-DICHLOROPROPANE	(1.0	ug/l	
TRANS-1, 3-DICHLOROPROPENE	(1.0	ug/1	
TRICHLOROETHYLENE	(1.0	ug/I	
DIBROMOCHLOROMETHANE	(1.0	ug/1	
CIS-1, 3-DICHLOROPROPENE	<1.0	ug/1	
1,1,2-TRICHLORDETHANE	(1.0	ug/l	
BENZENE	(1.0	ug/l	
2-CHLOROETHYLVINYL ETHER	(1.0	ug/l	
BROMOFORM	(1.0	ug/l	
TETRACHLOROETHYLENE	(1.0	ug/l	
1, 1, 2, 2-TETRACHLORDETHANE	(1.0	ug/l	
TOLUENE	3.0	ug/l	
1,2 DICHLOROBENZENE	(1.0	ug/l	
1,3 DICHLOROBENZENE	(1.0	ug/1	
1,4 DICHLOROBENZENE	(1.0	ug/1 ·	

(10.

ug/1

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NET Northeast, Inc. 5854 Butternut Drive East Syracuse, NY 13057 Tel: (315) 446-8795 Fax: (315) 449-1611

Formerly CS Environmental Laboratory, Inc.

Date: Apr 06 1989

To: ENVIRONMENTAL DIL INC.

P.O. BOX 315

SYRACUSE, NY 13209

Attention: MARK HANSON

PURCHASE DRDER # :SPILL885323

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**SAMPLE #3325** 

PAGE 1 OF 2

SAMPLE SUMMARY

CLIENT : ENVIRONMENTAL DIL INC.

DATE RECEIVED : 03/20/89

JOB # : 405.099.00

DATE COLLECTED: 03/18/89

LOCATION : MW-3

TIME COLLECTED : NA

METHOD :GRAB

PARAMETER	RESULTS	UNITS
ACETONE?	(5.0	ug/l
CHLOROMETHANE	<b>⟨5</b> ₊Ø	ug/l
BROMOMETHANE	<b>(5.0</b>	ug/l
VINYL CHLORIDE	(5.0	ug/1
CHLOROETHANE	(5.0	ug/l
METHYLENE CHLORIDE	(1.0	ug/l
CHLOROBENZENE	(1.0	ug/l
1,1-DICHLOROETHYLENE	(1.0	ug/1
1,1-DICHLOROETHANE	<1.0	ug/l
TRANS-1, 2-DICHLOROETHYLENE	(1.0	ug/1
ETHYLBENZENE	(1.0	ug/1
CHLOROFORM	(1.0	ug/l
1,2-DICHLOROETHANE	(1.0	ug/l



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SAMPLE #3325

PAGE 2 OF 2

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PARAMETER	RESULTS	UNITS
1, 1, 1-TRICHLOROETHANE	(1.0	ug/l
CARBON TETRACHLORIDE	⟨1.∅	ug/1
BROMODICHLOROMETHANE	(1.0	ug/l
1,2-DICHLOROPROPANE	(1.0	ug/l
TRANS-1, 3-DICHLOROPROPENE	(1.0	ug/1
TRICHLOROETHYLENE	(1.0	ug/l
DIBROMOCHLOROMETHANE	(1.0	ug/l
CIS-1,3-DICHLOROPROPENE	(1.0	ug/1
1,1,2-TRICHLOROETHANE	(1.0	ug/l
BENZENE	(1.0	ug/l
2-CHLORDETHYLVINYL ETHER	(1.0	ug/1
BROMOFORM	<1.0	ug/l
TETRACHLORDETHYLENE	(1.0	ug/l
1,1,2,2-TETRACHLOROETHANE	⟨1.∅	ug/l
TOLUENE	<i.0< td=""><td>ug/1</td></i.0<>	ug/1
1,2 DICHLOROBENZENE	(1.0	ug/l
1,3 DICHLOROBENZENE	(1.0	ug/l
1,4 DICHLOROBENZENE	⟨1.∅	ug/I
TRICHLOROFLUOROMETHANE	(10.	un/l

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Tel: (315) 446-8795 Fax: (315) 449-1611

Formerly CS Environmental Laboratory, Inc.

Date: Apr Ø6 1989

ENVIRONMENTAL DIL INC. To:

P.O. BOX 315

SYRACUSE, NY 13209

Attention: MARK HANSON

PURCHASE ORDER # :SPILL885323

\*\*\*\*\*\*\*\*

**SAMPLE #3326** 

PAGE 1 OF 2

LABORATORY ANALYSIS REPORT \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

PECH TO INITE

SAMPLE SUMMARY

CLIENT : ENVIRONMENTAL OIL INC.

DADANETED

DATE RECEIVED : 03/20/89

JOB # : 405.099.00 DATE COLLECTED: 03/18/89

LOCATION : MW-4 TIME COLLECTED : NA

METHOD : GRAB

PARAMETER	RESULTS	UNITS
OCETONE	10	/1
ACETONE.	12.	ug/l
CHLOROMETHANE	(5.0	ug/l
BROMOMETHANE	<b>(5.0</b>	ug/l
VINYL CHLORIDE	(5. Ø	ug/l
CHLOROETHANE	<b>(5.0</b>	ug/l
METHYLENE CHLORIDE	(1.0	ug/l
CHLOROBENZENE	₹1.0	ug/l
1,1-DICHLOROETHYLENE	(1.0	ug/l
1, 1-DICHLOROETHANE	(1.0	ug/l
TRANS-1, 2-DICHLOROETHYLENE	(1.0	ug/l
ETHYLBENZENE	(1.0	ug/1
CHLOROFORM	⟨1.∅	ug/I
1,2-DICHLOROETHANE	(1.0	ug/l



