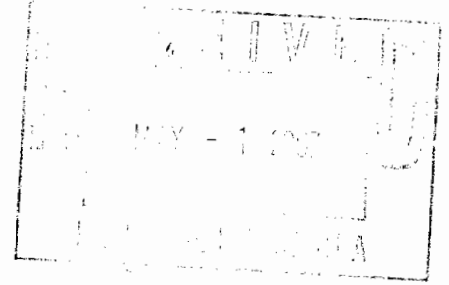




**O'BRIEN & GERE**

April 26, 2006

Ms. Kerry Maloney  
Environmental Engineer  
Division of Environmental Remediation  
Bureau A  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, New York 12233



Re: Preliminary Site Characterization –  
Gem Cleaners  
84 North Village Avenue  
Rockville Centre, New York  
Site No. 1-30-082

File: 10653/36447 #5

Dear Ms. Maloney:

This letter report serves to summarize the Preliminary Site Characterization (PSC) activities conducted at the Gem Cleaners site located at 84 North Village Avenue, Rockville Centre, New York. Refer to Figure 1 for the site location.

### Site Description

Gem Cleaners is an active dry cleaning facility, which has used and stored chemicals on site. The main chemical used is tetrachloroethene, also known as perchloroethylene or PCE. The facility is located on an approximately 0.25-acre lot in a one-story masonry building. A two-story frame and stucco building is attached to the south side of the building. Refer to Figure 2.

The site has one dry well (DW-1) and two existing monitoring wells (MW-1A and MW-2), located in the paved lot and driveway south of the building. Two additional monitoring wells, MW-1B (located in the proximity of MW-1A and DW-1) and MW-3 (located approximately 300 ft north of the site) were shown on site plans from previous site assessment reports provided by NYSDEC. MW-1B and MW-3 could not be located during the PSC activities, but are presented in Figures 2 and 3.

The site borders North Village Avenue on the east and a municipal parking lot on the west. Neighboring buildings border the site on the north and south.

### Previous Investigations/History

Energy & Environmental Analysts, Inc. (EEA) completed a Phase I Environmental Assessment in July 1994 at the site. In May 1995, EEA also conducted a Phase II Environmental Subsurface Investigation which included a soil boring through the dry well and the installation and sampling of four groundwater

monitoring wells. Refer to Attachment 1. PCE was present in all four monitoring wells, ranging from 2 micrograms/liter ( $\mu\text{g/L}$ ) to 56  $\mu\text{g/L}$  in MW-1A.

In August 1997, P.W. Grosser Consulting conducted additional activities at the site and prepared a Site Assessment and Remediation Report. Refer to Attachment 1. Their inspection focused on the current operations at the facility and the liquid wastes that were generated. Dye testing was performed to evaluate if the interior sink, toilet, and floor drain discharged to the municipal sewer system. Dye testing indicated that the interior sink, toilet, and floor drain discharged to the municipal sewer system through the manhole in front of the building.

A vent pipe, which discharged small amounts of PCE/water condensate into a stairwell drain, was also identified and relocated to the roof. The stairwell drain, located on the west side of the building, was investigated and the soil was sampled. PCE levels were observed in the soil (6 to 8 ft) at 12,000  $\mu\text{g/Kg}$ , which is well above the TAGM Soil Cleanup Objectives of 1,400  $\mu\text{g/Kg}$ . The drain area was excavated to 8 ft below grade (the identified cleanup endpoint), a new drain was installed, and the excavation was backfilled.

### **Site Geology and Hydrology**

The site appears to be filled, as the grade of the Village of Rockville Center parking lot near the site is approximately 3 feet lower. The site is underlain by the Upper Glacial Aquifer. This unit, which underlies most of Long Island, is composed of glacial outwash (unconsolidated mixture of sand and gravel) deposited during the Pleistocene ice ages. The Upper Glacial Aquifer has an average thickness of approximately 100 feet in the vicinity of the site. As indicated during previous drilling events, there is fine sand with trace of gravel to 20 feet below grade.

The Upper Glacial Aquifer is an unconfined aquifer recharging from rainfall that falls on Long Island. The water table is highest along the center of the island. This is also where the greatest rainfall occurs. Groundwater tends to flow from recharge areas in the center of the island to discharge areas along the north and south shores. At the site, depth to groundwater is approximately 19 feet below grade. The estimated average hydraulic conductivity of the Upper Glacial Aquifer is 270 feet/day horizontally and 27 ft/day vertically. The ground water flow direction could not be calculated due to the limited number of monitoring wells at the site. However, in the Phase II Environmental Subsurface Investigation Report, dated May 1995 and prepared by EEA, the regional ground water flow pattern was reportedly from north to south.

### **Field Activities**

Field activities consisting of soil borings, subsurface soil sampling, ground water sampling, and residual sampling were performed on-site from January 17 through January 20, January 30, and March 2 through March 3, 2006. Environmental Probing Investigations, Inc. (EPI) located in Cream Ridge, New Jersey, performed the drilling activities. A representative from YEC located in Valley Cottage, New York provided the drilling oversight and sample collection.

Soil borings were conducted at eight locations (SB-1 through SB-8) as shown on Figures 2 and 3. For borings located outside the property (SB-7/GWS-7 and SB-8/GWS-8), the Village of Rockville was contacted and a permit was obtained prior to drilling. Refer to Attachment 2.

The borings were performed using a Geoprobe® direct push probe (6600 unit). The scope of the PSC was to advance the borings to 90 feet or refusal. None of the borings were advanced to 90 ft due to subsurface conditions. Refusal occurred at the depths presented in Table A below. Four-foot long core samples were retrieved from the borings and screened via a headspace method using a photo ionization detector (PID). Refer to boring logs in Attachment 3. Soil samples with the highest PID reading were collected and submitted for analysis. The PID readings ranged from non-detect to 34.8 ppm. The depths and PID readings for the soil samples collected are presented in Table A below. At SB-3, two soil samples were collected and submitted for analysis. In addition to the soil samples, a residual sample was collected from the dry well (DW-1). Duplicate samples were also collected and submitted for analysis for SB-5 and DW-1.

**Table A:** *Depth to refusal, depth of soil samples, and PID readings.*

Location	Depth to Refusal (ft)	Depth of Soil Samples (ft)	PID Reading (ppm)
SB-1	44	24-28	17.8
SB-2	40	36-40	7.4
SB-3	40	28-32 & 36-40	5.0 & 5.3
SB-4	40	24-28	3.7
SB-5	40	28-32 (plus field duplicate at 28-32 ft)	34.8
SB-6	40	16-20	6.6
SB-7	40	36-40	6.1
SB-8	36	20-24	2.0

Groundwater samples were collected from each of the eight boring locations (GWS-1 through GWS-8). The samples were collected using the Geoprobe® discrete screen point groundwater sampling method. Groundwater samples were collected at the depths presented in Table B below. In addition, water samples were collected from the dry well (DW-1) and the existing monitoring wells (MW-1A and MW-2) on site.

**Table B:** *Depth of groundwater samples.*

Location	Depth to Groundwater Samples (ft)
GWS-1	29
GWS -2	29
GWS -3	29
GWS -4	20, 34, & 49
GWS -5	29 (plus field duplicate at 29 ft)
GWS -6	21, 34, & 44
GWS -7	17, 28, & 43
GWS -8	24
MW - 1A	59
MW - 2	20

Following the boring and sampling activities YEC performed an instrument survey of the site that included the sample locations, dry well, monitoring wells, and other prominent structures.

The soil samples and the groundwater samples along with matrix spike/matrix spike duplicate (MS/MSD) samples, and equipment blank samples were sent via overnight delivery to Life Science Laboratories in Syracuse, New York for analysis. The samples were analyzed for volatile organic compounds.

## **Analytical Results**

### ***Data Quality***

The samples were analyzed for volatile organic compounds according to the Standby QAPP and project specific DER-10 QAPP using USEPA Method 8260B.

The analytical data packages from Life Science Laboratories were validated by an independent data validation contractor, Nancy Potak of Greensboro, Vermont, and the results were reported in a data usability summary report (DUSR). Refer to Attachment 4 (separately bound). The validated soil and residual analytical results are summarized in Table 1. The validated groundwater analytical results are summarized in Table 2.

The data quality for soil, residual and groundwater were generally acceptable for intended uses. The DUSR noted that there were problems with the system monitoring and internal standard recoveries in the initial analysis of the residual samples from DW-1. The samples were reanalyzed and the data from the reanalysis were not significantly different. As recommended by the validator, the data from the original analysis was used for reporting, as presented in Table 1. In addition, the DUSR noted that there was minor acetone and methylene chloride contamination in the method and storage blanks, and the data is flagged by the "B" data qualifier in Table 1.

Minor acetone and methylene chloride contamination was also found in the trip blanks for the groundwater samples. In three groundwater samples, GWS-1(29), GWS-6(21), GWS-6(34), the samples had to be reanalyzed due to the high concentrations of PCE exceeding instrument calibration range. As recommended by the validator, the data for this compound was reported from the diluted analysis.

### ***Data Evaluation***

The analytical results were compared to the following New York State screening values:

- Soil and residual results are compared to applicable screening values provided in TAGM #4046, 1994.
- Groundwater results are compared to applicable screening values provided in TOGS 1.1.1, 1998.

The validated analytical results for the soil, residual and groundwater samples are summarized in Tables 1 and 2. In addition, the analytical results, which exceed the applicable screening values, are highlighted with boxes in the tables and presented on Figure 3.

For the soil and residual samples, no compounds exceeded their applicable screening values. Compounds that were detected include acetone, 2-butanone, toluene, and PCE as shown in Table 1.

For the groundwater samples, only PCE and cis-1,2-dichloroethene exceeded their applicable screening values. This occurred at three locations as shown below in Table C. Other compounds that were detected included trichlorofluoromethane, acetone, carbon disulfide, methylene chloride, methyl tert-butyl ether, 2-butanone, chloroform, benzene, trichloroethene, toluene, ethylbenzene, xylenes and 1,2,4-trichlorobenzene as shown in Table 2. PCE was present in GWS-1, 3, 4, 5, 6, 7, and 8, MW-1A and MW-2.

**Table C:** *Groundwater samples with compounds that exceed their applicable screening values.*

Compound	Screening Values	GWS-1 (29')	GWS-4 (20')	GWS-4 (34')	GWS-6 (21')	GWS-6 (34')	GWS-6 (44')
cis-1,2-dichloroethene	5	ND	ND	ND	5.11	ND	ND
PCE	5	303	20.2	12.4	313	109	11.2

ND = Not detected. Concentrations are in µg/L.

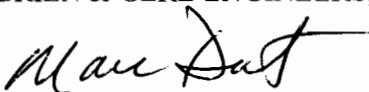
**Summary**

PCE was the contaminant of concern based on the site history. Based on the analytical results of the soil and residual samples collected during the PSC, no compounds exceeded their applicable screening values. Several volatile organic compounds were present in the ground water, however, only PCE and cis-1,2-dichloroethene exceeded the applicable screening values. This occurred at three locations (GWS-1, GWS-4 and GWS-6) with PCE concentrations ranging from 11.2 to 313 µg/L.

If you have any questions or comments regarding this information, please contact me at (315) 437-6100, extension 2258.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.



Marc J. Dent, P.E.  
Managing Engineer



TABLE 2  
Gem Cleaners Site  
Ground Water Sample Results

Compounds	CAS No.	NYSDEC TOGS 1.1.1 Allowable Concentration <sup>[1]</sup>	Sample ID Depth Interval Date Sampled	GWS-1 29' 1/17/06	GWS-2 29' 1/18/06	GWS-3 29' 1/18/06	GWS-4 20' 1/18/06	GWS-4 34' 1/18/06	GWS-4 49' 1/18/06	GWS-5 29' 1/19/06	GWS-5-FD (X-2) 29' 1/19/06	GWS-6 21' 1/20/06	GWS-6 34' 1/20/06	GWS-6 44' 1/20/06
Volatile Organic Compounds <sup>[2]</sup> (µg/L)														
Dichlorodifluoromethane	75-71-8	5		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Chloromethane	74-87-3	5		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Vinyl chloride	75-01-4	2		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromomethane	74-83-9	5		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroethane	75-00-3	5		0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Trichlorofluoromethane	75-69-4	5		0.14 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
1,1-Dichloroethane	75-35-4	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Acetone	67-64-1	50		0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U	0.23 U
Carbon disulfide	75-15-0	60 <sup>[3]</sup>		0.03 U	0.38 U	0.33 U	0.65 U	0.19 U	0.85 U	0.35 U	0.37 U	0.42 U	0.69 U	0.83 U
Methyl acetate	79-20-9	NA		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride	75-09-2	5		0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U	0.09 U
trans-1,2-Dichloroethane	156-60-5	5		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Methyl tert-butyl ether	1634-04-4	10 <sup>[3]</sup>		0.22 U	0.03 U	0.03 U	0.03 U	1.21 U	0.03 U	0.14 U	0.14 U	0.03 U	0.20 U	0.03 U
1,1-Dichloroethane	75-34-3	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
cis-1,2-Dichloroethane	156-59-2	5		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
2-Butanone	78-93-3	50		0.68 U	1.05 U	1.04 U	0.68 U	0.68 U	2.37 U	0.68 U	1.18 U	0.68 U	1.66 U	1.12 U
Chloroform	67-66-3	7		0.26 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.10 U	0.02 U
1,1,1-Trichloroethane	71-55-6	5		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Cyclohexane	110-82-7	NA		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Carbon tetrachloride	56-23-5	5		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Benzene	71-43-2	1		0.02 U	0.11 U	0.14 U	0.02 U	0.02 U	0.02 U	0.11 U	0.12 U	0.02 U	0.21 U	0.17 U
1,2-Dichloroethane	107-06-2	0.6		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Trichloroethene	79-01-6	5		0.12 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.29 U	0.03 U
Methylcyclohexane	108-87-2	NA		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
1,2-Dichloropropane	78-87-5	1.0		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane	75-27-4	50		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
cis-1,3-Dichloropropene	10061-01-5	0.4 <sup>[4]</sup>		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
4-Methyl-2-pentanone	108-10-1	NA		1.20 U	1.20 U	1.20 U	1.2 U	1.20 U	1.20 U	1.20 U	1.20 U	1.20 U	1.20 U	1.20 U
Toluene	108-88-3	5		0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.40 U	0.46 U	0.55 U	0.63 U
trans-1,3-Dichloropropene	10061-02-6	0.4 <sup>[4]</sup>		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
1,1,2-Trichloroethane	79-00-5	1		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Tetrachloroethene	127-18-4	5		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
2-Hexanone	591-78-6	50		0.36 U	0.05 U	0.36 U	0.36 U	12.4 U	0.91 U	1.19 U	1.20 U	3.13 U	1.09 U	3.36 U
Dibromochloromethane	124-48-1	50		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
1,2-Dibromoethane	106-93-4	6E-04		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Chlorobenzene	108-90-7	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Ethylbenzene	100-41-4	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Xylenes	1330-20-7	5 <sup>[5]</sup>		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.14 U	0.11 U	0.10 U	0.04 U	0.04 U	0.04 U
Styrene	100-42-5	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Isopropylbenzene	75-25-2	50		0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
1,1,2,2-Tetrachloroethane	98-82-8	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
1,3-Dichlorobenzene	79-34-5	5		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,4-Dichlorobenzene	541-73-1	3		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
1,2-Dichlorobenzene	106-46-7	3		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dibromo-3-chloropropane	95-50-1	3		0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U
1,2,4-Trichlorobenzene	96-12-8	0.04		0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
	120-82-1	5		0.19 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Notes:

- Analytical Data Qualifiers:  
B = Deleted in method blank at concentrations less than contract required detection limit (CRDL)  
J = Estimated
- FD = Field Duplicate  
NA = Not Available  
= Exceeds Screening Value
- [1] Table 1 of NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998.
- [2] Non-detect limits are MDLs.
- [3] TOGS April 2000 Addendum.
- [4] The TOGS value is for the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene
- [5] The TOGS value for total xylenes is assumed to be equal to the TOGS value for 1,2-xylene, 1,3-xylene, or 1,4-xylene

TABLE 2  
Gem Cleaners Site  
Ground Water Sample Results

Compounds	CAS No.	NYSDEC TOGS 1.1.1 Allowable Concentration <sup>(1)</sup>	Sample ID Depth Interval Date Sampled	GWS-7 17' 3/2/06	GWS-7 28' 3/2/06	GWS-7 43' 3/2/06	GWS-8 24' 3/3/06	MW-1A 59' 1/19/06	MW-2 20' 1/19/06	MW-2 FD (X-3) 20' 1/19/06
Volatile Organic Compounds <sup>(2)</sup> (µg/L)										
Dichlorodifluoromethane	75-71-8	5		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Chloromethane	74-87-3	5		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Vinyl chloride	75-01-4	2		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Bromomethane	74-83-9	5		0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Chloroethane	75-00-3	5		0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
Trichlorofluoromethane	75-69-4	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
1,1-Dichloroethene	75-35-4	5		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	5		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Acetone	67-64-1	50		2.54 J	1.73 J	0.23 U	1.01 J	0.23 U	0.23 U	0.23 U
Carbon disulfide	75-15-0	60 <sup>(3)</sup>		<b>0.55</b> U	0.19 J	<b>1.02</b> U	0.03 U	0.03 U	0.03 U	0.03 U
Methyl acetate	79-20-9	NA		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Methylene chloride	75-09-2	5		0.09 U	0.09 U	0.21 J	0.09 U	0.09 U	0.09 U	0.09 U
trans-1,2-Dichloroethene	156-60-5	5		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Methyl tert-butyl ether	1634-04-4	10 <sup>(3)</sup>		0.03 U	0.03 U	0.03 U	0.03 U	0.19 J	0.03 U	0.03 U
1,1-Dichloroethane	75-34-3	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
cis-1,2-Dichloroethene	156-59-2	5		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
2-Butanone	78-93-3	50		0.68 U	0.68 U	1.02 J	0.68 U	0.68 U	0.68 U	0.68 U
Chloroform	67-66-3	7		0.02 U	0.02 U	0.02 U	0.02 U	0.14 J	0.02 U	0.02 U
1,1,1-Trichloroethane	71-55-6	5		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Cyclohexane	110-82-7	NA		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Carbon tetrachloride	56-23-5	5		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Benzene	71-43-2	1		0.18 J	0.02 U	0.18 J	0.02 U	0.02 U	0.02 U	0.02 U
1,2-Dichloroethane	107-06-2	0.6		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Trichloroethene	79-01-6	5		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Methylcyclohexane	108-87-2	NA		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
1,2-Dichloropropane	78-87-5	1.0		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Bromodichloromethane	75-27-4	50		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
cis-1,3-Dichloropropene	10061-01-5	0.4 <sup>(4)</sup>		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
4-Methyl-2-pentanone	108-10-1	NA		0.28 U	0.20 J	1.20 U	1.20 U	1.20 U	1.20 U	1.20 U
Toluene	108-88-3	5		0.28 J	0.19 J	0.30 J	0.27 J	0.02 U	0.02 U	0.02 U
trans-1,3-Dichloropropene	10061-02-6	0.4 <sup>(4)</sup>		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
1,1,2-Trichloroethane	79-00-5	1		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Tetrachloroethene	127-18-4	5		0.42 J	<b>0.60</b> U	0.52 U	<b>0.94</b> U	<b>1.58</b> U	0.36 U	<b>3.38</b> U
2-Hexanone	591-78-6	50		0.36 U	0.02 U	0.02 U	0.36 U	0.02 U	0.02 U	0.02 U
Dibromochloromethane	124-48-1	50		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
1,2-Dibromoethane	106-93-4	6E-04		0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U	0.03 U
Chlorobenzene	108-90-7	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Ethylbenzene	100-41-4	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Xylenes	1330-20-7	5 <sup>(5)</sup>		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
Styrene	100-42-5	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Bromoform	75-25-2	50		0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U
Isopropylbenzene	98-82-8	5		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
1,1,2,2-Tetrachloroethane	79-34-5	5		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
1,3-Dichlorobenzene	541-73-1	3		0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
1,4-Dichlorobenzene	106-46-7	3		0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U	0.04 U
1,2-Dichlorobenzene	95-50-1	3		0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U	0.07 U
1,2-Dibromo-3-chloropropane	96-12-8	0.04		0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U	0.22 U
1,2,4-Trichlorobenzene	120-82-1	5		0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U	0.13 U

Notes:

Analytical Data Qualifiers:  
 B = Detected in method blank at concentrations less than contract required detection limit (CRDL)  
 J = Estimated  
 U = Not detected at or above method detection limit (MDL) or practical quantitation limit (PQL)  
 NA = Not Available  
 FD = Field Duplicate  
 = Exceeds Screening Value

[1] Table 1 of NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 1998.