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PAGE 2 OF 2

# LABORATORY ANALYSIS REPORT

******	****	*****	*****
PARAMETER	RESULTS	UNITS	
1,1,1-TRICHLORDETHANE	⟨1.∅	ug/1	
CARBON TETRACHLORIDE		-	
	(1.0	ug/1	
BROMODICHLOROMETHANE	(1.0	ug/1	
1,2-DICHLOROPROPANE	(1.0	ug/l	
TRANS-1, 3-DICHLOROPROPENE	(1.0	ug/l	
TRICHLOROETHYLENE	(1.0	ug/l	
DIBROMOCHLOROMETHANE	(1.0	ug/l	
CIS-1,3-DICHLOROPROPENE	(1.0	ug/l	
1,1,2-TRICHLORDETHANE	(1.0	ug/l	
BENZENE	(1.0	ug/l	
2-CHLOROETHYLVINYL ETHER	(1.0	ug/l	
BROMOFORM	(1.0	ug/l	
TETRACHLOROETHYLENE	(1.0	ug/l	
1, 1, 2, 2-TETRACHLORDETHANE	(1.0	ug/l	
TOLUENE	8.0	ug/1	
1,2 DICHLOROBENZENE	(1.0	ug/l	
1,3 DICHLOROBENZENE	(1.0	ug/1	
1,4 DICHLOROBENZENE	(1.0	ug/l	
TRICHLOROFLUOROMETHANE	10.	ug/l	

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Tel: (315) 446-8795 Fax: (315) 449-1611

Formerly CS Environmental Laboratory, Inc.

Date: Apr 06 1989

ENVIRONMENTAL DIL INC.

P.O. BOX 315

To:

SYRACUSE, NY 13209

Attention: MARK HANSON

PURCHASE ORDER # :SPILL885323

SAMPLE #3327

PAGE 1 OF 2

LABORATORY ANALYSIS REPORT

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

SAMPLE SUMMARY

CLIENT : ENVIRONMENTAL DIL INC.

DATE RECEIVED : 03/20/89

JDB # : 405.099.00

DATE COLLECTED: 03/18/89

LOCATION : MW-5

TIME COLLECTED : NA

METHOD :GRAB

RESULTS	UNITS
(5.0	ug/l
<b>(5.0</b>	ug/1
<b>(5.0</b> )	ug/I
(5.0	ug/I
₹5. Ø	ug/l
(1.0	ug/1
(1.0	աց/1
(1.0	ug/l
(1.0	ug/1
(1.0	ug/l
(1.0	սց/1
(1.0	ug/l
(1.0	ug/I
	(5.0 (5.0 (5.0 (5.0 (1.0 (1.0 (1.0 (1.0 (1.0 (1.0



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PAGE 2 OF 2

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PARAMETER	RESULTS	UNITS
1,1,1-TRICHLOROETHANE	(1.0	ug/1
CARBON TETRACHLORIDE	(1.0	ug/l
BROMODICHLOROMETHANE	(1.0	ug/1
1,2-DICHLOROPROPANE	<1.0	ug/1
TRANS-1, 3-DICHLOROPROPENE	⟨1.∅	ug/1
TRICHLOROETHYLENE	(1.0	ug/l
DIBROMOCHLOROMETHANE	(1.0	ug/1
CIS-1, 3-DICHLOROPROPENE	(1.0	ug/l
1, 1, 2-TRICHLOROETHANE	(1.0	ug/1
BENZENE	(1.0	ug/l
2-CHLOROETHYLVINYL ETHER	⟨1.∅	ug/1
BROMOFORM	(1.0	ug/l
TETRACHLOROETHYLENE	(1.0	ug/1
1,1,2,2-TETRACHLOROETHANE	⟨1.∅	ug/1
TOLUENE	(1.0	ug/1
1,2 DICHLOROBENZENE	(1.0	ug/l
1,3 DICHLOROBENZENE	(1.0	ug/l
1,4 DICHLOROBENZENE	(1.0	ug/1
TRICHLOROFLUOROMETHANE	10.	ug/1

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Fax: (315) 449-1611

Formerly CS Environmental Laboratory, Inc.

Date: Apr 06 1989

To: ENVIRONMENTAL OIL

P.O. BOX 315

SYRACUSE, NY 13209

Attention: MARK HANSON

PURCHASE ORDER # :SPILL885323

PAGE 1 OF 2

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SAMPLE #3328

LABORATORY ANALYSIS REPORT

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

SAMPLE SUMMARY

CLIENT : ENVIRONMENTAL OIL INC. DATE RECEIVED : 03/20/89

JOB # : 405.099.00 DATE COLLECTED: 03/18/89

LOCATION : MW-E TIME COLLECTED : NA

METHOD : GRAB

PARAMETER	RESULTS	UNITS
ACETONE CHLOROMETHANE BROMOMETHANE VINYL CHLORIDE CHLOROETHANE METHYLENE CHLORIDE CHLOROBENZENE 1,1-DICHLOROETHYLENE 1,1-DICHLOROETHANE TRANS-1,2-DICHLOROETHYLENE ETHYLBENZENE CHLOROFORM	(5.0 (5.0 (5.0 (5.0 (1.0 (1.0 (1.0 (1.0 (1.0 (1.0	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l
1,2-DICHLOROETHANE	(1.0	ug/1



TRICHLOROFLUOROMETHANE

\*\*\*\*

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SAMPLE #3328

PAGE 2 OF 2

#### LABORATORY ANALYSIS REPORT

*****	****	**** <del>*</del>	*****
PARAMETER	RESULTS	UNITS	
1, 1, 1-TRICHLOROETHANE	(1,0	ug/l	
CARBON TETRACHLORIDE	(1.0	ug/l	
BROMODICHLOROMETHANE	(1.0	ug/l	
1,2-DICHLOROPROPANE	(1.0	ug/l	
TRANS-1, 3-DICHLOROPROPENE	(1.0	ug/l	
TRICHLOROETHYLENE	(1.0	ug/l	
DIBROMOCHLORDMETHANE	(1.0	ug/l	
CIS-1, 3-DICHLOROPROPENE	(1.0	ug/l	
1,1,2-TRICHLOROETHANE	(1.0	ug/l	
BENZENE	(1.0	ug/l	
2-CHLOROETHYLVINYL ETHER	(1.0	ug/l	
BROMOFORM	(1.0	ug/I	
TETRACHLOROETHYLENE	(1.0	ug/l	
1,1,2,2-TETRACHLOROETHANE	(1.0	ug/l	
TOLUENE	(1.0	ug/l	
1,2 DICHLOROBENZENE	(1.0	ug/l	
1,3 DICHLOROBENZENE	(1.0	ug/l	
1,4 DICHLOROBENZENE	<1.0	ug/l	

10.

ug/l

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Fax: (315) 446-8795

Formerly CS Environmental Laboratory, Inc.

Date: Apr 06 1989

To: ENVIRONMENTAL DIL INC.

P.O. BOX 315

SYRACUSE, NY 13209

Attention: MARK HANSON

PURCHASE ORDER # :SPILL885323

\*\*\*\*\*\*\*\*\*\*\*

SAMPLE #3329

PAGE 1 OF 2

SAMPLE SUMMARY

CLIENT : ENVIRONMENTAL DIL INC.

DATE RECEIVED : 03/20/89

JOB # : 405.099.00

DATE COLLECTED : 03/18/89

LOCATION : MW-7

TIME COLLECTED : NA

METHOD

:GRAB

PARAMETER	RESULTS	UNITS
ACETONE. CHLOROMETHANE BROMOMETHANE VINYL CHLORIDE CHLOROETHANE METHYLENE CHLORIDE CHLOROBENZENE 1,1-DICHLOROETHYLENE 1,1-DICHLOROETHANE TRANS-1,2-DICHLOROETHYLENE ETHYLBENZENE CHLOROFORM	(5.0 (5.0 (5.0 (5.0 (1.0 (1.0 (1.0 (1.0 (1.0 (1.0 (1.0	ug/1 ug/1 ug/1 ug/1 ug/1 ug/1 ug/1 ug/1
1,2-DICHLOROETHANE	11.0	471

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PAGE 2 OF 2

# LABORATORY ANALYSIS REPORT

**********	*****	************
PARAMETER	RESULTS	UNITS
1, 1, 1-TRICHLOROETHANE	⟨1.∅	ug/l
CARBON TETRACHLORIDE	(1.0	ug/l
BROMODICHLOROMETHANE	(1.0	ug/l
1,2-DICHLOROPROPANE	(1.0	ug/l
TRANS-1, 3-DICHLOROPROPENE	(1.0	ug/l
TRICHLOROETHYLENE	(1.0	ug/l
DIBROMOCHLOROMETHANE	(1.0	ug/l
CIS-1,3-DICHLOROPROPENE	(1.0	ug/l
1,1,2-TRICHLOROETHANE	(1.0	ug/l
BENZENE	(1.0	ug/l
2-CHLOROETHYLVINYL ETHER	(1.0	ug/l
BROMOFORM	(1.0	ug/I
TETRACHLOROETHYLENE	(1.0	ug/l
1,1,2,2-TETRACHLOROETHANE	(1.0	ug/1
TOLUENE	4.0	ug/l
1,2 DICHLOROBENZENE	(1.0	ug/l
1,3 DICHLOROBENZENE	(1.0	ug/l
1,4 DICHLOROBENZENE	(1.0	ug/l
TRICHLOROFLUOROMETHANE	(10.	ug/l

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1 1 -- 1 1 1



Apr 06 1989

Tel: (315) 446-8795 Fax: (315) 449-1611

Formerly CS Environmental Laboratory, Inc.

Date:

ENVIRONMENTAL DIL INC.

P.O. BOX 315

SYRACUSE, NY 13209

DELCOT OF DESCRIPTION THE

Attention: MARK HANSON

To:

PURCHASE ORDER # :SPILL885323

\*\*\*\*\*\*\*\*\*\*\*\*

**SAMPLE #3330** 

PAGE 1 OF 2

LABORATORY ANALYSIS REPORT

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SAMPLE SUMMARY

CLIENT : ENVIRONMENTAL DIL INC. DATE RECEIVED : 03/20/89

JOB # : 405.099.00 DATE COLLECTED : 03/18/89

LOCATION : MW-8 TIME COLLECTED : NA

METHOD :GRAB

PARAMETER	RESULTS	UNITS
PARAMETER  ACETONE CHLOROMETHANE BROMOMETHANE VINYL CHLORIDE CHLOROETHANE METHYLENE CHLORIDE CHLOROBENZENE 1,1-DICHLOROETHYLENE 1,1-DICHLOROETHANE TRANS-1,2-DICHLOROETHYLENE	RESULTS  12. (5.0) (5.0) (5.0) (1.0) (1.0) (1.0) (1.0) (1.0)	UNITS  ug/1  ug/1  ug/1  ug/1  ug/1  ug/1  ug/1  ug/1  ug/1  ug/1
ETHYLBENZENE	(1.0	ug/l
CHLOROETHANE		_
The state of the s		_
BROMOMETHANE	(5.0	ug/1
ACETONE	12.	ug/l
PARAMETER	RESULTS	UNITS