[2] Non-detect limits are MDLs.

[3] TOGS April 2000 Addendum.

[4] The TOGS value is for the sum of cis-1,3-Dichloropropene and trans-1,3-Dichloropropene.

[5] The TOGS value for total xylenes is assumed to be equal to the TOGS value for 1,2-xylene, 1,3-xylene, or 1,4-xylene.



I:\DIV71\PROJECTS\1065336447\DWG\GIS\MXD\GEM\_SITELOC.MXD

PLOT DATE: 08/09/06 DIV. 732 JPS

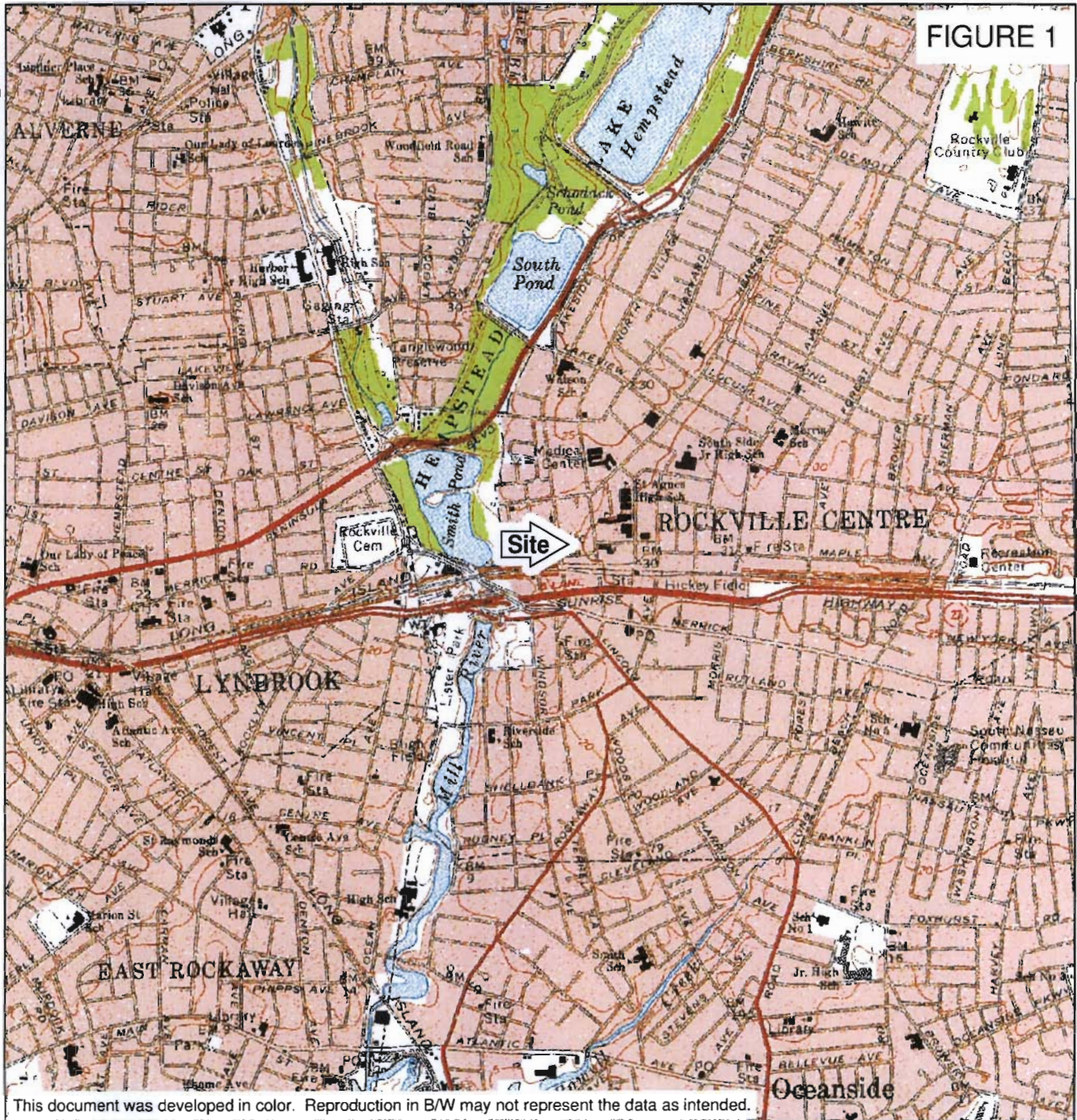


FIGURE 1

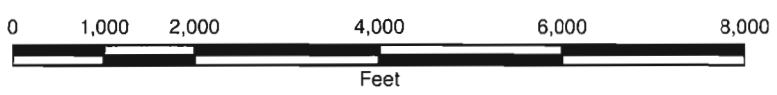
This document was developed in color. Reproduction in B/W may not represent the data as intended.

ADAPTED FROM: LYNBROOK, NEW YORK USGS QUADRANGLE.



GEM CLEANERS  
 SITE ID # 1-30-082  
 ROCKVILLE CENTRE, NEW YORK

**SITE LOCATION**







NOTE: MW-1B and MW-3 were not located during this investigation. The locations were obtained from the May 1995 Phase II Investigation Report by Energy & Environmental Analysts, Inc.

This document was developed in color. Reproduction in BW may not represent the data as intended.

<http://www.nysgis.state.ny.us> APRIL 2002

**FIGURE 2**

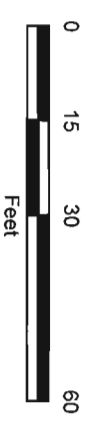


**LEGEND**

- ◆ EXISTING MONITORING WELL
- DRYWELL
- SOIL/GROUND WATER SAMPLE LOCATION

GEM CLEANERS  
 SITE ID # 1-30-082  
 ROCKVILLE CENTRE,  
 NEW YORK

**SAMPLE LOCATIONS**



AUGUST 2006  
 10653 36447







- NOTES:**
1. ALL SOIL AND RESIDUAL SAMPLE ANALYTICAL RESULTS WERE BELOW SCREENING VALUES.
  2. DATE OF FIELD SURVEY: MARCH 3, 2006, BY YEC, INC., VALLEY COTTAGE, NEW YORK
  3. HORIZONTAL DATUM: NAD 83 FROM GPS OBSERVATIONS
  4. VERTICAL DATUM: NGVD 1929 FROM GPS OBSERVATIONS (TO CONVERT TO NAVD 1988 SUBTRACT 0.60)
  5. MW-1B WAS NOT LOCATED DURING THIS INVESTIGATION. THE LOCATION WAS OBTAINED FROM THE MAY 1995 PHASE II INVESTIGATION REPORT BY ENERGY & ENVIRONMENTAL ANALYSTS, INC.
- ND = NOT DETECTED IN SAMPLE  
FD = FIELD DUPLICATE

FIGURE 3

- LEGEND**
- MW (w/ELEVATIONS) MONITORING WELL
  - SB (w/ELEVATIONS) SOIL BORING (w/ELEVATION)
  - DW (w/ELEVATIONS) DRYWELL
  - SMH (w/ELEVATIONS) SEWER MANHOLE
  - WV WATER VALVE
  - LP LIGHT POLE
  - TREE TREE

GEM CLEANERS  
SITE ID#1-30-082  
ROCKVILLE CENTRE, NY

**SAMPLE LOCATIONS AND ANALYTICAL RESULTS ABOVE SCREENING VALUES**

FILE NO. 10653.36447.001  
AUGUST 2006



**Phase II Environmental Subsurface  
Investigation Report and Site  
Assessment and Remediation Report**



August 21, 1997

Chris Lafemina  
NYSDEC  
SUNY, Bldg. 40  
Stony Brook, New York 11790-2356

Re: Site Assessment & Remediation Report  
Gem Cleaners  
84 N. Village Ave.  
Rockville Centre, NY

Dear Mr. LaFemina

Enclosed is a copy of the document *Site Assessment & Remediation Report for the Property at 84 North Village Avenue, Rockville Centre, New York, August, 1997.*

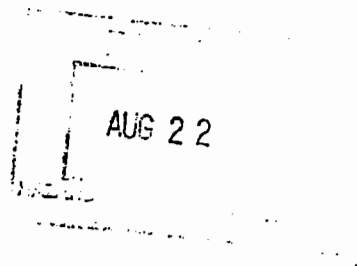
The report documents the findings of a site inspection, investigation and identification of a potential source of groundwater contamination at the site. After successful remediation of the potential source area, it is believed that no further action is warranted and referral of the site for the NYSDEC Registry of Inactive Hazardous Waste Sites is not appropriate.

We request that your Department acknowledge receipt of the enclosed and your concurrence that this concludes our clients obligations with respect to environmental action at the site.

Should you have any questions or require further information, please do not hesitate to contact this office.

Very truly yours  
**P.W. GROSSER CONSULTING**  
**ENGINEER & HYDROGEOLOGIST, P.C.**

*James P. Rhodes*  
James P. Rhodes, C.P.G.  
Sr. Hydrogeologist



JPR:jpr

cc: Mr. George Brauch w/encl.  
Mike Tone, Esq. w/encl.  
Norman Sarnoff, Esq. w/encl.

f:\shared\pwg\gbr\corespond\transmi

CL

**P.W. GROSSER CONSULTING**



**ENGINEER & HYDROGEOLOGIST, P.C.**

**SITE ASSESSMENT & REMEDIATION REPORT  
FOR THE PROPERTY LOCATED AT  
84 NORTH VILLAGE AVENUE  
ROCKVILLE CENTRE, NEW YORK**

136082



*Prepared for: Mr. George Brauch  
For Submittal To The  
New York State Department of Environmental Conservation  
Region I*

*Prepared by: P.W. Grosser Consulting Engineer & Hydrogeologist, P.C.*



AUGUST 1997



100 South Main Street, Suite 202  
Sayville, New York 11782-3150  
Ph: (516) 589-6353 - Fx: (516) 589-8705



**P.W. GROSSER CONSULTING**

**TABLE OF CONTENTS**

	<b>SECTION</b>	<b>PAGE NUMBER</b>
1.0	INTRODUCTION	1
2.0	SITE BACKGROUND	1
3.0	SITE INSPECTION	3
4.0	INITIAL SAMPLING OF EXTERIOR STAIRWELL DRAIN	6
5.0	SOIL BORING RESULTS	7
6.0	REMEDIATION OF EXTERIOR STAIRWELL DRAIN	8
7.0	SOIL DISPOSAL	10
8.0	SUMMARY & CONCLUSIONS	10

**LIST OF TABLES**

<b>TABLE NO.</b>	<b>TABLE NAME</b>	<b>FOLLOWS PAGE NUMBER</b>
1	Soil Boring Log	7
2	Soil Boring Sample Results	8

**LIST OF FIGURES**

<b>FIGURE NO.</b>	<b>FIGURE NAME</b>	<b>FOLLOWS PAGE NUMBER</b>
1	Site Plan	2
2	Building's First Floor Layout Plan	3
3	Building's Basement Layout Plan	4

**PHOTOGRAPHS: IMMEDIATELY FOLLOWING THE REPORT**

**APPENDIX A: EEA'S MAY, 1995 PHASE II REPORT**

**APPENDIX B: LABORATORY REPORTS**

**APPENDIX C: HAZARDOUS WASTE MANIFEST**

**P.W. GROSSER CONSULTING**

**1.0 INTRODUCTION**

P.W. Grosser Consulting Engineer & Hydrogeologist, P.C. (PWGC) has prepared this report to document the findings of a site inspection, investigation and remediation of an exterior stairwell drain at the property located at 84 North Village Avenue, Rockville Centre, New York. The property is currently occupied by a dry cleaning facility known as Gem Cleaners. The objective of the site inspection was to evaluate the potential for the existence of on-site source areas that may be contributing to groundwater contamination detected beneath the site. The findings of the inspection led to the sampling of bottom deposits within a small diameter exterior stairwell drain located adjacent to the basement door in the rear of the facility. After initial sample results indicated concentrations of tetrachloroethene (PCE) above New York State Department of Environmental Conservation (NYSDEC) soil cleanup objectives contained in their Technical and Administrative Guidance Memorandum (TAGM HWR-94-4046), a boring was performed through the drain to define the vertical extent of contamination. Subsequently, the drain was excavated and impacted soils above TAGM soil cleanup objectives were removed and properly disposed. The former drain was backfilled with clean material and a new structure was constructed.

After the identification and successful remediation of the potential source area, no further work at the site is warranted and referral of the site for the NYSDEC Registry of Inactive Hazardous Waste Sites is not appropriate. The basis of these conclusions are set forth below.

**2.0 SITE BACKGROUND**

Energy & Environmental Analysts, Inc. (EEA) conducted a Phase I Environmental Site Assessment at the facility in July, 1994. The Phase I identified the use of the site as a dry cleaning facility, which uses and stores chemical products. The main chemical noted in use, as in most dry cleaning facilities, was PCE. Also noted during the Phase I was the existence of a floor drain on the first floor of the subject building, a sump pit in the basement for the discharge of boiler condensate, and an exterior drainage structure located in the paved parking area behind the facility. EEA indicated that a pipe was noted within the exterior structure from an unknown source.



P.W. GROSSER CONSULTING

Based on the information obtained during the Phase I, EEA performed a Phase II Environmental Subsurface Investigation. Phase II work was completed in May, 1995. The scope of work for the Phase II included a soil boring conducted through the exterior drainage structure. Multiple soil samples were collected from within the structure and analyzed from various depths (2-4', 8-10', 13-15', and 18-20') to provide a vertical profile of soil quality. Depth to water beneath the site is approximately 18 feet below grade. In addition, a total of four groundwater monitoring wells (three water table and one deep) were installed and sampled. One well was located approximately 300 feet north (up-gradient) of the site, two wells (one water table and one deep) were installed directly down-gradient from the exterior drainage structure, and one well was located down-gradient of the sump pit located in the basement of the subject building. Since no water table elevation contours are presented in EEA's report, it is assumed EEA used regional groundwater flow patterns to determine up-gradient and down-gradient positions relative to the site (see Figure 1).

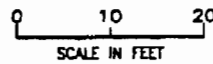
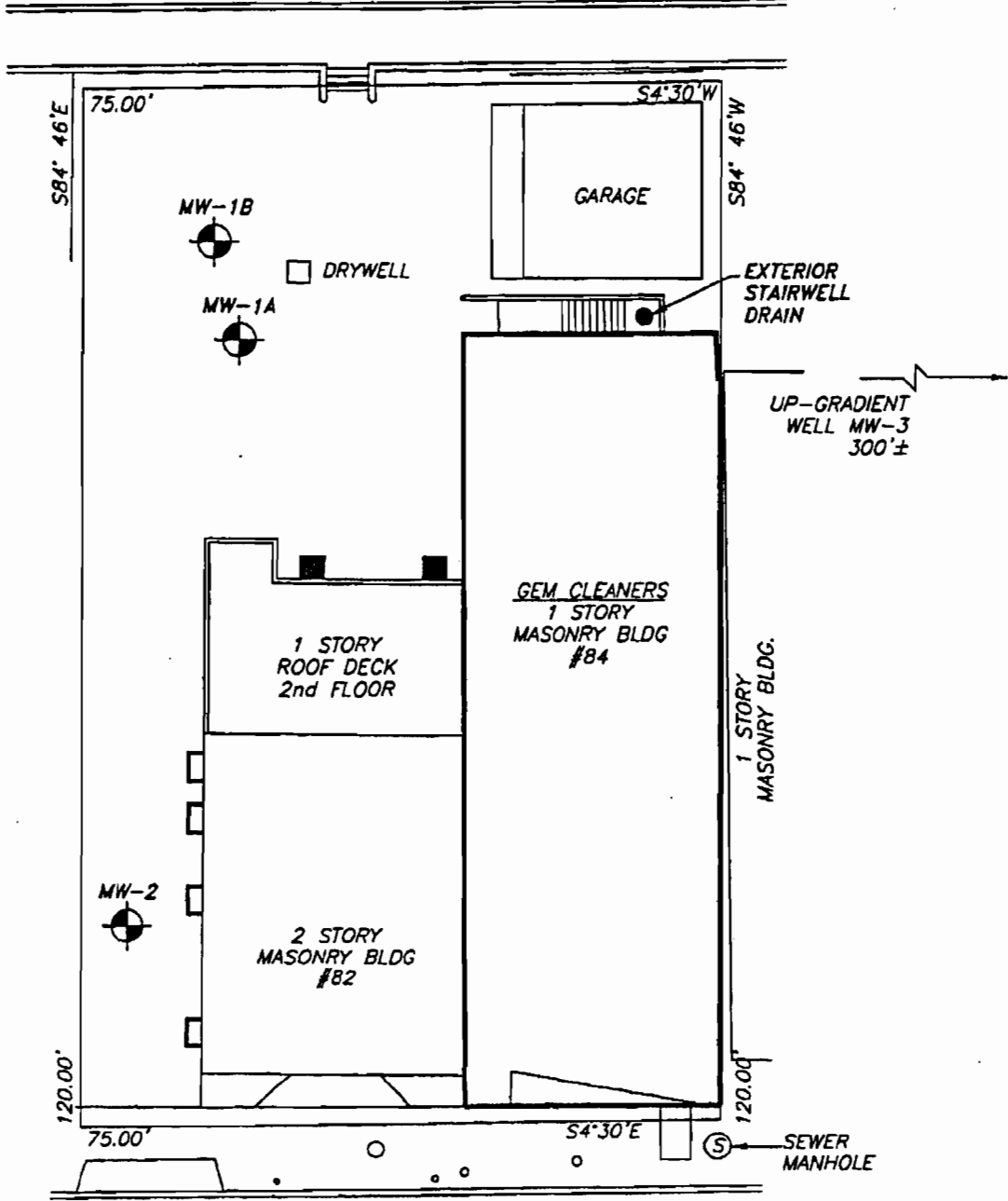
The results of the Phase II investigation indicated that PCE was detected at 7 ug/kg, well below the NYSDEC TAGM soil cleanup objective, in the 0-2' foot soil sample collected within the exterior drainage structure. PCE was below detectable levels in subsequent soil samples collected within the structure. The results of the groundwater samples collected from the monitoring wells indicated relatively low concentrations of PCE in the groundwater beneath the property, in addition to well MW-3 installed up-gradient of the site. The highest concentrations of PCE were detected in water table monitoring well MW-1A (26 ug/l -56 ug/l), which is located adjacent to the exterior drainage structure (see Figure 1).