\*\*\*\*



TRICHLOROFLUOROMETHANE

NET Northeast, Inc. 5854 Butternut Drive East Syracuse, NY 13057

Tel: (315) 446-8795 Fax: (315) 449-1611

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\*\*\*\*\*\*\*\*\*\*

**SAMPLE #3330** 

PAGE 2 OF 2

## LABORATORY ANALYSIS REPORT

		1 (1 1 - 1	
******	****	*****	*****
PARAMETER	RESULTS	UNITS	
1, 1, 1-TRICHLOROETHANE	(1.0	ug/1	
CARBON TETRACHLORIDE	(1.0	ug/1	
BROMODICHLOROMETHANE	(1.0	ug/l	
1,2-DICHLOROPROPANE	(1.0	ug/l	
TRANS-1, 3-DICHLOROPROPENE	⟨1.0	ug/l	
TRICHLOROETHYLENE	(1.0	ug/l	
DIBROMOCHLOROMETHANE	(1.0	սց/1	
CIS-1,3-DICHLOROPROPENE	(1.0	ug/l	
1,1,2-TRICHLOROETHANE	(1.0	ug/l	
BENZENE	(1.0	ug/I	
2-CHLOROETHYLVINYL ETHER	(1.0	ug/l	
BROMOFORM	(1.0	ug/l	
TETRACHLOROETHYLENE	(1.0	ug/l	
1, 1, 2, 2-TETRACHLOROETHANE	(1.0	ug/l	
TOLUENE	6.0	ug/l	
1,2 DICHLOROBENZENE	(1.0	ug/l	
1,3 DICHLOROBENZENE	(1.0	ug/l	
1,4 DICHLOROBENZENE	(1.0	ug/l	

(10.

ug/1

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Fax: (315) 449-1611

ENVIRONMENTAL DIL INC.

P.O. BOX 315

Attention: MARK HANSON

To:

SYRACUSE, NY 13209

THIS DE NOT THE HORSTHEND THE

Formerly CS Environmental Laboratory, Inc. Date: Apr Ø6 1989

PURCHASE ORDER # :SPILL885323

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* **SAMPLE #3331** 

PAGE 1 OF 2

LABORATORY ANALYSIS REPORT \*\*\*\*\*\*\*\*\*\*

SAMPLE SUMMARY

CLIENT : ENVIRONMENTAL DIL INC. DATE RECEIVED : 03/20/89

: 405.099.00

DATE COLLECTED: 03/18/89

LOCATION : MW-9 TIME COLLECTED : NA

METHOD :GRAB

JOB #

ACETONE 12. ug/1 CHLOROMETHANE (5.0 ug/1 BROMOMETHANE (5.0 ug/1 VINYL CHLORIDE (5.0 ug/1 CHLOROETHANE (5.0 ug/1 CHLOROETHANE (1.0 ug/1 CHLOROBENZENE (1.0 ug/1 1,1-DICHLOROETHYLENE (1.0 ug/1 1,1-DICHLOROETHYLENE (1.0 ug/1 TRANS-1,2-DICHLOROETHYLENE (1.0 ug/1 ETHYLBENZENE (1.0 ug/1 CHLOROFORM (1.0 ug/1	PARAMETER	RESULTS	UNITS
1,2-DICHLOROETHANE (1.0 ug/l	CHLOROMETHANE BROMOMETHANE VINYL CHLORIDE CHLOROETHANE METHYLENE CHLORIDE CHLOROBENZENE 1,1-DICHLOROETHYLENE 1,1-DICHLOROETHANE TRANS-1,2-DICHLOROETHYLENE ETHYLBENZENE CHLOROFORM	(5.0) (5.0) (5.0) (5.0) (1.0) (1.0) (1.0) (1.0) (1.0)	ug/1 ug/1 ug/1 ug/1 ug/1 ug/1 ug/1 ug/1



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\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**SAMPLE #3331** 

PAGE 2 OF 2

#### LABORATORY ANALYSIS REPORT

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* PARAMETER RESULTS UNITS 1, 1, 1-TRICHLOROETHANE (1.0 ug/I CARBON TETRACHLORIDE (1.0 uq/1 BROMODICHLOROMETHANE (1.0 ug/1 (1.0 1,2-DICHLOROPROPANE ug/1 TRANS-1, 3-DICHLOROPROPENE (1.0 ug/1TRICHLOROETHYLENE (1.0 ug/1 (1.0 DIBROMOCHLOROMETHANE ug/1 CIS-1, 3-DICHLOROPROPENE (1.0 ug/1 1, 1, 2-TRICHLOROETHANE (1.0 ug/1 (1.0 BENZENE ug/1 2-CHLOROETHYLVINYL ETHER (1.0 ug/1 BROMOFORM (1.0 ug/1 TETRACHLOROETHYLENE (1.0 ug/I (1.0 1, 1, 2, 2-TETRACHLOROETHANE uq/1TOLUENE 5.0 ug/1

(1.0

(1.0

(1.0

10.

ug/1

ug/1

ug/1

ug/1

NOTE:

Methyl Ethyl Ketone detected at a concentration of 6.0ug/1.