EEA's report, detailing the above findings was submitted to the NYSDEC for their review. The report recommendations indicated that no additional testing or remediation would likely be required as PCE concentrations in MW-1A would diminish over time to background levels. A copy of EEA's May, 1995 Phase II report is included in Appendix A.

Subsequently, the NYSDEC contacted the property owner and indicated that in order for the NYSDEC to consider a "no action" position, the potential for additional source areas needed to be



VILLAGE OF ROCKVILLE CENTRE  
COMMUTER PARKING



**P.W. Grosser Consulting  
Engineer & Hydrogeologist, P.C.**  
An Affiliate of Kasperowicz & Grosser Consulting Engineers, P.C.  
 100 South Main Street, Suite 502      Saratoga, N.Y. 12158  
 Ph: 518-482-2646      Fax: 518-482-0708

Prepared for: **Gem Cleaners**

Project No: **GBR9701**      Date: **8/14/97**

**SITE PLAN  
GEM CLEANERS**

84 N. Village Ave.  
Rockville Centre, N.Y.

Figure No:  
**1**

**P.W. GROSSER CONSULTING**

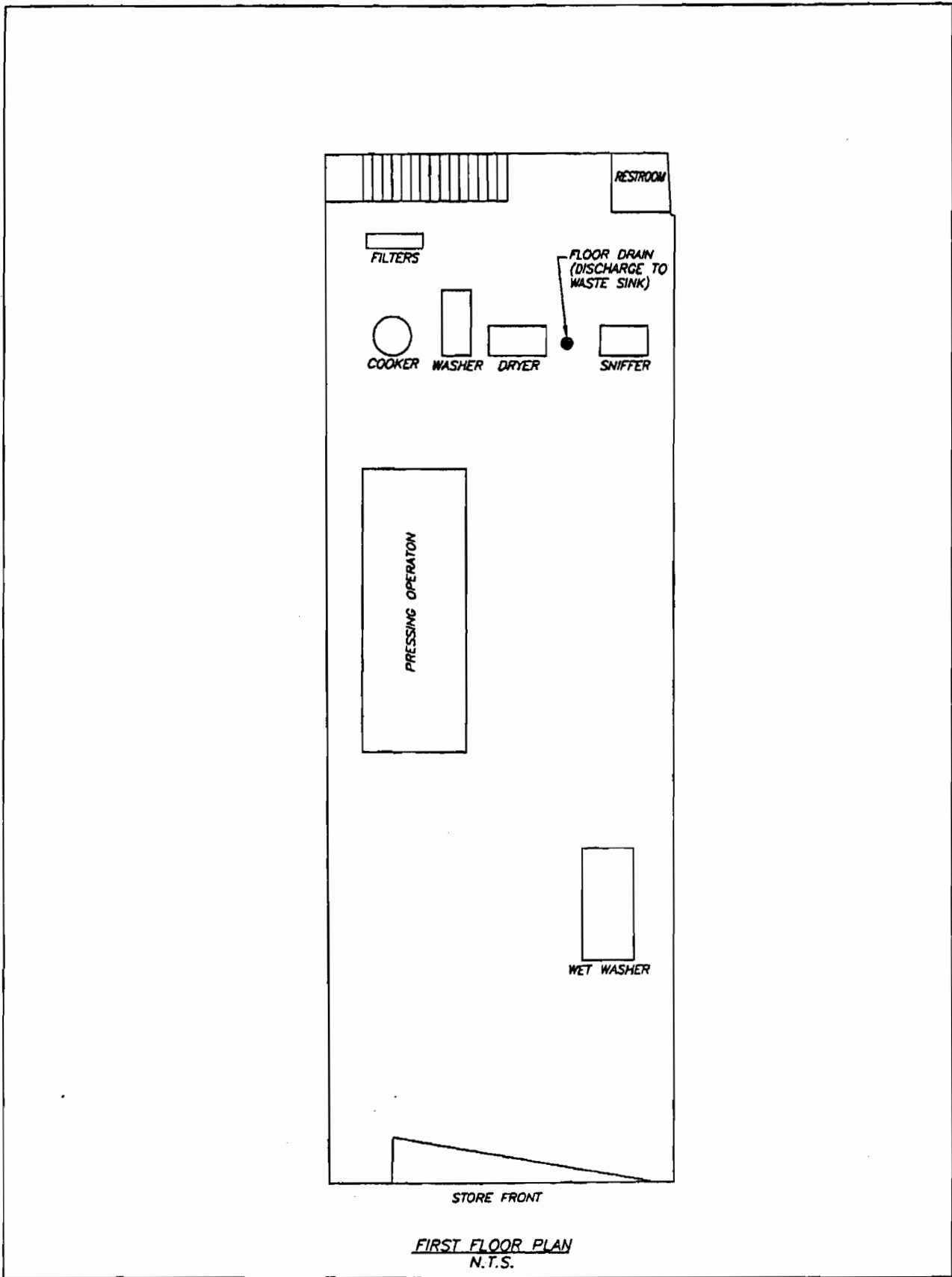
evaluated. After an initial site inspection was conducted, Mr. Lafemina of the NYSDEC was contacted by this office to discuss an appropriate scope of work related to the this project. The initial inspection revealed an additional potential source area to be an exterior basement stairwell drain. Mr. Lefemina informally indicated in a January 27, 1997 telephone conversation that a detailed discussion of the site inspection results and the sampling of the stairwell drain would be sufficient to satisfied the Department's requirements.

**3.0 SITE INSPECTION**

The initial site inspection was conducted on January 22, 1997 and focused on the current operations of the facility and the generation of liquid waste. During the site inspection, it was noted that early generation (transfer machine) equipment is still being utilized and the facility consumes approximately 200 gallons of PCE per year. Early generation machines do not employ many of the waste reduction and recovery technologies that are inherent in the later generation equipment, such as refrigerator condensers. Therefore, these operations tend to use more PCE throughout the year and generate greater volumes of liquid waste. Equipment used during the process includes the following; a Washex washing machine, Solve Miser dryer, Sniff-O-Miser sniffer, Filter King filters, Per Corporation cooker, and Remi-Dri vacuum system. With the exception of the vacuum system, the dry cleaning equipment is utilized on the first floor of the subject building. Figure 2 shows a general layout of the first floor.

As part of the process, PCE is stored at the base of the washer. Prior to washing, the PCE is pumped through the filters, which are designed to remove fatty acids, water and migrant dyes from the PCE. To further remove impurities from the PCE, the PCE is routed to the cooker every other day. The employee at the site indicated that both the muck generated by the cooking process and the spent filters are placed in 30 gallon drums and disposed of by Saftey Kleen. Saftey Kleen drums were observed at the site.

Once the washing operation is complete and the PCE drained, the clothes are transferred to the dryer. The sniffer is connected to both the washer and dryer and is designed to capture vapors from these



FIRST FLOOR PLAN  
N.T.S.

P.W. Grosser Consulting  
Engineer & Hydrogeologist, P.C.  
An Affiliate of Kleinfelder & Grosser Consulting Engineers, P.C.  
100 South Main Street, Suite 502  
Saratoga Springs, NY 12158  
Tel: 518.584.4444

Prepared for:  
Gem Cleaners

Project No: GBR9701      Date: 8/14/97

FIRST FLOOR PLAN  
GEM CLEANERS  
84 N. Village Ave.  
Rockville Centre, N.Y.

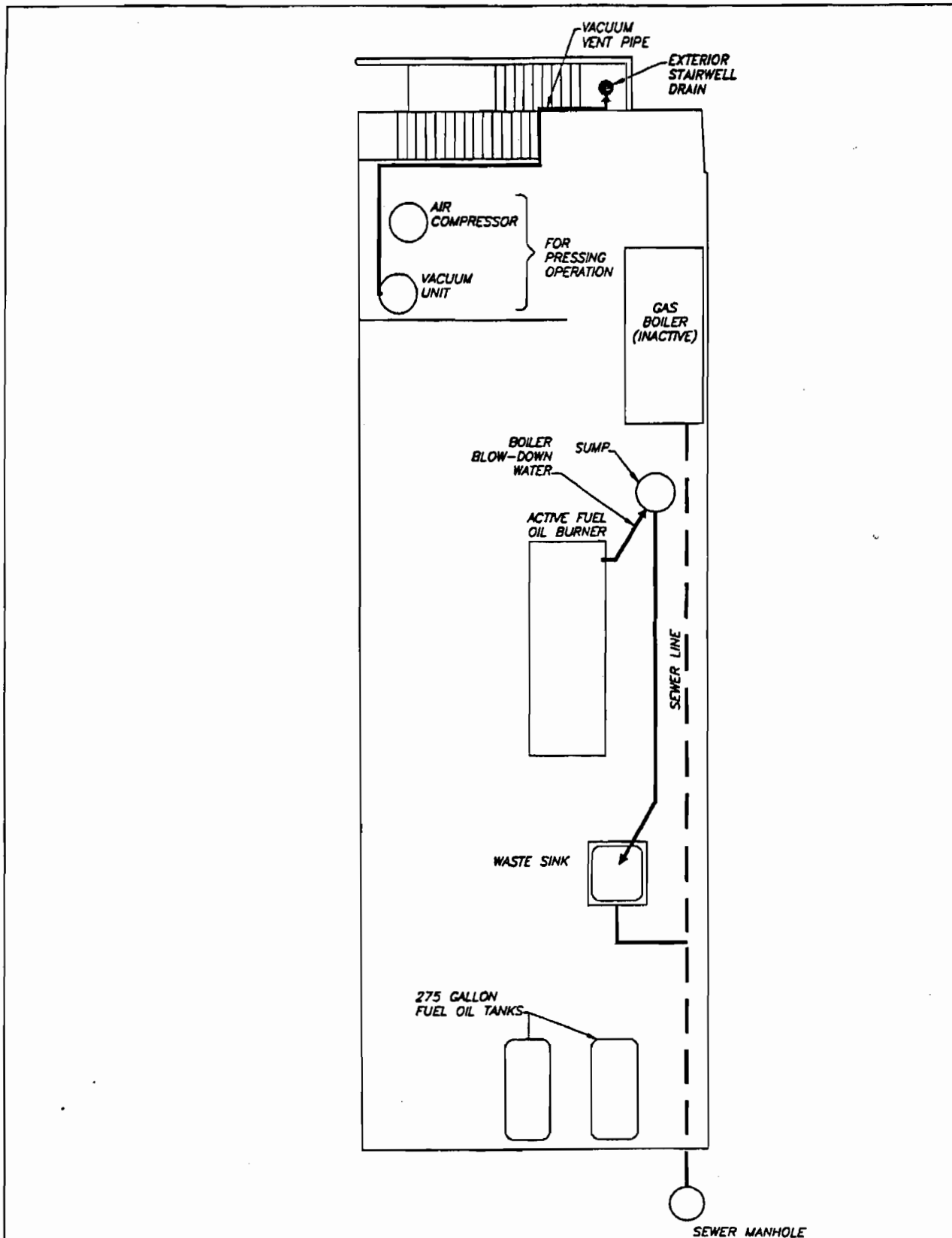
Figure No:  
2

P.W. GROSSER CONSULTING

processes. Captured liquids and condensed vapors processed by the sniffer are separated into PCE/water and are contained in pans located at the base of the unit. The employee indicated that the PCE is reused and the water is disposed of in the buildings toilet. Coolant water generated by the dryer is also disposed of in this manner. Also noted on the first floor of the building was a small diameter floor drain, located immediately adjacent to the dryer (see Figure 2). This floor drain, originally discussed in EEA's Phase I, was clogged at the time of inspection. However, tracing of the piping appeared to be associated with the floor drain, discharge to a waste sink located in the basement of the facility.

Figure 3 shows the general layout of the basement. As described in EEA's Phase I report, a sump pit is located off the northwest corner of the active fuel oil fired boiler. The sump pit consists of a pre-fabricated metal receptacle fitted into the basement floor which is currently receiving boiler condensate. No piping was noted in the sump pit and probing with a steel bar revealed it contained a solid bottom. The sump did contain a float activated sump pump, which turns on the pump when liquids reach a designated level. The sump pump discharged, via flex hose, to the waste sink also located in the basement. Numerous other pipes were also routed to the waste sink. One appeared to be from the floor drain located on the first floor, while another appeared to be an abandoned washing machine used for typical wet cleaning also located on the first floor.

The vacuum unit and associated equipment are located in the southwest corner of the basement. The system is designed to pull vapor and residual water from the press and spotting board operations located on the first floor. This vapor and water contains PCE released from the clothes. Water collected during the process is drained through the bottom of the unit when the system is shut down, while the vapor is typically released through a vent routed to the outside of the building. The vacuum vent at Gem Cleaners, constructed of PVC, was routed along the basement's west wall and horizontally out through a hole cut in the wooden basement door. Since the vent pipe was not routed vertically up, small quantities of water drawn into the system are released. The majority of liquid appeared to drain on the inside of the basement door, where a six inch concrete curb exists preventing water from entering or leaving the basement. Some liquid did appear to drain on the outside of the



BASEMENT FLOOR PLAN  
N.T.S.

**P. W. Grosser Consulting  
Engineer & Hydrogeologist, P.C.**  
An Affiliate of Haskins & Grosser Consulting Engineers, P.C.  
100 South Main Street, Suite 502  
P.O. Box 11732  
Buffalo, N.Y. 14211  
PH: (716) 882-2200  
FX: (716) 882-2702

Prepared for: **Gem Cleaners**

Project No: **GBR9701**      Date: **8/14/97**

**BASEMENT FLOOR PLAN  
GEM CLEANERS**

84 N. Village Ave.  
Rockville Centre, N.Y.

Figure No:  
**3**

P.W. GROSSER CONSULTING

door to the exterior stairwell, where a small diameter drain (approximately 6 inches) is located. This stairwell drain is located directly up-gradient (north) of monitoring well MW-1A. Additional liquid generated by the vacuum system is drained at the base of the unit and contained in a small pail. The employee at the facility indicated that this liquid was also disposed of in the building's toilet. The operator was made aware of the condition of the vacuum system vent and has since extended it vertically up to the roof and capped it with a "T", thereby, eliminating the discharge.

Since the employee working at the facility indicated that waste water generated at the facility was disposed of in the buildings's toilet, dye testing was performed to document discharge to the municipal sanitary sewer. This area of Nassau County is located in sewer District 2. Sanitary sewer connections began as early as 1953 in this District. Dye testing was performed by placing water soluble dye tablets in the facilities toilet and inducing flow. The closest access to the municipal sewer system is located in the sidewalk (via a steel manhole cover) directly in front of the building. This manhole cover was opened and the dye placed in the facilities toilet was observed. In addition, since it was observed that the sump pit and likely the floor drain discharges to the waste sink, this structure was dye tested. A 5 gallon mixture of dye and potable water was placed in the waste sink and observed in the municipal sewer system. After unclogging of the floor drain located on the first floor, discharge to the waste sink was confirmed.

The site inspection also included a survey of the area surrounding the building. The area around the site is almost entirely paved, with the exception of the exterior drainage structure identified by EEA, several basement window boxes associated with the adjacent building, and a small patch of exposed soil located along the western side of the garage (see Figure 1). The property appeared to be filled, as grade of a Village of Rockville Centre Parking lot adjacent to the site was approximately 3 feet lower.

The cover of the exterior drainage structure was removed so that the structure could be inspected. The structure was approximately four feet in diameter, with depth to bottom sediments estimated to be 3 feet. Unlike the observations made in the EEA report, no piping was noted within the structure.

**P.W. GROSSER CONSULTING**

Additionally, the detached garage located directly behind the Gem Cleaners building was inspected for floor drains and no structures were noted.

The results of the site inspection only identified the exterior stairwell drain as a potential source of groundwater contamination. Though waste water containing PCE is generated at the site, it appears most of it is discharged to the municipal sanitary sewer via the facilities toilet. The sump pit and floor drain identified by EEA both discharge to the waste sink, which was also confirmed to discharge to the sewer system.

The stairwell drain is subject to discharge of small quantities of liquid from the vacuum system. In addition, this drain represents the most likely receptacle for inadvertent manual discharge of waste water. Therefore, the sampling of bottom deposits within this structure was performed.

**4.0 INITIAL SAMPLING OF EXTERIOR STAIRWELL DRAIN**

A sample of bottom deposits within the exterior stairwell drain was collected on March 21, 1997, by a representative of PWGC. The sample was collected using a stainless steel hand auger that was properly decontaminated prior to use with a non-phosphate detergent scrub and distilled water rinse. To document the effectiveness of decontamination procedures, a rinsate field blank from the hand auger was also collected.

The sample was collected from 12 to 18 inches below the bottom of the drain. Upon collection, the appropriate laboratory supplied glassware was immediately filled with sample material, while the remaining portion was placed in a baggie for headspace screening with a photoionization detector (PID). A PID response of greater than 200 calibration gas equivalents (cge) was noted. The sample was delivered to Ecotest Laboratories, Inc. (Ecotest), a New York State Certified laboratory and analyzed for PCE, trichloroethylene (TCE), 1,2 dichloroethene (DCE), and vinyl chloride by EPA Method 8010. These compounds represent the contaminant of concern and its common associated breakdown products.



**P.W. GROSSER CONSULTING**

The analytical results for the initial sample were as follows:

<u>Parameter</u>	<u>Concentration(ug/kg)</u>	<u>TAGM Soil Cleanup Objective (ug/kg)</u>
PCE	12,000	1,400
TCE	2,600	700
DCE	4,400	300
Vinyl Chloride	BDL	200

As shown above, PCE, TCE and DCE were detected in excess of their respective TAGM soil cleanup objectives. Compounds analyzed for were below detectable levels in the field blank sample. Analytical results for the initial sampling are contained in Appendix B.

**5.0 SOIL BORING RESULTS**

A soil boring through the exterior stairwell drain was conducted on May 16, 1997. The objectives of the soil boring were to vertically define the extent of PCE impacted soil within the exterior stairwell drain and to document soil conditions above the water table, prior to remediation. The boring was performed by Advanced Cleanup Technologies, Inc., Farmindale, N.Y., under the field observation of a representative of PWGC.