1,2 DICHLOROBENZENE

1,3 DICHLOROBENZENE

1,4 DICHLOROBENZENE

TRICHLOROFLUOROMETHANE

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NYSDOH - ELAP #10067

APPROVED BY: Consal Tensel

Kwichkleen Monufactured Serval# #14,000

Fiberglass

Coround water Technology

Dil Recours Systems

Greenville NH 03048

Tel ((003) 878-2500

N 14415)

Staker

# New York State Department of Environmental Conservation 50 Wolf Road, Albany, New York 12233-



TO:	T. Quinn, Spill Response Section, Rm. 326  Henry G. Will Commission
FROM:	Rich Charles, Regional Spill Engr., Region 5
SUBJECT:	Hazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) OR CONTRACT (including lab work)
•	CONTRACTOR/VENDOR NAME GROWNWATER TECHNOLOGY CONTRACT NO. DUCCAS  SPILL NO. 5805323.  LOCATION FAUNT SAFATORA ROAD.
DATE: 3	THE STAN CONCERNATION
	ative of Events
Loca Spil Mate Amou Amou	of Spill: Stroles  tion of Spill: FALLUI SARATOGA BOAD  ler: KUNK KLEEN FORNICEE STRIPPE ENVIRONMENT ON TOTAL O
	PROJECT GUEN TO STHIN FEE REMEDITION.
Purpo	ose of Expenditure (What, Why):
	Significant ELAS
	required \$ 40.60
	Youcher (AC92) only for cleanups costing up to \$5,000
	Contractor's Application for Payment (32-02-2) for contracts over \$5,000
	X Invoice 10153
-	Standard Clauses (For Payment over \$2,500) (32-02-2)
	Solicitation Record as Required

cc: T. Plesnarski, Spill Response Section, Rm. 326 (cover letter only)

Affidavit as required for final payments on contracts over \$5,000

Written Quotations as required

Attach.

W11111

Attach.



Henry G. Williams T. Quinn, Spill Response Section, Rm. 326 TO: Commissioner Rich Con Gent Regional Spill Engr., Region 15 FROM: SUBJECT: Hazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) 7 OR CONTRACT (including lab work) CONTRACTOR/VENDOR NAME C-POUNDANCE TOCHERONSCONTRACT NO. DOWNERS SPILL NO. SEGGG378 MIDS ADJIAGAZINONA 3/13/89 DATE: Narrative of Events Date of Spill: うしてのしたも Location of Spill: Free CAPATOICA PORP Spiller: KICK KICER FIRMORE STROPPS Material Spilled: Amount Spilled: UNCNOWN Amount Recovered: Were and Project Status (Current, Future):
Project Status (Current, Future):
For reneduation Purpose of Expenditure (What, Why): hast invoice - (GWT) Grown bush will Attached are one original and three copies of the following doucments for work performed from 12129188 to 1128189 . Purchase Order, Service Agreement or Formal Contract as required \$ 140 all Voucher (AC92) only for cleanups costing up to \$5,000 Contractor's Application for Payment (32-02-2) for contracts over \$5.000 Invoice | Colol Standard Clauses (For Payment over \$2,500) (32-02-2) Solicitation Record as Required

cc: T. Plesnarski, Spill Response Section, Rm. 326 (cover letter only)

\_ Affidavit as required for final payments on contracts over \$5,000

Written Quotations as required



TO:	T. Quinn, Spill Response Section, Rm. 326	Henry G. Williams Commissioner
FROM:	2 WAGNER. Regional Spill Engr., Region 5.	
SUBJECT:	Hazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) OR (including lab work)	CONTRACT
•	CONTRACTOR/VENDOR NAME GROWN WHER TECHNOLOGYCONTRACT SPILL NO. 88053 ZS. LOCATION SO. GLENS FALLS CAPREN CO.	10. <u>Daws</u> 8.
DATE:		
	ative of Events $\mathcal{E}_{\mathcal{E},\mathcal{O}_{\mathcal{E}}}$	03 1999
Loca Spil Mate Amou Amou Proj	of Spill: 9-20-88  tion of Spill: FALL SARATOGA RAD, So. GUELS FALL ler: FULK KLEED FORMACOFF ETRAFEL  rial Spilled: METHULENE (HICKUE  nt Spilled: MENCON)  nt Recovered: MENCON  ect Status (Current, Future):  ched are one original and three copies of the following doucmen  performed from 10/7/88 to 12/24/88  Purchase Order, Service Agreement or Formal Contract as  required \$ 4959.81.  Voucher (AC92) only for cleanups costing up to \$5,000  Contractor's Application for Payment (32-02-2) for contr  \$5,000  Invoice 9810  Standard Clauses (For Payment over \$2,500) (32-02-2)	to for
	Solicitation Record as Required	
	Written Quotations as required	

Affidavit as required for final payments on contracts over \$5,000

cc: T. Plesnarski, Spill Response Section, Rm. 326 (cover letter only)

## RECEIVED FEB 0 6 1989

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Attach.

New York State Department of Environmental Conservation 50 Wolf Road, Albany, New York 12233-



TO:	T. Quinn, Spill Response Section, Rm. 326	Henry G. Williams Commissioner
FROM:	EXH UAGNER. , Regional Spill Engr., Region 5	
SUBJECT:	Hazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) \$\frac{1}{2} \frac{1}{2} \text{OR}\$ (including lab work)	CONTRACT
·	LOCATION SO. GLENS FALLS, SARATOGA CO	1 210012
DATE:	active of Events  FFB 0  REGIONAL ENONMENT	
Narr	ative of Events  ***RGIONAL ENGINEER :  ***BROOK, NOTER :	1929
Loca Spil Mate: Amour Amour	ative of Events  ative of Events  of Spill: 9-20-89.  tion of Spill: 7-20-89.  tion of Spill: 7-	· · ·
Purpo	ose of Expenditure (What, Why):  1) Project arend with thearput and are the source of	•
Atta: work	performed from	s for
_>	Purchase Order, Service Agreement or Formal Contract as required \$ \254.89.	
	Voucher (AC92) only for cleanups costing up to \$5,000	
	Contractor's Application for Payment (32-02-2) for contra \$5,000	cts over
	X. Invoice 9817.	
	Standard Clauses (For Payment over \$2,500) (32-02-2)	
	Solicitation Record as Required	

cc: T. Plesnarski, Spill Response Section, Rm. 326 (cover letter only)

Affidavit as required for final payments on contracts over \$5,000

Written Quotations as required







	001 18 1988
TO:	T. Quinn, Spill Response Section, Rm. 326  DEPT. OF ENVIRONMENTAL CONSERVATION SERVE TO SERVE
FROM:	REGIONAL ENGINEER - REGION 5  REGIONAL ENGINEER - REGION 5  REGIONAL ENGINEER - REGION 5  RAY BROOK NEW YORK 12977
SUBJECT:	Hazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) TO OR CONTRACT (including lab work)
٠	CONTRACTOR/VENDOR NAME ACRONOMORACE ENVIRONMENTAL CONTRACT NO. D COOKSESPILL NO. 5805323  LOCATION 50. GLENS FALLS CONTRACT NO. D COOKSESPILL NO. SARATOGA (
DATE:	1-31-89 (1166) DAK
	ative of Events
Loca Spil Mate Amou Amou Proj	of Spill: 4-20-88  tion of Spill: KWIK KIEEN So. WHATEN TORKED TORK TORK TORK TORK TORK TORK TORK TORK
	ched are one original and three copies of the following doucments for performed from <
	Purchase Order, Service Agreement or Formal Contract as required \$ 5533.20  Voucher (AC92) only for cleanups costing up to \$5,000
	Contractor's Application for Payment (32-02-2) for contracts over \$5,000
	X Invoice 616805
	Standard Clauses (For Payment over \$2,500) (32-02-2)
-	Solicitation Record as Required
	Written Quotations as required
Attach.	Affidavit as required for final payments on contracts over \$5,000



50 110111101		
TO:	T. Quinn, Spill Response Section, Rm. 326	Henry G. Willia
FROM:	RICH UNGNER., Regional Spill Engr., Region 5	Commissione
SUBJECT:	Hazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) #3 (Including lab work)	E CONTRACT
	CONTRACTOR/VENDOR NAME GECKNOWATER TECHNOLOGY CONTRACTOR NO. 8805323.  LOCATION SO. CLENS FALLS SAPATOGA	3000年 デジンニー
DATE: \	-9-89	IAN T
Narr	rative of Events  Region Control of Expenses From Figure 1 to 1 t	IAN II 1999 New York The Company Ton
Loca Spil Mate Amou Amou	e of Spill: 9-20-88:  ation of Spill: #AUN PCAN, SO. GUENS FALLS, WARR  ller: FULL FUEND FURNITURE  erial Spilled: METHYLENE CHUCKUF  unt Spilled: WEXXXIII  unt Recovered: UNIXXIIII  fect Status (Current, Future):  (1) PROTECT EEMEDIATION  (2) GUEND TO STHIN	20 CC
Purp	pose of Expenditure (What, Why):	
	DO THEST AND 91409	
Atta	ched are one original and three copies of the following douched performed from 10/27/88 to 1/26/88.	ents for
	Purchase Order, Service Agreement or Formal Contract as required \$ 4936.55	
	Voucher (AC92) only for cleanups costing up to \$5,000	
	Contractor's Application for Payment (32-02-2) for cont \$5,000	racts over
	X Invoice 9453	**
-	Standard Clauses (For Payment over \$2,500) (32-02-2)	
	Solicitation Record as Required	

Affidavit as required for final payments on contracts over \$5,000

Written Quotations as required

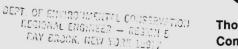
YV48119

12-7-88 REJECTED

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FROM MICE	O
SUBJECT # 8805323 WARREN CO DATE 12	112/88
MESSAGE	
AS PER ATTACHED MEMO ) INVOICE	& (2US)
(S7998) WAS REJECTED BY AIBANT AN	SIN GO
BE RESUBMITTED. PREASE NOTE IN FILE	
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man and men	
D DEC 0.1988	
ENVIRONMENTAL QUALITY	
WARRENSBURG	
SIGNED	
DRM 4S 468  (50 SETS) 4P468  NO REPLY NECESSARY  REPLY REQUESTED - USE	REVERSE SID

DEC 1 9 1988





December 15, 1988

Domermuth Petroleum Equipment and Maintenance Corp. P.O. Box 62 North Road Clarksville, NY 12041

Dear Contractor:

(39972)

In reference to attached invoice #12456 (Spill #8805323, Rt. 9N and Fawn Road, South Glens Falls) I am writing to clear up some confusion in billing. In the invoice, there were charges for a Driller and a Driller's Helper on 9/24/88 and 9/25/88. There were also charges on these same days for per foot drilling costs (Page 3 same invoice). The reasoning behind the "per foot" drilling rates, as listed in the contract, was to encompass the entire drilling process into a clear concise billing manner. This drilling process includes; all materials used, personnel needed, and all equipment utilized to install monitoring wells.

Therefore, I am disallowing the labor cost for Driller and Driller's Helper on the previously mentioned dates and invoice.

Also, for curb box installation, the contract states "the lump sum bid fo each curb box includes furnishing all labor, equipment and materials". (Page 40, paragraph 10 <u>Curb Box Installation</u>). Again, any labor costs that may have been, mistakenly, charged on this same invoice will also be disallowed.

Please resubmit your revised payment application and invoice to NYS Department of Environmental Conservation Region 5, Route 86, Raybrook, NY 12977, Attn: Wiley LaVigne.

I apologize for the confusion and appreciate your cooperation on this matter. If you have any questions, please call me at (518)457-2462.