The borings were advanced using a remote hydraulically driven probing unit capable of collecting soil samples at discreet depths. Soil samples were collected utilizing a 1 1/4-inch diameter by 2 foot long sampling tube lined with a dedicated acetate liner. Continuous soil samples were collected from two feet below the bottom of the drain to the water table, which was encountered at 10.5 feet below the surface of the structure. Upon retrieval, the sample was immediately screened for VOC's through a slit cut in the acetate liner. The section of the core exhibiting the highest PID response was then transferred to appropriate laboratory supplied glassware. A soil boring log, containing soil descriptions and PID response is shown on Table 1.

A total of three samples (4'-6', 6'-8', and 8'-10') were retained from the soil boring for laboratory

**TABLE 1**  
**Exterior Stairwell Drain- Soil Boring Log**  
**Gem Cleaners**  
84 North Village Avenue, Rockville Centre, N.Y.

Depth ft.	Rec. ft.	PID cge	Odor	Visual Description/Comments
2-4	0	NA	NA	No Recovery- sample moist and too soft
4-6A	.25	25	yes	Black medium sands and muck, wet. Rock blocked sampler. Not enough recovery for sample analysis.
4-6B*	2	5	no	Brown medium sands, trace gravel
6-8*	1.5	37	yes	Brown medium sands, some gray staining near top of sample.
8-10*	1.5	2	no	Brown medium sands, trace gravel. Sample dry at the top, moist towards the bottom.
10-12	2	0	no	Brown fine to medium sands, trace gravel. Entire sample saturated.

\* = Sample Submitted for laboratory analysis.  
PID response was taken directly from the acetate liners.

**P.W. GROSSER CONSULTING**

analysis. No recovery was obtained from the 2'-4' sample interval as the material near the top of the drain was moist and extremely soft. The 4'-6' sample was collected off-center, near the side of the drain, due to a small cobble encountered at this depth. However, the results of this sample can be used to represent soil quality near the sides of the structure. The bottom portion of the 8'-10' sample interval was slightly moist, indicating the bottom of the sample was in close proximity to the water table. To confirm the depth of the water table, a sample from the 10' -12' depth was collected. The sample was completely saturated, confirming the existence of the water table within the 10'-10.5' foot depth range. Since this sample was saturated and not representative of soil conditions above the water table, it was not retained for laboratory analysis. The samples were delivered to Ecotest and analyzed for PCE, TCE, DCE, and vinyl chloride by EPA Method 8010.

Table 2 contains the compounds quantified in the samples collected at the above referenced depths (copies of the analytical results are included in Appendix B). Compounds quantified in these samples are compared to their respective soil clean-up objectives. As presented in Table 1, PCE and TCE in the 4'-6' sample were detected below their TAGM soil cleanup objectives indicating the contamination is primarily confined to the center of the structure. The PCE concentration in the 6'-8' foot sample was the same as in the initial sample however, concentrations of TCE and DCE were an order of magnitude lower. As can be seen in Table 1, the concentrations of PCE and TCE drop well below their respective soil cleanup objectives, directly above the water table. As noted on the soil boring log, the 8'-10' sample interval represents the first depth at which no staining of the soils were noted. Prior to this depth, black staining was noted within the first six feet, which lessened to greyish in the 6'-8' sample interval.

**6.0 REMEDIATION OF EXTERIOR STAIRWELL DRAIN**

Initial sampling of the stairwell drain and soil boring results, indicate that remediation of the structure down to 8 feet is appropriate to remove the potential source of groundwater contamination at the site. Remediation of the structure was performed on July 31, 1997 by Trade-Winds Environmental Restoration Inc.(Trade-Winds), under the field observation of a representative of PWGC.



<b>TABLE 2</b> <b>Gem Cleaners</b> 84 N. Village Ave., Rockville Centre, New York Soil Boring Sample Results				
Parameter EPA Method 8010 (ug/kg)	4'-6'B <sup>^</sup> Depth	6'-8' Depth	8'-10' Depth	TAGM* Clean-up Objective
PCE	350	12,000	90	1,400
TCE	11	270	10	700
DCE	BDL	100	BDL	300
Vinyl Chloride	BDL	BDL	BDL	200
Notes: BDL = Below Detectable Levels ^ - Sample was collected off-center towards the side of the drain. * = New York State Department of Environmental Conservation, Technical and Administrative Guidance Memorandum, Revised 1/24/94 (HWR-94-4046).				

P.W. GROSSER CONSULTING

The scope of the remediation included the excavation of the existing drain and impacted soil to 8 feet below grade, documented as exceeding TAGM soil cleanup objectives. The previously collected 8-10 foot soil boring sample is considered the "clean" endpoint. This information, along with soil removal methods were presented to the NYSDEC in a June 11, 1997 letter, prior to initiating remediation. The NYSDEC, through informal conversation, indicated that the scope of work presented was adequate to address the concerns documented at the site.

Prior to the removal of impacted soil, the drain and the majority of surrounding concrete making up the stairwell floor were removed. Once the concrete was removed, it was apparent the drain was of block construction. The diameter of the drain ranged from 2.0 feet near the surface to 1.5 feet at approximately 3.0 feet below grade, where the blocks were supported by native soil.

The soil within the blocks were removed using a trailer mounted Vector, which utilizes a vacuum to extract soil and is equipped to discharge directly into drums. After removing the soil within the drain, the majority of blocks were removed to facilitate the placement of a 5 foot section of 2 foot diameter, 3/4 inch thick PVC well screen. Soils immediately adjacent to the outside of the former blocks were excavated to remove material potentially impacted through the blocks. Therefore, the top portion of the excavation was approximately 3 feet wide.

Starting at 3 feet below grade, the well screen was advanced within the excavation to prevent collapse and undermining of the adjacent structure. Soils within the excavation were removed, in a two foot diameter down to 8.5 feet below grade. An additional 1.5 feet of material was excavated in the center of the well screen to provide a greater level of confidence of clean out and at approximately 10 feet soils remained dry. However, following setting of the well screen, water was visible seeping into the deepest portion of the excavation. Additionally, remaining soils within the top 3 feet and bottom 3 feet of the excavation were screened for VOC's with a PID, and no reponse was noted. A total of six 55-gallon drums of soil were removed during remediation procedures.

After removal of the soil was complete, the well screen and excavation was backfilled with clean sand

**P.W. GROSSER CONSULTING**

and on the following day a new drain was constructed to prevent flooding. New concrete was poured around the drain to secure it into place. Photos depicting the remediation of the drain, newly installed drain, and rerouted PVC vacuum vent, immediately follow this report.

**7.0 SOIL DISPOSAL**

During remediation of the stairwell drain, impacted soils were placed directly into DOT certified 55-gallon drums. A total of six 55-gallon drums were generated from the clean out. Due to the nature of the waste, the soils were handled as hazardous to be destroyed by incineration. Soil disposal was coordinated by Trade-Winds. The soils were transported by Bechem Transport, Inc. (USEPA ID # CYD982191942) and the designated disposal facility is LWD, Inc., Calvert City KY, (USEPA ID # KYD088438817). The generator copy of the hazardous waste manifests is contained in Appendix C. A signed copy of the manifest by the disposal facility and certificate of destruction will be forwarded upon receipt.

**8.0 SUMMARY & CONCLUSIONS**

A Phase II investigation performed by EEA as a follow-up to their Phase I Site Assessment performed at the subject site, documented relatively low concentrations of PCE in the groundwater beneath, as well as up-gradient of the site. The highest concentrations of PCE were detected in water table monitoring well MW-1A (26 ug/l -56 ug/l), located adjacent to an exterior drywell believed by EEA to be the most likely source of groundwater contamination. However, results of soil samples collected within the structure indicated that PCE was only detected at 7 ug/kg in the 0-2' foot soil sample. PCE was below detectable levels in subsequent deeper soil samples collected within the structure down to the water table.

A detailed site inspection was performed by PWGC to evaluate the potential for the existence of other on-site source areas that may be contributing to groundwater contamination detected beneath the site. The site inspection focused on the current operations of the facility and the generation of liquid waste. The results of the site inspection indicated that liquid waste is currently being discharged via the toilet or waste sink to the municipal sewer system as documented through dye testing. The floor drain and

P.W. GROSSER CONSULTING

basement sump identified as concerns by EEA, were documented as discharging to the waste sink which discharges to the sanitary sewer rather than to the exterior drywell sampled as part of their investigation.

During the site inspection, an exterior basement stairwell drain located directly outside the basement door, was identified as a potentially receiving discharge of waste water containing PCE. The drain is located up-gradient relative to monitoring well MW-1A. During the time of the inspection, the drain was documented as receiving waste from the site's vacuum system vent and also represents the most likely structure to receive inadvertent manual disposal of waste water. Subsequently, the vent was re-routed directly to the roof of the building and capped with a "T" to prevent discharge.

Through sampling of the stairwell drain, impacted soils (in excess of TAGM soil cleanup objectives) were documented as existing to 8 feet beneath the surface of the drain, which was approximately 2 feet above the current water table at the drain's location. Subsequently, the impacted soil was removed and properly disposed.

Though the stairwell drain may have contributed to the low levels of PCE documented in the MW-1A, up-gradient sources apparently exist as documented by the detection of PCE in a well up-gradient of the site. Though up-gradient concentrations were lower, the well was installed approximately 300 feet away and on-site well MW-1A may be installed in a more contaminated portion of the plume. However, if the soils within the drain did contribute to groundwater contamination, they have effectively been removed, and concentrations in the well will return to background levels through natural attenuation.

Therefore, no further work in relation to the site is warranted and that the site should not be referred to the NYSDEC list of Inactive Hazardous Waste Sites in any Classification form. This is based on the following:

- EEA sampled the only drywell located on the property and eliminated the structure as a

potential source of groundwater contamination.

- A detailed site inspection only identified an exterior stairwell drain as potentially being an alternate on-site source of contamination.
- The stairwell drain was confirmed to be impacted by PCE and subsequently, effectively remediated.
- Only relatively low levels of PCE were documented in on-site wells, while also being detected in an up-gradient well.
- If the impacted soil with the stairwell drain contributed to groundwater contamination in the past, the concentrations should lessen to background levels through natural attenuation within a short period of time.



P.W. GROSSER CONSULTING

PHOTOS

  
*5 Years of Excellence*  

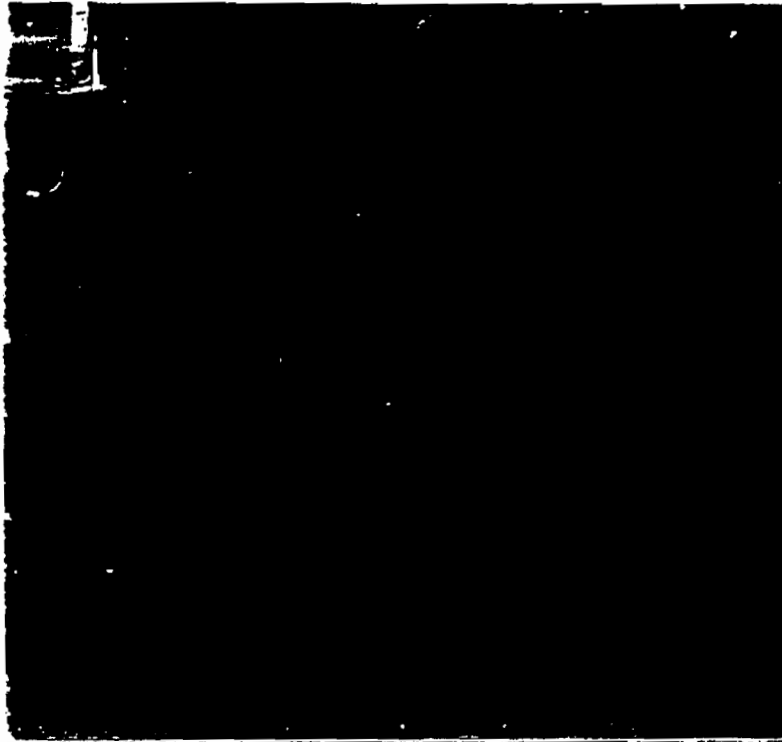
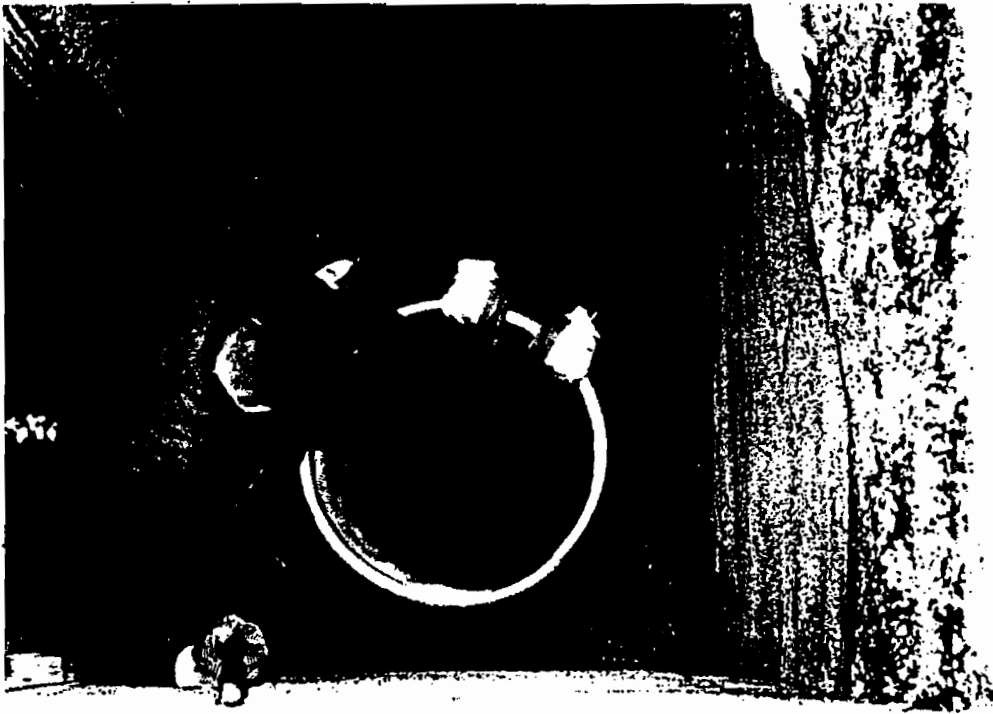



Photo # 1: Stairwell drain conditions, prior to remediation.



Photo# 2: Installing 2' diameter well screen in excavation for support.



Photo #3: Excavated stairwell drain with installed well screen.

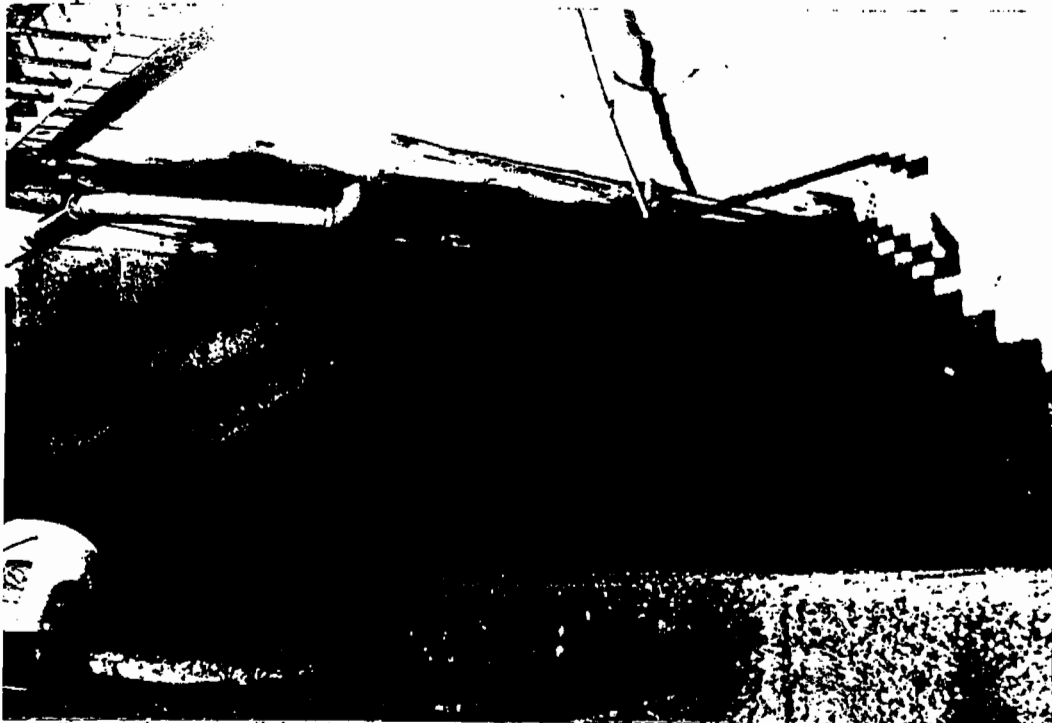


Photo #4: Backfilling stairwell drain.



**Photo #5: Completed new construction of stairwell drain.**



**Photo # 6: Rerouted vacuum system vent.**

P.W. GROSSER CONSULTING

**APPENDIX A**



Phase II

**EEA** *Inc.*

*Energy & Environmental Analysts, Inc.*

55 HILTON AVENUE • GARDEN CITY, NEW YORK 11530

**PHASE II ENVIRONMENTAL  
SUBSURFACE INVESTIGATION  
PROPERTY LOCATED AT  
84 NORTH VILLAGE AVENUE  
ROCKVILLE CENTRE, NEW YORK**

**Prepared for:**

**MR. GEORGE BRAUCH  
169 HEMPSTEAD AVENUE  
ROCKVILLE CENTRE, NEW YORK**

**Prepared by:**

**EEA, Inc.**  
55 Hilton Avenue  
Garden City, New York 11530  
(516) 746-4400  
(212) 227-3200

**MAY 1995**

**Project: 95706**

PHASE II ENVIRONMENTAL SUBSURFACE INVESTIGATION  
GEM CLEANERS  
84 NORTH VILLAGE AVENUE  
ROCKVILLE CENTRE, NEW YORK

---

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION .....	1
SCOPE OF WORK .....	1
RESULTS OF LABORATORY ANALYSES .....	3
DISCUSSION OF FINDINGS AND CONCLUSIONS .....	8
RECOMMENDATIONS .....	8
SAMPLING METHODOLOGY .....	9
 APPENDIX:	
Laboratory Data Sheets	
Chain-of-Custody Record	
Soil Boring Logs	



PHASE II ENVIRONMENTAL SUBSURFACE INVESTIGATION  
GEM CLEANERS  
84 NORTH VILLAGE AVENUE  
ROCKVILLE CENTRE, NEW YORK

INTRODUCTION

EEA, Inc. has completed a Phase II Environmental Subsurface Investigation of the property located at 84 North Village Avenue, Rockville Centre, New York. A Phase I Environmental Site Assessment (ESA-94196) was also completed by EEA for this property in July 1994.

EEA's research into the history of site use indicates that the property had been occupied by Gem Cleaners, which operates a dry cleaning facility and tailor shop. This operation uses and stores significant amounts of toxic and hazardous materials and chemical products, and generates toxic or hazardous wastes. Various aboveground and belowground tanks, drums, and containers containing a variety of materials, such as Tetrachloroethene (PCE) were noted.

One floor drain was noted on the first floor of the subject building. In addition, a sump pit was noted in the basement of the subject building. This pit appears to be used for the discharge of boiler condensate.

One exterior drainage structure (possibly a drywell or leaching pool) was observed in the rear paved section of the property. In addition, a pipe was noted extending inside this drainage structure from an unknown source, possibly from drains within the building.

From the information gathered during EEA's Phase I investigation, the following Phase II Scope of Work was developed and performed at the subject property.

SCOPE OF WORK

- o Collect several soil samples within the rear drywell structure at various depth intervals above the water table. The samples were analyzed for volatile organic chemicals including Perchloroethylene (PCE), using United States Environmental Protection Agency (USEPA) Method 8010.
- o Construct and sample a total of four (4) groundwater monitoring wells. Two wells (MW-1A and MW-1B) are located adjacent to the exterior drainage structure, and monitor groundwater quality in shallow and deep groundwater environments. Monitoring Well MW-2 is located

downgradient of the sump pit which is found in the building's basement. An upgradient monitoring well (MW-4) was placed approximately 300 feet north of the property in the Village of Rockville Centre parking field.

- o The groundwater collected from the monitoring wells was analyzed for volatile organic chemicals which include Tetrachloroethene (PCE) using USEPA Method 8010.

- o Soil Sampling Protocol

The soil borings were performed by continuous split spoon sampling. Soil samples were obtained every two feet. Each split spoon sample was screened in the field by utilizing an OVA portable gas analyzer. The sample exhibiting the highest non-methane organic vapor reading was sent to the laboratory for analysis, as stated above.

- o Groundwater Sampling

The groundwater samples were obtained by installing a permanent monitoring well. The water samples were obtained by placing a 2-inch ID PVC casing in a 6-inch augered hole at each location. The PVC screen was installed above the level of the perched groundwater.

The wells were developed on the same day, drilled, and hand bailed until visually free of suspended materials or sediments. A dedicated teflon bailer was used for each well. The groundwater samples were sent to the laboratory for the stated analyses.

- o Laboratory Testing

New York State Department of Environmental Conservation (NYSDEC) approved laboratories were used for all laboratory analyses. The laboratory operates a Quality Assurance/Quality Control (QA/QC) program that consists of proper laboratory practices (including the required chain-of-custody), an internal quality control program, and external quality control audits by New York State.

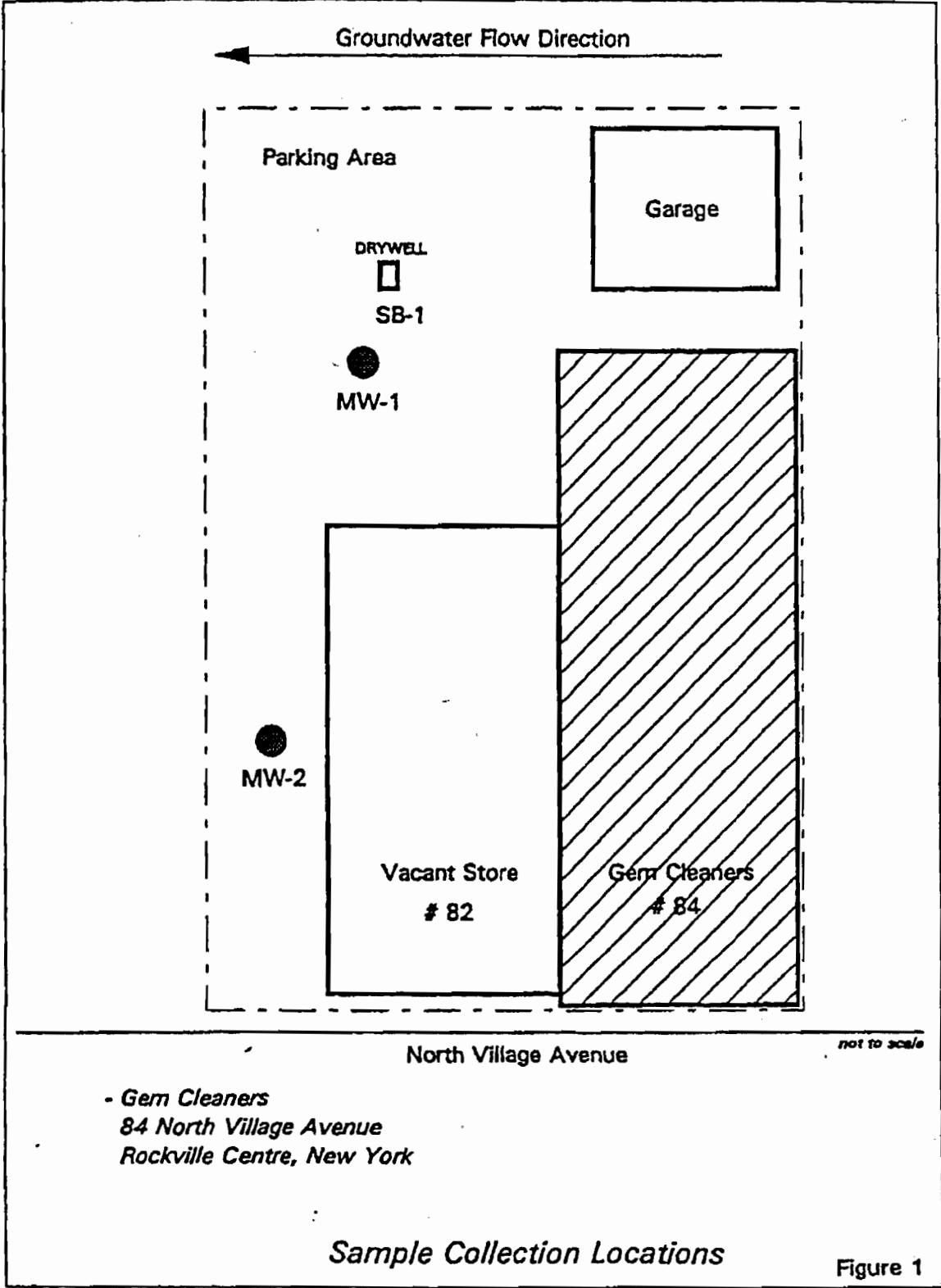
All work performed was completed following United States Environmental Protection Agency (Region II) and NYSDEC protocols and guidelines.

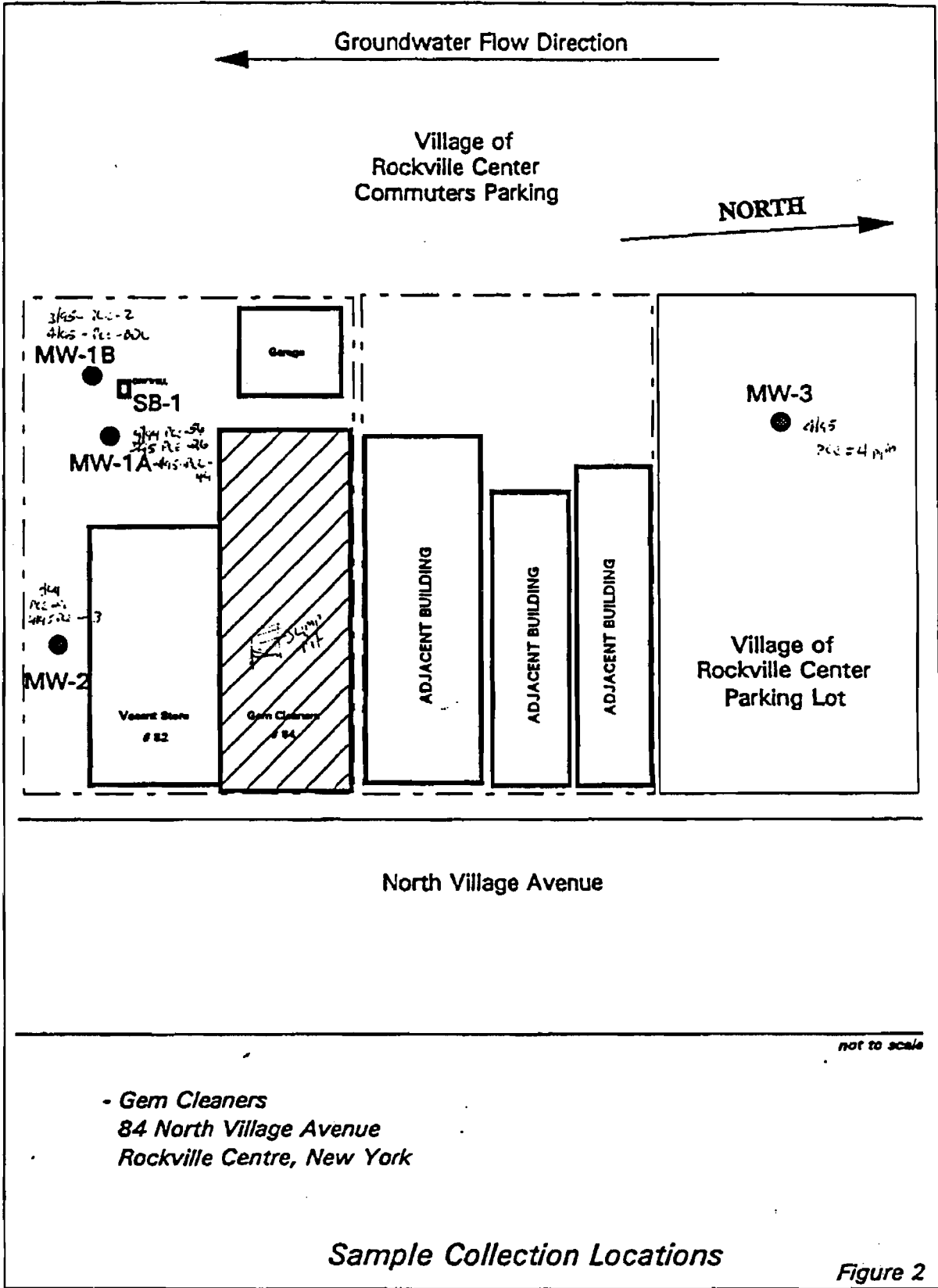
- o Field Decontamination

To avoid contamination and cross-contamination of samples, all sampling equipment was cleaned prior to collection of each sample. All sampling equipment was decontaminated using the attached decontamination procedure.

## RESULTS OF LABORATORY ANALYSES

The results of soil and groundwater samples were prepared by EcoTest Laboratories, Inc. (New York State certified laboratory). The tables below present a summary of the results. The chain-of-custody records, as well as the analytical laboratory data sheets, are presented in the Appendix to this report. The sample collection locations are shown on Figures 1 and 2.





**Figure 2**

TABLE 1

RESULTS ORGANIC CHEMICAL COMPOUNDS (SOILS)  
EPA METHOD 8010

	Sample Collection Location and Depth				NYSDEC <sup>1</sup> Recommended Cleanup Objectives (TAGM)
	September 1994	April 1995			
	SB-1 2-4 ft	SB-1A 8-10 ft	SB-1B 13-15 ft	SB-1C 18-20 ft	
Chloromethane	<5	<5	<5	<5	1,900
Vinyl Chloride	<5	<5	<5	<5	200
Bromomethane	<5	<5	<5	<5	NA
Chloroethane	<5	29	23	<5	1,900
Trichlorofluomethane	<10	<10	<10	<10	NA
1,1 Dichloroethane	<5	<5	<5	<5	400
Methylene Chloride	<5	<5	<5	<5	100
1,2-Dichloroethane	<5	<5	<5	<5	300
1,1 Dichloroethane	<5	<5	<5	<5	200
Chloroform	<5	<5	<5	<5	300
111 Trichloroethane	<5	<5	<5	<5	800
Carbon Tetrachloride	<5	<5	<5	<5	600
Dichlorodifluomethane	<10	<10	<10	<10	NA
1,2 Dichloroethane	<5	<5	<5	<5	100
Trichloroethene	<5	<5	<5	<5	700
1,2 Dichloropropane	<5	<5	<5	<5	300
Bromodichloromethane	<5	<5	<5	<5	NA
2chloroethvinylether	<10	<10	<10	<10	NA
1,3 Dichloropropene	<10	<10	<10	<10	NA
c 13 Dichloropropene	<10	<10	<10	<10	NA
112 Trichloroethane	<10	<10	<10	<10	NA
Tetrachloroethene	7	<5	<5	<5	1,400
Chlorodibromomethane	<5	<5	<5	<5	NA
Chlorobenzene	<5	<5	<5	<5	1,700

TABLE 2

RESULTS ORGANIC CHEMICAL COMPOUNDS  
EPA METHOD 601 (GROUNDWATER)

Analytical Parameters (µg/kg)	Sample Collection Location and Depth								NYSDEC <sup>1</sup> Groundwater Standards (TAGM)
	Sept 1994 MW-1A	Sept 1994 MW-2	March 1995 MW-1A	March 1995 MW-1B	April 1995 MW-1A	April 1995 MW-1B	April 1995 MW-2	April 1995 MW-3	
Chloromethane	<1	<1	<1	<1	<1	<1	<1	<1	NA
Vinyl Chloride	<1	<1	<1	<1	<1	<1	<1	<1	2
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	NA
Chloroethane	<1	<1	<1	<1	<1	<1	<1	<1	50
Trichlorofluomethane	<2	<2	<2	<2	<1	<1	<1	<1	NA
1,1 Dichloroethene	<1	<1	<1	<1	<1	<1	<1	<1	5
Methylene Chloride	<1	<1	<1	<1	<1	<1	<1	<1	5
t-1,2-Dichloroethene	47	<1	<1	<1	<1	<1	<1	<1	5
1,1 Dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	5
Chloroform	<1	<1	<1	<1	<1	<1	<1	<1	7
111 Trichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	5
Carbon Tetrachloride	<1	<1	<1	<1	<1	<1	<1	<1	5
Dichlorofluomethane	<2	<2	<2	<2	<1	<1	<1	<1	NA
1,2 Dichloroethane	<1	<1	<1	<1	<1	<1	<1	<1	5
Trichloroethane	5	<1	<1	<1	<1	<1	<1	<1	5
1,2 Dichloropropane	<1	<1	<1	<1	<1	<1	<1	<1	NA
Bromodichloromethane	<1	<1	<1	<1	<1	<1	<1	<1	50
2chloroethvinylether	<2	<2	<2	<2	<1	<1	<1	<1	NA
t-1,3 Dichloropropene	<2	<2	<2	<2	<1	<1	<1	<1	NA
c-1,3 Dichloropropene	<2	<2	<2	<2	<1	<1	<1	<1	5
112 Trichloroethane	<2	<2	<2	<2	<1	<1	<1	<1	NA
Tetrachloroethene	56	9	26	2	49	<1	3	4	5
Chlorodibromomethane	<1	<1	<1	<1	<1	<1	<1	<1	NA
Chlorobenzene	<1	<1	<1	<1	<1	<1	<1	<1	5
Bromoform	<2	<2	<2	<2	<1	<1	<1	<1	NA
1122Tetrachloroethane	<2	<2	<2	<2	<1	<1	<1	<1	5

TABLE 2 - Continued

RESULTS ORGANIC CHEMICAL COMPOUNDS  
EPA METHOD 8240 PLUS LIBRARY SEARCH (GROUNDWATER)

Analytical Parameters ( $\mu\text{g}/\text{kg}$ )	Sample Collection Location and Depth								NYSDEC <sup>1</sup> Groundwater Standards (TAGM)
	Sept. 1994 MW-1A	Sept. 1994 MW-2	March 1995 MW-1A	March 1995 MW-1B	April 1995 MW-1A	April 1995 MW-1B	April 1995 MW-2	April 1995 MW-3	
m Dichlorobenzene	<2	<2	<2	<2	<1	<1	<1	<1	4.7
p Dichlorobenzene	<2	<2	<2	<2	<1	<1	<1	<1	5
o Dichlorobenzene	<2	<2	<2	<2	<1	<1	<1	<1	5

$\mu\text{g}/\text{kg}$  - presented in parts per billion, micrograms per kilogram  
 NA - Not available, no guideline has been established  
 ND - Not detected above method detection limits

<sup>1</sup> New York State Department of Environmental Conservation,  
 Technical and Administrative Guidance Memorandum (TAGM)



## DISCUSSION OF FINDINGS AND CONCLUSIONS

### Rear Drywell Structure

Results of soil sampling within this drywell structure show low concentration levels of Tetrachloroethene (PCE) ( $7\mu\text{g}/\text{kg}$ ) in the soil sample collected in September 1994. Subsequent sampling conducted in April 1995 at depth ranges of 8 to 10 feet, 13 to 15 feet, and 18 to 20 feet did not detect PCE in any of the samples tested. Table 1 shows a summary of the laboratory results.

### Groundwater Monitoring Wells

Four permanent groundwater monitoring wells were installed on the subject property in locations upgradient and downgradient of the subject building. Table 2 shows a summary of the laboratory results.

Results of groundwater testing show a low concentration of PCE in MW-1A. This well monitors the water table in the vicinity of the drywell. MW-1B, which monitors the deeper groundwater environment, did not show any detectable concentrations of PCE.

Upgradient Monitor Well (MW-3) and sidegradient Monitor Well (MW-2) did show low concentrations of PCE; however, the concentrations are below NYSDEC Groundwater Standards ( $5\mu\text{g}/\text{L}$ ).

From the information collected during this investigation, there is no indication of soil contamination present in the drywell sampled. Low levels of PCE exist in the shallow groundwater, but not in the deeper zone. This indicates that significant contamination of the groundwater has not occurred from operations at this property. Low concentrations of PCE were also found in groundwater upgradient and sidegradient of the property, and is likely derived from another off-site source.

### RECOMMENDATIONS

No additional testing or remediation is anticipated to be required. It is expected that, over time, the concentration of PCE in MW-1A will diminish to background levels.

## SAMPLING METHODOLOGY

### a. Soil Borings

At each on-site sampling location, soil samples were obtained by utilizing a steel, 24-inch, split spoon sampler, which was driven through the subsurface levels ahead of a hollow stem (6-inch) auger, which bores into the soil to the desired sampling depth. The split-spoon sampler was driven through the top two feet of soil to obtain the surface sample, which was composted and placed in the properly refrigerated containers.

The auger then bored down to a depth of two feet. A split-spoon sampler was then inserted in the hollow stem and driven to a depth of four feet to obtain the first intermediate sample. Next, the auger bore down to four feet and the split-spoon sampler driven to six feet, to obtain the second intermediate sample. This procedure was repeated until the end of the boring.

An organic vapor analysis (OVA) was performed on all soil samples using a Thermo Environmental 580 B Photoionization Detector with headspace adaptor. The sample producing the highest organic vapor reading was sent to the laboratory for analysis.