Sincerely,

androny Karwellts

Anthony Karwiel Bureau of Spill Response NYSDEC

cc: Barbara Bishop Mike McClean

Bill Agresta



	$\Gamma_{i}$
TO:	T. Quinn, Spill Response Section, Rm. 326  Commissioner
FROM:	RICH WAGNER, Regional Spill Engr., Region 5
SUBJECT:	Hazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) OR CONTRACT) (including lab work)
·	CONTRACTOR/VENDOR NAME GENNOWFIER TECHNOLOGY CONTRACT NO. PLOOSS.  SPILL NO. BBOS323  LOCATION SG. GEORG FALLS, SARATOWN CO.
DATE: (2	-28-88
Narr	ative of Events
Loca Spil Mate: Amou Amou	of Spill: 9.20-88.  tion of Spill: KWE KLEEN, So. GLENS FALLS, BARATOON.  Ital Spilled: METHYLENE CHICRIDE  at Spilled: UNENCUIN  at Recovered: UNENCUIN  ect Status (Current, Future):
	(2) GIVEN TO SHAN TO BEMEDIATE
Purpo	ose of Expenditure (What, Why):
	GECLIOWATER TECHNENT
	ched are one original and three copies of the following doucments for performed from 9/25/88 to 10/29/88.  Purchase Order, Service Agreement or Formal Contract as required \$ 9811.40.
	Voucher (AC92) only for cleanups costing up to \$5,000
	Contractor's Application for Payment (32-02-2) for contracts over \$5,000
-	X Invoice 9032
	Standard Clauses (For Payment over \$2,500) (32-02-2)
-	Solicitation Record as Required

cc: T. Plesnarski, Spill Response Section, Rm. 326 (cover letter only)

Affidavit as required for final payments on contracts over \$5,000

Written Quotations as required

New York State Department of Environmental Conservation 50 Wolf Road, Albany, New York 12233-T. Quinn, Spill Response Section, Rm. 326 TO: Commissioner RICH WAGNER. Regional Spill Engr., Region FROM: Hazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) OR CONTRACT SUBJECT: (including lab work) CONTRACTOR/VENDOR NAME GROUNDWATER TECH CONTRACT NO. DIOCOCO SPILL NO. 8805323 LOCATION SO. GLENS FALLS, SLEPATOGA DATE: 12-27-80. Narrative of Events Date of Spill: 9.70-88 LOCATION OF SPILL: KWIK FLEEN, SO. GLESS FALLS, SYRATOGA Spiller: KUIK FLEED CHICROF CHICROF Amount Spilled: WENCUP Project Status (Current, Future): Project & gran to Sig HW Purpose of Expenditure (What, Why): Remediation of groundway

Attached are one original and three copies of the following doucments for work performed from 9-75-82 to 5-75-83

Purchase Order, Service Agreement or Formal Contract as required \$ 27.12

Voucher (AC92) only for cleanups costing up to \$5,000

Contractor's Application for Payment (32-02-2) for contracts over \$5,000

Invoice 90-10

Standard Clauses (For Payment over \$2,500) (32-02-2)

Solicitation Record as Required

Written Quotations as required

Affidavit as required for final payments on contracts over \$5,000

Attach.

CC: T. Plesnarski, Spill Response Section, Rm. 326 (cover letter only)

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Attach.

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Henry G. Williams Commissioner
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2) for contracts over
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contracts over \$5,000

SC WOII NO	DEC OF THE
TO:	T. Quinn, Spill Response Section, Rm. 326  Henry G. William Commissioner
FROM:	RICH WACKER. Regional Spill Engr., Region AND
SUBJECT:	Hazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) OR CONTRACT (including lab work)
·	CONTRACTOR/VENDOR NAME CT MALE CONTRACT NO. DIOCHY ( SPILL NO. SPOSSES LOCATION SPRATOGA TO. Se. GLENG FACE)
DATE: (2	
Narr	ative of Events
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Purpo	ose of Expenditure (What, Why):
	SMARLE INFLUENT (EFFLUENT OF AIR STRIPPER
Work	performed from 10-18-88 to
	Purchase Order, Service Agreement or Formal Contract as required \$ 835,20
	Voucher (AC92) only for cleanups costing up to \$5,000
-	Contractor's Application for Payment (32-02-2) for contracts over \$5,000
	X Invoice 40885
	Standard Clauses (For Payment over \$2,500) (32-02-2)
	Solicitation Record as Required
	Written Quotations as required

Affidavit as required for final payments on

Department of Environmental Conservation  ny, New York 12233-
tinn, Spill Response Section, Rm. 326  Commissioner  A WAGNER , Regional Spill Engr., Region
dous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) OR CONTRACT
CACTOR/VENDOR NAME CT MALE CONTRACT NO. DROWG. NO. 8805323 TON SARATOGA RD. So. GIBBS FACCS.
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Expenditure (What, Why):
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re one original and three copies of the following doucments for rmed from 9-70-88 to
Purchase Order, Service Agreement or Formal Contract as required \$ 104.46
Voucher (AC92) only for cleanups costing up to \$5,000
Contractor's Application for Payment (32-02-2) for contracts over \$5,000
Invoice 40384
Standard Clauses (For Payment over \$2,500) (32-02-2)
Solicitation Record as Required
Written Quotations as required
Affidavit as required for final payments on contracts over \$5,000

TO:	T. Quinn, Spill Response Section, Rm. 326  Commissioner
FROM:	RICH WAGNER, Regional Spill Engr., Region 5
SUBJECT:	Hazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) OR CONTRACT (including lab work)
•	CONTRACTOR/VENDOR NAME CT MALE CONTRACT NO. DECOMO SPILL NO. 8805323 LOCATION SARATOGA RD. SO. GENS FALLS.
DATE: 12	-2-58
Narra	ative of Events
Locat Spill Mater Amour Amour	of Spill: 9-20-88  tion of Spill: MUKE KLEEN FLENANCE STEIPPING SO WHILE  ler: KUNK KLEEN  rial Spilled: METHYLENE (HOPIDE  of Recovered: WIK.  ect Status (Current, Future):
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Purpo	ose of Expenditure (What, Why):
	SAMPLE RUNOFF FROM FIRE TO DETERMINE SECO
	thed are one original and three copies of the following doucments for performed from 9-70-88 to
	Purchase Order, Service Agreement or Formal Contract as required \$ 104.46
	Voucher (AC92) only for cleanups costing up to \$5,000
	Contractor's Application for Payment (32-02-2) for contracts over \$5,000
-	X Invoice 40384
	Standard Clauses (For Payment over \$2,500) (32-02-2)
	Solicitation Record as Required
	Written Quotations as required

New York State Department of Environmental Conservation

Attach.