### b. Ground Water Monitor Wells

The water samples were obtained by installing a 2-inch ID PVC casing in a 6-inch augured hole. The PVC screen was installed with the top two feet above the level of the ground water. The total screen length was 10 feet. The well screen slot size was 0.10. A filter pack of sand was placed in the annular space around the screens and extended above the screen.

The well was developed on the same day, drilled, and hand bailed until visually free of suspected materials or sediments. A dedicated teflon bailer was used for each well.

### c. Quality Assurance and Control

To avoid contamination and cross-contamination of samples, all sampling equipment was cleaned before each sample was collected. The split-spoon and hollow-stem auger were first steam cleaned. The following procedures were followed:

- Step 1: Steam clean equipment.
- Step 2: Scrub with a bristle brush using a non-phosphate detergent (such as Alconox) in hot tap water.
- Step 3: Rinse with hot tap water.
- Step 4: Rinse twice with deionized water.

Step 5: Air dry.

Step 6: Rinse twice with deionized water.

Step 7: Air dry.

Step 8: Keep in clean unused aluminum foil.

This decontamination procedure was used for all borings.

A chain-of-custody record is kept at all times with the samples. This record documents sample collection date/time and collector. The sample possession record begins at sample collection and ends at delivery to the laboratory.

*APPENDIX*

*LABORATORY DATA SHEETS,  
CHAIN-OF-CUSTODY RECORD, and  
SOIL BORING LOGS*

# ENERGY AND ENVIRONMENTAL ANALYSTS

55 HILTON AVENUE, GARDEN CITY, NEW YORK

## SOIL BORING AND MONITOR WELL REPORT

DATE: 4-24-95 SHEET / OF /

CLIENT: GEM CLEANERS BORING NO: S-1

PROJECT LOCATION: 84 N. Village Ave Rockville Centre PROJECT NO: 95706


REMARKS: Soil boring through parking area drainage structure

DRILLING CONTRACTOR: TSDT, INC. LOGGED BY: [Signature] DRILLER: PR

EQUIPMENT	SOIL SAMPLER	AUGER	MONITOR WELL SPECIFICATIONS			DRILL RIG DRILL METHOD
			CASING	SCREEN	COVER	
TYPE	SPLIT SPOON	HSA	—	—	—	Mobil B-50 HSA
SIZE	STD 2	3 1/4"				
SURFACE ELEVATION: —		SURFACE CONDITIONS: Asphalt around cover				

WATER LEVEL:

DEPTH	GVA READINGS	SAMPLE INFORMATION		STRATA	SOIL DESCRIPTION & OBSERVATIONS
		NUMBER	DEPTH		

0					
5				6	 <p>OPEN DRAIN STRUCTURE</p>
10	0	S-1	6-8	DRY	<p>FINE TAN/YW SAND + gravel</p> <p style="text-align: center;">↓</p> <p>EOB @ 20ft</p>
	0	S-2	8-10	DRY	
	0	S-3	10-12	DRY	
15	0	S-4	12-13	DRY	
	0	S-5	13-15	MOIST	
20	0	S-6	18-20	WET	19 D WT

# MONITOR WELL CONSTRUCTION SPECIFICATION

## ENERGY AND ENVIRONMENTAL ANALYSTS, INC.

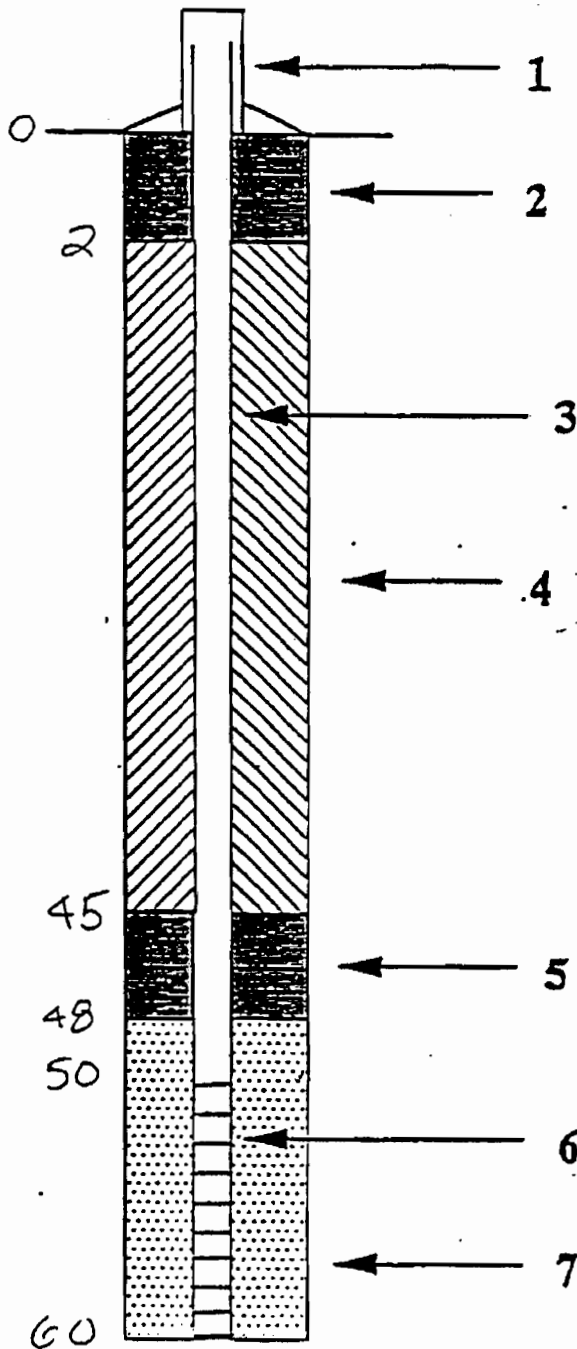
JOB NUMBER : 95706

WELL IDENTIFICATION : MW-13

DATE: 3/13/95

HYDROGEOLOGIST: N. Recchia

DRILLING CONTRACTOR: TSOT



1. PROTECTIVE CASING  YES  NO

2. CONCRETE SEAL YES  NO

3. RISER PIPE TYPE: PVC

LENGTH: 50 FT

DIAMETER: 2 FT IN

4. TYPE OF BACKFILL: NATURAL

HOW INSTALLED: BACKFILLED

5. TYPE OF LOWER SEAL: Bentonite

6. SCREEN TYPE: PVC

SLOTTED LENGTH: 10 FT

SLOT SIZE: 0.1

7. TYPE OF BACKFILL:

NATURAL

COMMENTS:

Deeper zone monitoring

### WATER LEVEL CHECKS :

DATE	DEPTH	REMARKS
3/6/95	13.60	EDC
4/24/95	13.7	SAMP

# MONITOR WELL CONSTRUCTION SPECIFICATION

## ENERGY AND ENVIRONMENTAL ANALYSTS, INC.

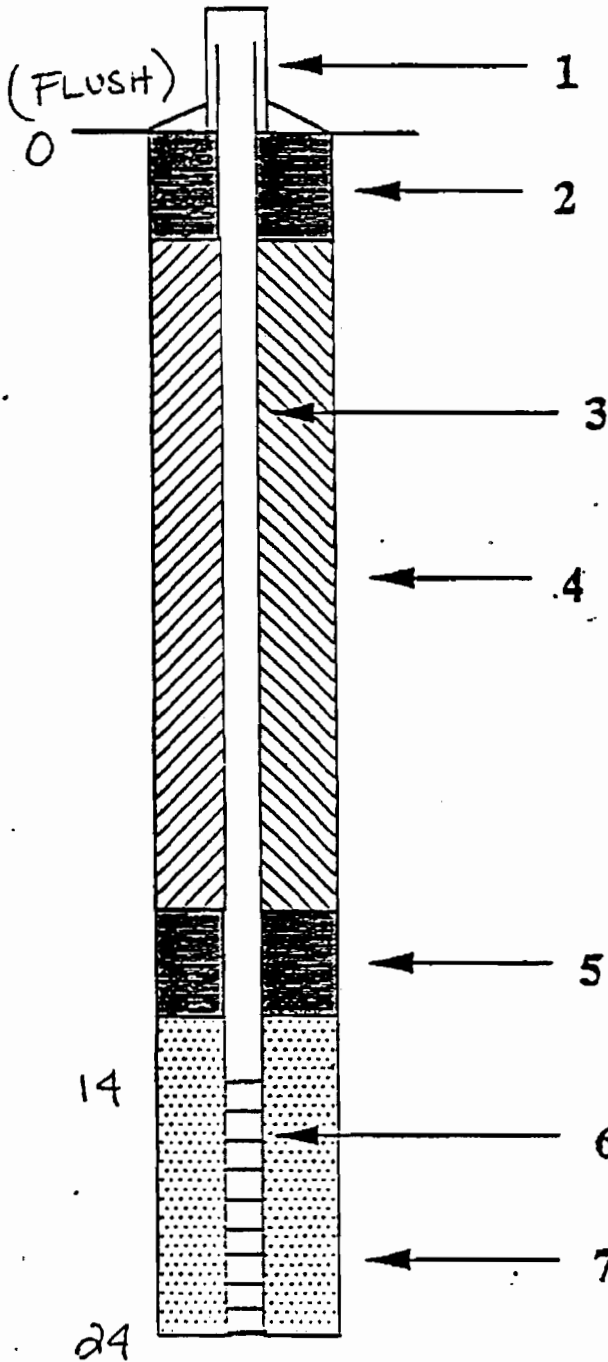
JOB NUMBER: 95706

WELL IDENTIFICATION: MW-3

DATE: 4/24/95

HYDROGEOLOGIST: N. Recchia

DRILLING CONTRACTOR: TSDT



1. PROTECTIVE CASING  YES  NO

2. CONCRETE SEAL  YES  NO

3. RISER PIPE TYPE: PVC

LENGTH: 14 FT

DIAMETER: 2 FT IN

4. TYPE OF BACKFILL: BACKFILL  
HOW INSTALLED: BACKFILLED

5. TYPE OF LOWER SEAL: BENTONITE

6. SCREEN TYPE: PVC

SLOTTED LENGTH: 0 FT

SLOT SIZE: 0.10

7. TYPE OF BACKFILL:

SILICA SAND

COMMENTS;

UPGRADIENT MW  
RC PARKING LOT

### WATER LEVEL CHECKS:

DATE	DEPTH	REMARKS
4/24	14.5	EOC

EEA, Inc.

Groundwater Sampling Data Sheet

Project Name: Gen Cleaners Project No.: 95706

Sampler Name: N. Recchia Sample ID No.: MW-1B

Date: 3/21/95 Time: 1130

Well pipe diameter: 2 inches

Depth to well bottom: 160 ft<sup>1</sup>

Depth to water surface: 18.60 ft<sup>1</sup>

Total volume: 1.38 gallons

Purge volume: 10.4 gallons

Purge method: B-K Pump & Bailor

Depth to water after purging: 18.75 ft<sup>1</sup>

Water temperature: 11 °C

Conductivity: 650 umhos

pH: 5.93

Color: clear

Turbidity: <50 NTUs

Recharge: (circle) slow  normal fast

Odors: (circle) yes  no OVA/Pid reading 0 ppm

Additional comments:

Deep rowe well

<sup>1</sup> below measuring point

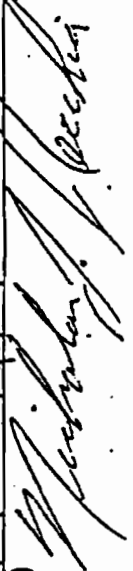


# ENERGY AND ENVIRONMENTAL ANALYSTS, INC.

55 HILTON AVENUE, GARDEN CITY, NEW YORK 516-746-4400 212-227-3200

## CHAIN OF CUSTODY RECORD

PROJECT NO. 94725	PROJECT NAME EEA-94725		DATE	TIME	SAMPLE LOCATION	NUMBER SAMPLE CONTAINERS	ANALYSIS					SAMPLE DESCRIPTION	
	INITIATOR NAME EcoTest Laboratories	DATE					TIME	CP 600	CP 800	CP 820	TYPE		EMERO (FPO)
MW-1	9/1/94	0800	MW-1			2	✓						GROUNDWATER
SB-1	9/1/94	1000	SB-1 2-4 ft			1	✓						SOIL
MW-2	9/1/94	1130	MW-2			2	✓						GROUNDWATER
DW-1	9/1/94	1320	DW-1 1-3 ft			2	✓	✓					SOIL
CP-1	9/1/94	1410	CP-1 0-2 ft			2	✓	✓	✓				SOIL
DW-2	9/1/94	1420	DW-2 1-3 ft			2	✓	✓	✓				SOIL
CP-2	9/1/94	1440	CP-2 0-2 ft			2	✓	✓	✓				SOIL
CP-3	9/1/94	1500	CP-3 0-2 ft			2	✓	✓	✓				SOIL

SHIPPED VIA:	hand delivered by EEA						
INQUIRED BY:	N. Pechin	DATE	9/1/94	TIME	1545	COMPANY	EEA, Inc.
RECEIVED BY:	EDM	DATE	9/1/94	TIME	1615	COMPANY	EEA, Inc.
SAMPLET SIGNATURE:							

REMARKS  
\* Specifically Te-tachbrosilone (PERK)

ECO LABORATORIES, INC. - ENVIRONMENTAL, EST. 1982  
 377 Sheffield Avenue, North Babylon, New York 11703  
 (516) 422-5777 • FAX (516) 422-5770

CHAIN OF CUSTODY RECORD

Client: EEA, Inc.  
 Address: 55 Hilltop Ave  
 Garden City, NY  
 Phone: 746-41400 FAX: 746-4432  
 Person receiving report: N. Rerchia  
 Sampled by: (NR)  
 Source: EEA  
 Job No.: EEA 9526

TYPE & NUMBER OF CONTAINERS

3 PA 8210  
 3 PA 601

\* 2 week turn around

MATRIX	COLLECTED DATE/TIME	SAMPLE IDENTIFICATION	TOTAL NUMBER OF CONTAINERS	REMARKS-TESTS REQUIRED SPECIAL TURNAROUND, SPECIAL Q.O. etc	Received by: (Signature)		Seal Intact?		Relinquished by: (Signature)		Seal Intact?		
					Signature	Representing	YES	NO (NA)	Signature	Representing	YES	NO (NA)	Signature
SOIL	8/21/95 1130	SB-1A	1										
SOIL	8/21/95 1200	SB-1B	1										
SOIL	8/21/95 1230	SB-1C	1										
WATER	8/21/95 1330	MW-1B	2										
WATER	8/21/95 1300	MW-1A	2										
WATER	8/21/95 1330	MW-2	2										
WATER	8/21/95 1400	MW-3	2										
Relinquished by: (Signature)				Received by: (Signature)				Seal Intact?		Received by: (Signature)			
Representing:				Representing:				YES NO (NA)		Representing:			
Relinquished by: (Signature)				Received by: (Signature)				Seal Intact?		Received by: (Signature)			
Representing:				Representing:				YES NO (NA)		Representing:			



# ECOTEST LABORATORIES, INC.

## ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C951198/1

03/30/95

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530  
ATTN: Nicholas Recchia

SOURCE OF SAMPLE: Gem Cleaners, EEA 95706  
COLLECTED BY: Client DATE COL'D: 03/21/95 RECEIVED: 03/21/95

SAMPLE: Water sample, MW-1A, 10:40 am

ANALYTICAL PARAMETERS

Chloromethane	ug/L	<1
Bromomethane	ug/L	1
Dichlorodifluomethane	ug/L	<2
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<2
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	<1
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
c 13 Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	26

ANALYTICAL PARAMETERS

Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<2
1,2 Dichlorobenzene	ug/L	<2
1,4 Dichlorobenzene	ug/L	<2

cc:

REMARKS:

DIRECTOR 

# ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C951198/1

03/30/95

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530

ATTN: Nicholas Recchia

SOURCE OF SAMPLE: Gem Cleaners, EEA 95706  
COLLECTED BY: Client DATE COL'D: 03/21/95 RECEIVED: 03/21/95

SAMPLE: Water sample, MW-1B, 11:30 am

### ANALYTICAL PARAMETERS

Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlorodifluomethane	ug/L	<2
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<2
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	<1
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
c 13 Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	2

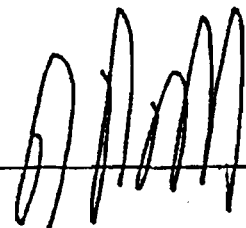
### ANALYTICAL PARAMETERS

Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<2
1,2 Dichlorobenzene	ug/L	<2
1,4 Dichlorobenzene	ug/L	<2

cc:

REMARKS:

DIRECTOR



rn=

5694

NYSDOH ID# 10320

# ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C951734/1

05/09/95

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530

ATTN: Nicholas Recchia

SOURCE OF SAMPLE: EEA 95706

COLLECTED BY: Client

DATE COL'D: 04/24/95 RECEIVED: 04/24/95

SAMPLE: Soil sample, SB-1A, 8-10 ft., 11:30 am

### ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<5
Bromomethane	ug/Kg	<5
Dichlorodifluomethane	ug/Kg	<10
Vinyl Chloride	ug/Kg	<5
Chloroethane	ug/Kg	29
Methylene Chloride	ug/Kg	<5
Trichlorofluomethane	ug/Kg	<10
1,1 Dichloroethene	ug/Kg	<5
1,1 Dichloroethane	ug/Kg	<5
1,2 Dichloroethene	ug/Kg	<5
Chloroform	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
111 Trichloroethane	ug/Kg	<5
Carbon Tetrachloride	ug/Kg	<5
Bromodichloromethane	ug/Kg	<5
1,2 Dichloropropane	ug/Kg	<5
t-1,3Dichloropropene	ug/Kg	<10
Trichloroethylene	ug/Kg	<5
Chlorodibromomethane	ug/Kg	<5
112 Trichloroethane	ug/Kg	<10
c 13 Dichloropropene	ug/Kg	<10
2chloroethvinylether	ug/Kg	<10
Bromoform	ug/Kg	<10
1122Tetrachloroethan	ug/Kg	<10
Tetrachloroethene	ug/Kg	<5

### ANALYTICAL PARAMETERS

Chlorobenzene	ug/Kg	<5
1,3 Dichlorobenzene	ug/Kg	<10
1,2 Dichlorobenzene	ug/Kg	<10
1,4 Dichlorobenzene	ug/Kg	<10

cc:

REMARKS:

DIRECTOR



# ECOTEST LABORATORIES, INC.

## ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C951734/2

05/09/95

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530

ATTN: Nicholas Recchia

SOURCE OF SAMPLE: EEA 95706

COLLECTED BY: Client

DATE COL'D: 04/24/95 RECEIVED: 04/24/95

SAMPLE: Soil sample, SB-1B, 13-15 ft., 12:00 pm

### ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<5
Bromomethane	ug/Kg	<5
Dichlorodifluomethane	ug/Kg	<10
Vinyl Chloride	ug/Kg	<5
Chloroethane	ug/Kg	23
Methylene Chloride	ug/Kg	<5
Trichlorofluomethane	ug/Kg	<10
1,1 Dichloroethene	ug/Kg	<5
1,1 Dichloroethane	ug/Kg	<5
1,2 Dichloroethene	ug/Kg	<5
Chloroform	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
111 Trichloroethane	ug/Kg	<5
Carbon Tetrachloride	ug/Kg	<5
Bromodichloromethane	ug/Kg	<5
1,2 Dichloropropane	ug/Kg	<5
t-1,3Dichloropropene	ug/Kg	<10
Trichloroethylene	ug/Kg	<5
Chlorodibromomethane	ug/Kg	<5
112 Trichloroethane	ug/Kg	<10
c 13 Dichloropropene	ug/Kg	<10
2chloroethvinylether	ug/Kg	<10
Bromoform	ug/Kg	<10
1122Tetrachloroethan	ug/Kg	<10
Tetrachloroethene	ug/Kg	<5

### ANALYTICAL PARAMETERS

Chlorobenzene	ug/Kg	<5
1,3 Dichlorobenzene	ug/Kg	<5
1,2 Dichlorobenzene	ug/Kg	<5
1,4 Dichlorobenzene	ug/Kg	<5

cc:

REMARKS:

DIRECTOR



rn=

8715

NYSDOH ID# 10320

# ECOTEST LABORATORIES, INC.

## ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C951734/3

05/09/95

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530

ATTN: Nicholas Recchia

SOURCE OF SAMPLE: EEA 95706

COLLECTED BY: Client

DATE COL'D: 04/24/95 RECEIVED: 04/24/95

SAMPLE: Soil sample, SB-1C, 18-20 ft., 12:30 pm

### ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<5
Bromomethane	ug/Kg	<5
Dichlorodifluomethane	ug/Kg	<10
Vinyl Chloride	ug/Kg	<5
Chloroethane	ug/Kg	<5
Methylene Chloride	ug/Kg	<5
Trichlorofluomethane	ug/Kg	<10
1,1 Dichloroethene	ug/Kg	<5
1,1 Dichloroethane	ug/Kg	<5
1,2 Dichloroethene	ug/Kg	<5
Chloroform	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
111 Trichloroethane	ug/Kg	<5
Carbon Tetrachloride	ug/Kg	<5
Bromodichloromethane	ug/Kg	<5
1,2 Dichloropropane	ug/Kg	<5
t-1,3Dichloropropene	ug/Kg	<10
Trichloroethylene	ug/Kg	<5
Chlorodibromomethane	ug/Kg	<5
112 Trichloroethane	ug/Kg	<10
c 13 Dichloropropene	ug/Kg	<10
2chloroethvinylether	ug/Kg	<10
Bromoform	ug/Kg	<10
1122Tetrachloroethan	ug/Kg	<10
Tetrachloroethene	ug/Kg	<5

### ANALYTICAL PARAMETERS

Chlorobenzene	ug/Kg	<5
1,3 Dichlorobenzene	ug/Kg	<10
1,2 Dichlorobenzene	ug/Kg	<10
1,4 Dichlorobenzene	ug/Kg	<10

cc:

REMARKS:

DIRECTOR





# ECOTEST LABORATORIES, INC.

## ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C951734/5

05/09/95

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530

ATTN: Nicholas Recchia

SOURCE OF SAMPLE: EEA 95706

COLLECTED BY: Client

DATE COL'D: 04/24/95 RECEIVED: 04/24/95

SAMPLE: Water sample, MW-1A, 13:00 pm

### ANALYTICAL PARAMETERS

Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlorodifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<1
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	<1
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<1
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<1
c 13 Dichloropropene	ug/L	<1
2chloroethvinylether	ug/L	<1
Bromoform	ug/L	<1
1122Tetrachloroethan	ug/L	<1
Tetrachloroethene	ug/L	49

### ANALYTICAL PARAMETERS

Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<1
1,2 Dichlorobenzene	ug/L	<1
1,4 Dichlorobenzene	ug/L	<1

cc:

REMARKS:

DIRECTOR



# ECOTEST LABORATORIES, INC.

## ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C951734/4

05/09/95

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530

ATTN: Nicholas Recchia

SOURCE OF SAMPLE: EEA 95706

COLLECTED BY: Client

DATE COL'D: 04/24/95 RECEIVED: 04/24/95

SAMPLE: Water sample, MW-1B, 12:30 pm

### ANALYTICAL PARAMETERS


Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlorodifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<1
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	<1
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<1
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<1
c 13 Dichloropropene	ug/L	<1
2chloroethvinylether	ug/L	<1
Bromoform	ug/L	<1
1122Tetrachloroethan	ug/L	<1
Tetrachloroethene	ug/L	<1

### ANALYTICAL PARAMETERS

Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<1
1,2 Dichlorobenzene	ug/L	<1
1,4 Dichlorobenzene	ug/L	<1

cc:

REMARKS:

DIRECTOR 

# ECOTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C951734/6

05/09/95

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530

ATTN: Nicholas Recchia

SOURCE OF SAMPLE: EEA 95706

COLLECTED BY: Client

DATE COL'D: 04/24/95 RECEIVED: 04/24/95

SAMPLE: Water sample, MW-2, 13:30 pm

### ANALYTICAL PARAMETERS

Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlorodifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<1
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	<1
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<1
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<1
c 13 Dichloropropene	ug/L	<1
2chloroethvinylether	ug/L	<1
Bromoform	ug/L	<1
1122Tetrachloroethan	ug/L	<1
Tetrachloroethene	ug/L	3

### ANALYTICAL PARAMETERS

Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<1
1,2 Dichlorobenzene	ug/L	<1
1,4 Dichlorobenzene	ug/L	<1

cc:

REMARKS:

DIRECTOR



rn=

8719

NYSDOH ID# 10320

# ECOTEST LABORATORIES, INC.

## ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. ••N. BABYLON, N.Y. 11703 ••(516) 422-5777 ••FAX (516) 422-5770

LAB NO. C951734/7

05/09/95

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530

ATTN: Nicholas Recchia

SOURCE OF SAMPLE: EEA 95706

COLLECTED BY: Client

DATE COL'D: 04/24/95 RECEIVED: 04/24/95

SAMPLE: Water sample, MW-3, 14:00 pm

### ANALYTICAL PARAMETERS

Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlorodifluomethane	ug/L	<1
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<1
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	<1
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<1
Trichloroethylene	ug/L	<1
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<1
c 13 Dichloropropene	ug/L	<1
2chloroethvinylether	ug/L	<1
Bromoform	ug/L	<1
1122Tetrachloroethan	ug/L	<1
Tetrachloroethene	ug/L	4

### ANALYTICAL PARAMETERS

Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<1
1,2 Dichlorobenzene	ug/L	<1
1,4 Dichlorobenzene	ug/L	<1

cc:

REMARKS:

DIRECTOR 

rn=

8720

NYSDOH ID# 10320

# ECOTEST LABORATORIES, INC.

## ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C943887/2

09/16/94

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530

ATTN: Nicholas Recchia

SOURCE OF SAMPLE: EEA-94725

COLLECTED BY: Client

DATE COL'D: 09/01/94 RECEIVED: 09/01/94

SAMPLE: Soil sample, SB-1, 2-4 ft., 10:00 am

### ANALYTICAL PARAMETERS

Chloromethane	ug/Kg	<5
Bromomethane	ug/Kg	<5
Dichlorodifluomethane	ug/Kg	<10
Vinyl Chloride	ug/Kg	<5
Chloroethane	ug/Kg	<5
Methylene Chloride	ug/Kg	<5
Trichlorofluomethane	ug/Kg	<10
1,1 Dichloroethene	ug/Kg	<5
1,1 Dichloroethane	ug/Kg	<5
1,2 Dichloroethene	ug/Kg	<5
Chloroform	ug/Kg	<5
1,2 Dichloroethane	ug/Kg	<5
111 Trichloroethane	ug/Kg	<5
Carbon Tetrachloride	ug/Kg	<5
Bromodichloromethane	ug/Kg	<5
1,2 Dichloropropane	ug/Kg	<5
t-1,3Dichloropropene	ug/Kg	<10
Trichloroethylene	ug/Kg	<5
Chlorodibromomethane	ug/Kg	<5
112 Trichloroethane	ug/Kg	<10
c 13 Dichloropropene	ug/Kg	<10
2chloroethvinylether	ug/Kg	<10
Bromoform	ug/Kg	<10
1122Tetrachloroethan	ug/Kg	<10
Tetrachloroethene	ug/Kg	7

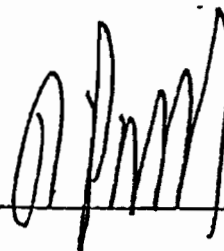
### ANALYTICAL PARAMETERS

Chlorobenzene	ug/Kg	<5
1,3 Dichlorobenzene	ug/Kg	<10
1,2 Dichlorobenzene	ug/Kg	<10
1,4 Dichlorobenzene	ug/Kg	<10

cc:

REMARKS:

DIRECTOR



# ECOTEST LABORATORIES, INC.

## ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C943887/1

09/16/94

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530

ATTN: Nicholas Recchia

SOURCE OF SAMPLE: EEA-94725

COLLECTED BY: Client

DATE COL'D: 09/01/94 RECEIVED: 09/01/94

SAMPLE: Water sample, MW-1, 09:30 am

### ANALYTICAL PARAMETERS

Chloromethane	ug/L	<1
Bromomethane	ug/L	<1
Dichlorodifluomethane	ug/L	<2
Vinyl Chloride	ug/L	<1
Chloroethane	ug/L	<1
Methylene Chloride	ug/L	<1
Trichlorofluomethane	ug/L	<2
1,1 Dichloroethene	ug/L	<1
1,1 Dichloroethane	ug/L	<1
1,2 Dichloroethene	ug/L	47
Chloroform	ug/L	<1
1,2 Dichloroethane	ug/L	<1
111 Trichloroethane	ug/L	<1
Carbon Tetrachloride	ug/L	<1
Bromodichloromethane	ug/L	<1
1,2 Dichloropropane	ug/L	<1
t-1,3Dichloropropene	ug/L	<2
Trichloroethylene	ug/L	5
Chlorodibromomethane	ug/L	<1
112 Trichloroethane	ug/L	<2
c 13 Dichloropropene	ug/L	<2
2chloroethvinylether	ug/L	<2
Bromoform	ug/L	<2
1122Tetrachloroethan	ug/L	<2
Tetrachloroethene	ug/L	56

### ANALYTICAL PARAMETERS

Chlorobenzene	ug/L	<1
1,3 Dichlorobenzene	ug/L	<2
1,2 Dichlorobenzene	ug/L	<2
1,4 Dichlorobenzene	ug/L	<2

cc:

REMARKS:

DIRECTOR



# ECOTEST LABORATORIES, INC.

## ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C943887/3

09/16/94

Energy & Environmental Analysts, Inc.  
55 Hilton Avenue  
Garden City, NY 11530

ATTN: Nicholas Recchia

SOURCE OF SAMPLE: EEA-94725

COLLECTED BY: Client

DATE COL'D: 09/01/94 RECEIVED: 09/01/94

SAMPLE: Water sample, MW-2, 11:30 am

ANALYTICAL PARAMETERS			ANALYTICAL PARAMETERS		
Chloromethane	ug/L	<1	Chlorobenzene	ug/L	<1
Bromomethane	ug/L	<1	1,3 Dichlorobenzene	ug/L	<2
Dichlorodifluomethane	ug/L	<2	1,2 Dichlorobenzene	ug/L	<2
Vinyl Chloride	ug/L	<1	1,4 Dichlorobenzene	ug/L	<2
Chloroethane	ug/L	<1			
Methylene Chloride	ug/L	<1			
Trichlorofluomethane	ug/L	<2			
1,1 Dichloroethene	ug/L	<1			
1,1 Dichloroethane	ug/L	<1			
1,2 Dichloroethene	ug/L	<1			
Chloroform	ug/L	<1			
1,2 Dichloroethane	ug/L	<1			
111 Trichloroethane	ug/L	<1			
Carbon Tetrachloride	ug/L	<1			
Bromodichloromethane	ug/L	<1			
1,2 Dichloropropane	ug/L	<1			
t-1,3Dichloropropene	ug/L	<2			
Trichloroethylene	ug/L	<1			
Chlorodibromomethane	ug/L	<1			
112 Trichloroethane	ug/L	<2			
c 13 Dichloropropene	ug/L	<2			
2chloroethvinylether	ug/L	<2			
Bromoform	ug/L	<2			
1122Tetrachloroethan	ug/L	<2			
Tetrachloroethene	ug/L	9			

cc:

REMARKS:

DIRECTOR 

P.W. GROSSER CONSULTING

APPENDIX B





**ECOTEST LABORATORIES, INC.**

**ENVIRONMENTAL TESTING**

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.C971271/1

04/03/97

P.W. Grosser Consulting  
100 South Main Street, Suite 202  
Sayville, NY 11782

ATTN: James P. Rhodes, Jr.

SOURCE OF SAMPLE: Gem Cleaners, GBR9701  
COLLECTED BY: Client      DATE COL'D:03/21/97 RECEIVED:03/21/97

SAMPLE: Soil sample, Stairwell storm drain, 1025

**ANALYTICAL PARAMETERS**

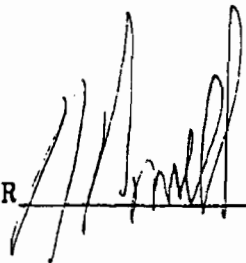
Tetrachloroethene	ug/Kg	12000
Trichloroethylene	ug/Kg	2600
1,2 Dichloroethene	ug/Kg	4400
Vinyl Chloride	ug/Kg	<50

**ANALYTICAL PARAMETERS**

% Solids		64
----------	--	----

cc:

REMARKS:

DIRECTOR 

**ECOTEST** LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C971271/2

04/03/97

P.W. GROSSER CONSULTING  
100 SOUTH MAIN STREET, SUITE 202  
SAYVILLE, NY 11782  
ATTN: James P. Rhodes, Jr.

SOURCE OF SAMPLE: Gem Cleaners, GBR9701  
COLLECTED BY: Client DATE COL'D: 03/21/97 RECEIVED: 03/21/97

SAMPLE: Water sample, Field Blank, 1015

ANALYTICAL PARAMETERS  
Tetrachloroethene ug/L <1  
Trichloroethylene ug/L <1  
1,2 Dichloroethene ug/L <1  
Vinyl Chloride ug/L <1

ANALYTICAL PARAMETERS

cc:

REMARKS:

DIRECTOR 

**ECO TEST LABORATORIES, INC. • ENVIRONMENTAL TESTING**  
 377 Sheffield Avenue, North Babylon, New York 11703  
 (516) 422-5777 • FAX (516) 422-5770

**CHAIN OF CUSTODY RECORD**

Client: RAW GROSSER  
 Address: 190 S. Main Suite 202  
WILMINGTON  
 Phone: 281-6355 FAX: 581-8705  
 Person receiving report: Jim Rhodes  
 Sampled by: Scott PIM  
 Source: 84 Village Ave  
 Job No.: GBR-9701

TYPE & NUMBER OF CONTAINERS

102 soil water glass  
 102 soil water glass

Hold all  
 until notified

MATRIX (Soil, Water, etc.)	COLLECTED		SAMPLE IDENTIFICATION		REMARKS: TESTS REQUIRED, SPECIAL TURNAROUND, SPECIAL Q.C. etc.
	DATE	TIME	DATE	TIME	
	8/9/01	12:10	2-4		Method 8010
	11-10		4-6		(PCE, DCE, TCE and Vinyl Chloride)
	11-15		6-8		
	11-20		8-10		
	11-30		10-12		
	5/14/01	12:00	GW		

Relinquished by: (Signature)	Received by: (Signature)	DATE/TIME	SEAL INTACT?	Relinquished by: (Signature)	Received by: (Signature)	DATE/TIME	SEAL INTACT?
Representing: P.W.G.C.	Representing: [Signature]	5/16/01 3:00	YES NO (NR)	Representing:	Representing:		YES NO NA
Relinquished by: (Signature)	Received by: (Signature)	DATE/TIME	SEAL INTACT?	Relinquished by: (Signature)	Received by: (Signature)	DATE/TIME	SEAL INTACT?
Representing:	Representing:		YES NO NA	Representing:	Representing:		YES NO NA

**ECOTEST** LABORATORIES, INC.

**ENVIRONMENTAL TESTING**

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO.C972114/3

06/10/97

P.W. Grosser Consulting  
100 South Main Street, Suite 202  
Sayville, NY 11782  
ATTN: James P. Rhodes, Jr.

SOURCE OF SAMPLE: 84 Village Avenue, #GBR-9701  
COLLECTED BY: Client            DATE COL'D:05/16/97 RECEIVED:05/16/97

SAMPLE: Soil sample, 4-6B ft., 11:40 am

ANALYTICAL PARAMETERS  
Tetrachloroethene    ug/Kg   350  
Trichloroethylene    ug/Kg   11  
1,2 Dichloroethene    ug/Kg   <5  
Vinyl Chloride        ug/Kg   <5  
  
% Solids                                  96

ANALYTICAL PARAMETERS

cc:

REMARKS:

DIRECTOR \_\_\_\_\_  


**ECOTEST** LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C972114/4

06/10/97

P.W. Grosser Consulting  
100 South Main Street, Suite 202  
Sayville, NY 11782  
ATTN: James P. Rhodes, Jr.

SOURCE OF SAMPLE: 84 Village Avenue, #GBR-9701  
COLLECTED BY: Client DATE COL'D: 05/16/97 RECEIVED: 05/16/97

SAMPLE: Soil sample, 6-8 ft., 11:15 am

ANALYTICAL PARAMETERS

Tetrachloroethene ug/Kg 12000  
Trichloroethylene ug/Kg 270  
1,2 Dichloroethene ug/Kg 100  
Vinyl Chloride ug/Kg <5

% Solids 93

ANALYTICAL PARAMETERS

cc:

REMARKS:

DIRECTOR \_\_\_\_\_

**ECOTEST** LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777 • FAX (516) 422-5770

LAB NO. C972114/5

06/10/97

P.W. Grosser Consulting  
100 South Main Street, Suite 202  
Sayville, NY 11782  
ATTN: James P. Rhodes, Jr.

SOURCE OF SAMPLE: 84 Village Avenue, #GBR-9701  
COLLECTED BY: Client DATE COL'D: 05/16/97 RECEIVED: 05/16/97

SAMPLE: Soil sample, 8-10 ft., 11:20 am

ANALYTICAL PARAMETERS

Tetrachloroethene	ug/Kg	90
Trichloroethylene	ug/Kg	10
1,2 Dichloroethene	ug/Kg	<5
Vinyl Chloride	ug/Kg	<5

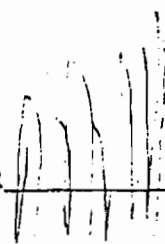
ANALYTICAL PARAMETERS

% Solids		91
----------	--	----

cc:

REMARKS:

DIRECTOR



P.W. GROSSER CONSULTING

APPENDIX C



DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
DIVISION OF SOLID & HAZARDOUS MATERIALS  
**HAZARDOUS WASTE MANIFEST**

P.O. Box 12820, Albany, New York 12212

Form Approved OMB No. 2030-0039, Expires 9-30-96

Please print or type. Do not Staple.