	06/18/1988
TO:	T. Ouinn, Spill Response Section, Rm. 326 DEPT OF FAMILY G. William
FROM:	REGIONAL ENGINEER - REGIONAL ENGINEER - REGION 5  REGIONAL ENGINEER - REGION 5  REGIONAL ENGINEER - REGION 5
SUBJECT:	Bazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) TO OR CONTRACT (including lab work)
	CONTRACTOR/VENDOR NAME APPRONDACE EMPONITUM CONTRACT NO. DOOLSE SPILL NO. 8805323 LOCATION WARPEN CO.
DATE: \	0-18-88
Narr	rative of Events
Loca Spil Mate Amou Amou Proj	e of Spill: 9-20-38  Stion of Spill: FLUIR KLEEN) S. GLENS FALLS, GARREN CO.  Stiel: FLUIR KLEEN FURNITURE  Stilled: METHYLENE (HURWE  Lect Spilled: WAR  SECT Status (Current, Future):  MN INSTALLED  Cose of Expenditure (What, Why):  ANALYSIS OF ASH DEURS  Sched are one original and three copies of the following doucments for performed from 9/26/88 to  Y. Purchase Order, Service Agreement or Formal Contract as required \$ 97092
	Voucher (AC92) only for cleanups costing up to \$5,000
	Contractor's Application for Payment (32-02-2) for contracts over \$5,000
	X Invoice C16771
	Standard Clauses (For Payment over \$2,500) (32-02-2)
-	Solicitation Record as Required
-	Written Quotations as required
	Affidavit as required for final navments on contracts over \$5,000



	\$ 1000 ·
TO:	T. Quinn, Spill Response Section, Rm. 326  DEPT. OF ENVIRONMENTAL CONSERVATION ISSUED FOR THE PROPERTY OF THE
FROM:	Regional Spill Engr., Region Spill Engr., Region YORK 12977
SUBJECT:	Hazardous Spill Cleanup PAYMENT PACKAGE (NON-CONTRACT) TO OR CONTRACT (including lab work)
·	CONTRACTOR/VENDOR NAME ADDRONDACK ENVIRONMENTAL CONTRACT NO. D LOCAL SPILL NO. 5805323  LOCATION 50. GLENS FALLS WARRINGO.
DATE: \C	7 18-80
Narr	ative of Events
Loca Spil Mate Amou Amou	of Spill: 4-20-88 tion of Spill: FWIK KLEBY So. WEND FALLS, WARREN ler: FWIK KLEAN FURNAKE rial Spilled: METHYLENE CHUCRIE  ot Spilled: WK  ot Recovered: NCHE ect Status (Current, Future):
	CHOONED GEONAWATER TREAMENT
Purp	ose of Expenditure (What, Why):
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	thed are one original and three copies of the following doucments for performed from <-76-8 to
-	Purchase Order, Service Agreement or Formal Contract as required \$ 5533.20
	Voucher (AC92) only for cleanups costing up to \$5,000
	Contractor's Application for Payment (32-02-2) for contracts over \$5,000
-	X Invoice 016805
	Standard Clauses (For Payment over \$2,500) (32-02-2)
	Solicitation Record as Required
	Written Quotations as required
Attach.	Affidavit as required for final payments on contracts over \$5,000

SC Wolf Road, Albany, New York 12233-	
TO:	T. Quinn, Spill Response Section, Rm. 326  DEC 0 Heavy G. Williams
FROM:	Regional Spill Engr.,
SUBJECT:	T. Quinn, Spill Response Section, Rm. 326  DEC O Heave G. Williams  DEPT. OF ENHANCEMENT CONSERVATION  RAY BROOK, NEW YOS REGION F. REGI
٠	CONTRACTOR/VENDOR NAME DOM BRAUTH BURCHAS PALCONTRACT NO. DIOCOTOR SPILL NO. 8805323 LOCATION SO. GUENS FAULS .
DATE: \Z	-7-88
	of Spill: 9-20-88
Locat Spill Mater Amoun Amoun Proje	CION OF SPILL: KWIK KLEEN FURNITURE STRIPPING, SO, GUENC Ler: KWIK KLEEN  TIAL SPILLED: METHYLENE CHLORIDE  IN SPILLED: UNKNOWN  COT Status (Current, Future):  CON STUDY (CMPLETED (3) MONITORING SITE  AIR STRIPPER INSTALLED (9) TURNED GUER TO STHIN  THE OF EXPENDITURE (What, Why):  TRETALL 5 MIN) IRW (3) GN REPORT
(2)	FRUM CENTAMINATED ASJES
	hed are one original and three copies of the following doucments for performed from 9-24-88 to 16-18-88.
	Purchase Order, Service Agreement or Formal Contract as required \$ \\\0,022.28.  Voucher (AC92) only for cleanups costing up to \$5,000
	Contractor's Application for Payment (32-02-2) for contracts over \$5,000
*****	X Invoice 51998
	Standard Clauses (For Payment over \$2,500) (32-02-2)
	Solicitation Record as Required
	Written Quotations as required
ttach.	Affidavit as required for final payments on contracts over \$5,000