In case of emergency or spill immediately call the National Response Center (800) 424-6802 and the N.Y. Dept. of Environmental Conservation (518) 457-7362.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA No. <b>NYD0131605850161219</b>		Manifest Document No. <b>1</b>		2. Page 1 of 1 Information in the shaded areas is not required by Federal Law.	
3. Generator's Name and Mailing Address <b>Gen Cleaners 84 North Village Road Rockville Centre, NY 11570</b>		A. State Manifest Document No. <b>NYB 842762-7</b>		B. Generator's ID <b>Same</b>			
4. Generator's Phone (516) 766-3445		6. US EPA ID Number <b>CTD1918121911942</b>		C. State Transporter's ID <b>PL1311</b>		D. Transporter's Phone <b>203-562-1280</b>	
5. Transporter 1 (Company Name) <b>Rechem Transport, Inc.</b>		7. Transporter 2 (Company Name)		E. State Transporter's ID		F. Transporter's Phone	
8. Designated Facility Name and Site Address <b>LMD, Inc. Highway 1523, PO Box 327 Calvert City, KY 42029</b>		10. US EPA ID Number <b>KYD088438817</b>		G. State Facility's ID		H. Facility's Phone <b>(502) 395-8313</b>	
11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)				12. Containers	13. Total Quantity	14. Unit WU/Vol	15. Waste No.
a. <b>EQ, Hazardous Waste Solids, M.O.S., (Tetrachloroethylene)(P001) 9. NA3077, PG III</b>				No. <b>171</b>	Type <b>DM</b>	<b>131010 P</b>	EPA <b>P001</b> STATE
b.							EPA STATE
c.							EPA STATE
d.							EPA STATE
J. Additional Descriptions for Materials listed Above				K. Handling Codes for Wastes Listed Above			
a. <b>Tetrachloroethylene</b>				a. <input checked="" type="checkbox"/> <b>B</b>			
b.				b. <input type="checkbox"/>			
15. Special Handling Instructions and Additional Information <b>Emergency-Contact: Trade Winds 516-755-4000</b> <b>11a)</b>							
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations. If I am a large quantity generator, I certify that I have program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a small generator, I have made a good faith effort to minimize my waste and select the best waste management method that is available to me and that I can afford.							
Printed/Typed Name <b>Stanley Sankowski (owner)</b>		Signature <i>Stanley Sankowski</i>		Mo. Day Year <b>08/10/97</b>			
17. Transporter 1 (Acknowledgement of Receipt of Materials) Printed/Typed Name <b>David Gerac</b>		Signature <i>David Gerac</i>		Mo. Day Year <b>08/07/97</b>			
18. Transporter 2 (Acknowledgement of Receipt of Materials) Printed/Typed Name		Signature		Mo. Day Year			
19. Discrepancy Indication Space							
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.							
Printed/Typed Name				Signature		Mo. Day Year	

NYB 842762 7

EPA Form 8700-22 (Rev. 9-88) Previous editions are obsolete.

**ATTACHMENT 2**

**Street Opening Permit**

VILLAGE OF ROCKVILLE CENTRE  
DEPARTMENT OF PUBLIC WORKS

THIS PERMIT EXPIRES  
**30 CALENDAR DAYS**  
FROM DATE OF ISSUANCE.

**STREET OPENING PERMIT**

LOCATION: 82 NO VILLAGE PERMIT # ~~16-06~~ 06-05 DATE: 1/27/06  
HOUSE NO. STREET

@ intersection/details: P.F. NO OF WASHINGTON BEHIND NO. VILLAGE

CASE NO. 60300541 24 HR. EMERGENCY #: 585-7341538 PERMIT FEE: \$ 150.00

APPLICATION OF: O'BRIEN + OERE ENGINEERS  
NAME (INDIVIDUAL OR COMPANY)

5800 BRITTON FIELD PKW E. SYRACUSE  
STREET ADDRESS, TOWN, STATE, ZIP 13057

OPENING FOR: TYPE OF ROADWAY:  
 WATER  
 SEWER  
 GAS  
 ELECTRIC  
 OTHER PARKING LOT  
 ASPHALT  
 CONCRETE

THE UNDER-SIGNED APPLICANT AGREES TO GUARANTEE RESTORATION WORK FOR A PERIOD OF TWO (2) YEARS FROM COMPLETION OF WORK. ANY REQUIRED RESTORATION WITHIN SAID TIME IS THE SOLE RESPONSIBILITY OF THE APPLICANT AND MUST BE REPAIRED IN A TIMELY MANNER ACCORDING TO THE GUIDELINES SET HEREIN FOR STREET REPAIRS.

[Signature]  
(SIGNATURE OF APPLICANT)

NO. OF OPENINGS	<u>5</u>			
SIZE OF OPENINGS	<u>3"</u>			

Permission as required by the Department of Public Works of the Village of Rockville Centre, in compliance with the Unified Code of Ordinances No. 3.1, to perform the work as described in the within statement is hereby granted.

Examined and approved:  
[Signature]  
(AUTHORIZED SIGNATURE)

DATE OPENING WILL BE MADE: 1/30/06-2/4/06

**TO AVOID SERIOUS DAMAGE TO VITAL UNDERGROUND UTILITIES, THE APPLICANT MUST CALL THE UTILITY CALL CENTER # 1-800-272-4480 BEFORE STARTING THE WORK AUTHORIZED BY THIS PERMIT. IN ADDITION, THE APPLICANT MUST NOTIFY DEPT. OF PUBLIC WORKS 24 HOURS BEFORE OPENING IS MADE AND PRIOR TO FINAL RESTORATION. CALL PUBLIC WORKS # 1-516-678-9288.**

This permit is issued subject to the compliance with all laws, ordinances and regulations enacted by the Village of Rockville Centre, and that the applicant shall save and keep harmless the Village of Rockville Centre from all damages caused by the negligence of such applicant in making such excavations, or in properly guarding same, and is subject to revocation at any time.

The applicant shall restore all street openings pursuant to Village specifications.

In making such repairs to road openings, the applicant shall square off the street openings so as to avoid irregular cuts and the repaired surface shall be so made that the entire repairs shall overlap firm unexcavated earth by at least 1 1/2 feet around the entire perimeter of the excavation.

This permit is not valid unless the applicant complies with Section 322-a of the General Business Law, governing proper notification to the local gas company and others.

**RESTORATION WORK MUST BE COMPLETED WITHIN 45 CALENDAR DAYS FROM COMPLETION OF WORK.**

OFFICE RECORD: DATE: \_\_\_\_\_ INSPECTOR: \_\_\_\_\_

1 <sup>ST</sup> INSPECTION DATE:	WHEN SURFACE RESTORED:	REPAIR GUARANTEE:	LICENSE & PERMIT BOND:
TYPE OF ROADWAY:	NO. OF SQUARE FEET:		
SIZE OF CUTS:	2 <sup>ND</sup> INSPECTION DATE:		

**ATTACHMENT 3**

**Boring Logs**

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 1 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-1		Total Depth: 44'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/17/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
1	S-1		4/3	Asphalt 10"		SP	PID = 0.0 PPM Dry loose non-plastic Fill
2				Tan to Brown (mf) rounded gravel Sand, trace 1'6"			
3				Brown (m) Sand			
4				4'			
5	S-2		4/4	Brown to Orange (mf) Sand		SW	PID = 0.7 PPM Dry loose non-plastic Fill
6							
7							
8							
9	S-3		4/4			SW	PID = 0.0 PPM Dry loose non-plastic Fill
10							
11							
12					White to Tan (cmf) Sand 11'6"		

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

**Boring Log**

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 2 of 4		Sketch:			
Location: Rockville Centre, NY		Job Number:							
Boring: SB-1		Total Depth: 44'							
Drilling Co. EPI		Sample	Core	Casing					
Driller: Lauren		Type	4'						
Drilling Method: Direct Push		DIA.	2"						
Date: 1/17/2006		Weight							
Inspector: Dan Simpson		Fall							
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks			
13	S-4		4/4	Brown to Orange (mf) Sand, 13'	SP	PID = 0.0 PPM Dry loose non-plastic			
14									
15									
16	S-5		4/4	Brown to Orange (mf) Sand, some 16' (mf) sub-rounded gravel	SP	PID = 0.8 PPM Dry loose non-plastic			
17						Brown to Orange (mf) Sand, trace (mf) sub-rounded gravel			
18									
19				19'		Wet @ 19'			
20				19 1/2" Red and Orange (mf) Sand	SP				
21	S-6		4/3	White to Tan (f) Sand	SW	PID = 13.0 PPM Saturated moderately compact non-plastic			
22									
23									
24				23' 3" Brown to Red sandy (mf) Gravel	GP				
				23' 9" White to Tan (f) Sand	SW				

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 3 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-1		Total Depth: 44'					
Drilling Co. EPI			Sample	Core	Casing		
Driller: Lauren	Type	4'					
Drilling Method: Direct Push	DIA.	2"					
Date: 1/17/2006	Weight						
Inspector: Dan Simpson	Fall						
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
25							PID = 17.8 PPM wet moderately compact non-plastic
26	S-7		4/3				
27							
28				27'6" Brown silty gravel (mf)			
				27'9" white to tan (f) sand		GM	
				27'10" Brown to black (f) sand		SW	
29				28'6" Brown (mf) sand		SW	PID = 0.4 PPM wet compact plastic
30	S-8		4/3	29'6" Brown clayey (f) sand		SW	
31						SC	moderately compact plastic
32				31'6" Brown clayey silt		ML	
33				32' Brown (f) sand			PID = 0.5 PPM saturated moderately compact non-plastic
34	S-9		4/2.5			SW	wet
35							
36				35'6" Brown clayey (f) sand		SC	wet plastic

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 4 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-1		Total Depth: 44'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/17/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks	
37	S-10		4/3	Brown (cm) Sand, trace Sub-angular to Sub-rounded gravel	SP	PID = 2.1 PPM Wet moderately compact non-plastic	
38							
39							
40	S-11		4/2	White to Tan (mf) Sand,	SP	PID = 3.8 PPM Saturated loose non-plastic	
41							
42							
43							
44							
45				End of boring			
46							
47							
48							



Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 1 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-2		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/17/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks	
1	S-1		4/2	Asphalt 10"	SW	PID = 0.0 PPM	
2				Brown (m) Sand		Dry loose non-plastic Fill	
3				Brown to Orange (mf) Sand, trace sub-rounded (in) gravel		SP	
4	S-2		4/3.5	Brown to Orange (mf) Sand	SW	PID = 1.8 PPM	
5						Dry loose non-plastic Fill	
6							
7	S-3		4/4			PID = 2.1 PPM	
8						Dry loose non-plastic	
9							
10						Native @ 10'6"	
11				White to Tan (f) Sand	SW		
12							

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

**Boring Log**

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 2 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-2		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/17/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
13							PID = 0.0 PPM Dry loose non-plastic
14	S-4		4/3.5	14'6"			
15				White to Brown (mf) Sand, some (cmf) sub-rounded gravel		SP	
16				Brown (mf) Sand 15'9"		SP	
17				Gray (C) Sand, And (cmf) Gravel 16'3"		GP	PID = 1.5 PPM Dry loose non-plastic
18	S-5		4/4	Brown (cmf) Sand some (cmf) sub-rounded gravel 17'6"		SP	
19				Brown to orange (mf) Sand 18'		SP	
20				Brown (cmf) Sand, some (mf) rounded gravel 19'		SP	Wet @ 19'
21				Brown (m) Sandy (cmf) Gravel			
22	S-6		4/3	22'		GP	PID = 1.7 PPM Saturated loose non-plastic
23				Brown (f) Sand			
24						SW	Moderately Compact

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

**Boring Log**

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 3 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-2		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/17/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/Recovery	Geologic Description		Class USCS	Remarks
25	S-7		4/3	Brown to Orange (F) Sand		SW	PID = 2.4 PPM Saturated moderately compact non-plastic
26							
27					Orange to Red (F) Sand 26'9"		
28	S-8		4/4	Gray (F) Sand 27'6"	SW	PID = 2.1 PPM Wet moderately compact non-plastic	
29					Brown sandy (MF) Gravel 28'		GW
30	S-9		4/4	Brown to Orange (F) Sand 30'		SW	Plastic
31					Brown Sandy clay		
32	S-9		4/4	Brown (F) Sand 32'		SW	PID = 4.1 PPM Wet moderately compact non-plastic
33					Brown clayey (F) Sand 34'		
34						SW	
35							
36						SC	

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 4 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-2		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4"				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/17/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
37	S-10		4/4	Brown (mf) Sand <span style="float: right;">36'3"</span>		SP	PID = 7.4 PPM Saturated Moderately compact non-plastic
38							
39				Orange, to Red (mf) Sand <span style="float: right;">38'6"</span>			
39				Brown (mf) sand, some (mf) sub-angular to rounded gravel <span style="float: right;">38'9"</span>			
40				40'		SP	
41				End of boring			
42							
43							
44							
45							
46							
47							
48							

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 1 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-3		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/18/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
1				Asphalt 10"			PID = 1.5 PPM Dry loose non-plastic Fill
				Brown (mf) Sand 1'6"		SW	
2	S-1		4/3.5	Brown to Orange (mf) Sand			
3						SW	
4				Orange to Brown (mf) Sand 4'			PID = 1.2 PPM Dry loose non-plastic Fill
5							
6	S-2		4/4				
7						SW	
8							PID = 2.0 PPM Dry loose non-plastic
9							
10	S-3		4/3				
11				White to Tan (mf) Sand 11'			Native soil @ 11'
12						SP	

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

**Boring Log**

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 2 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-3		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/18/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
13	S-4		4/4	White to Tan (mf) Sand, some (mf) rounded gravel		SP	PID = 2.6 PPM Dry loose non-plastic
14				Orange to Brown (mf) Sand, some (mf) rounded gravel			
15				13' 8"			
16	S-5		4/3	Orange to Brown (f) Sand		SP	PID = 4.0 PPM Dry loose non-plastic
17				16'			
18				19'			
19	S-6		4/3	Brown sandy (mf) gravel		GP	Wet @ 19'
20				20' 6"			
21	S-6		4/3	White to Tan (f) Sand		SW	PID = 0.9 PPM Saturated moderately compact non-plastic
22							
23							
24						Compact	

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 3 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-3		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/18/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
25	S-7		4/4	<del>Orange to Red (f) sand</del> 24'9"		SW	PID = 3.3 PPM Wet Compact Non-plastic
				<del>White to Orange (f) sand</del> 25'			
26							
27							
28	S-8		4/4	<del>Brown sandy (mf) gravel</del> 27'9"		SW	PID = 5.0 PPM Wet Compact Non-plastic
				<del>White to Tan (f) sand, All (mf) rounded gravel</del> 28'			
				<del>White to Tan (f) sand</del> 28'9"			
29				<del>Red (f) sand</del> 29'			
				<del>White to Tan (f) sand</del> 30'			
30				30'4"		SW	
31				Brown clayey silt		ML	Plastic
32	S-9		4/4	32'		SM	PID = 4.3 PPM Wet Non-plastic Compact
				Brown (f) sand, some silt			
33							
34							
35				35'6"			
36				Brown clayey silt		ML	
				Brown (f) sand, some silt		SW	

Yec, Inc.  
 612 Corporate Way  
 Vailey Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 4 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-3		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren	Type	4'					
Drilling Method: Direct Push	DIA.	2"					
Date: 1/18/2006	Weight						
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks	
37	S-10		4/1	Brown (f) Sand	SW	PID = 5.3 PPM Wet Compact non-plastic	
38							
39							
40							
41				End of boring			
42							
43							
44							
45							
46							
47							
48							



Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 1 of 4		Sketch:			
Location: Rockville Centre, NY		Job Number:							
Boring: SB-4		Total Depth: 40'							
Drilling Co. EPI		Sample	Core	Casing					
Driller: Lauren		Type	4'						
Drilling Method: Direct Push		DIA.	2"						
Date: 1/19/2006		Weight							
Inspector: Dan Simpson		Fall							
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks		
1	S-1		4/2	Asphalt 10"			PID = 1.2 PPM Dry loose non-plastic Fill		
2				Brown (mf) Sand		SW			
3									
4					Brown (mf) Sand, some (mf) sub-angular to rounded gravel	3'6" 4'		SP	
5	S-2		4/3	Brown to Orange (mf) Sand		SP	PID = 2.0 PPM Dry loose non-plastic		
6				White to Brown (mf) Sand		6'		SP	Native Soil @ 6'
7									
8						Brown (mf) Sand		8'	SP
9	S-3		4/4	Brown (mf) Sand		9'	PID = 2.8 PPM Dry loose non-plastic		
10				Brown to Red (mf) Sand		9'3"		SP	
11				Brown (mf) Sand				SP	
12				White to Tan (mf) Sand		11'6"		SP	

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 2 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-4		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/19/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
13	S-4		4/3	White to Brown (mf) Sand, some (mf) rounded gravel		GP	PID = 2.1 PPM Dry loose
14				Orange to Brown (mf) Sand, some (mf) rounded gravel			
15						GP	
16	S-5		4/2	Brown to Orange (mf) Sand, some (mf) rounded gravel		GP	PID = 2.2 PPM moist loose non-plastic moist @ 18' wet @ 19'
17							
18							
19	S-6		4/2.5	White to Tan (f) Sand		SW	PID = 1.8 PPM saturated moderately compact non-plastic
20				White to Tan (f) Sand, some (mf) gravel			
21				White to Tan (f) Sand		SP	
22						SW	
23							
24							

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 3 of 4		Sketch:		
Location: Rockville Centre, NY		Job Number:						
Boring: SB-4		Total Depth: 40'						
Drilling Co. EPI		Sample	Core	Casing				
Driller: Lauren		Type	4'					
Drilling Method: Direct Push		DIA.	2"					
Date: 1/19/2006		Weight						
Inspector: Dan Simpson		Fall						
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks		
25	S-7		4/3	Brown (st) sub-rounded to rounded Gravel white to tan (F) sand, trace (cmf) rounded gravel	BW	PID = 3.7 ppm Wet compact non-plastic		
26					SP			
27								
28	S-8		4/0	Rust to Brown silty (cmf) Gravel	GM			
29						* Shore lost no recovery		
30								
31								
32					32'			
33	S-9		4/4	Brown (F) sand		PID = 3.1 ppm wet moderately compact non-plastic		
34						SW		
35								
36				Brown clayey (F) sand	35'6"	SC	Plastic	

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 4 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-4		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/19/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
37	S-10		4/4	Brown (conf) Sand, Acid Silt			PID = 0.9 Saturated moderately compact non-plastic wet loose non-plastic
38				Brown (conf) Sand		37' 37 1/6"	
39						SP	
40							
41				End of boring			
42							
43							
44							
45							
46							
47							
48							

Boring Log

Project: GEM		Client: O'Brien & Gere		Page 1 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-5		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/19/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks	
1				Asphalt 10"		PID = 14.9 PPM Dry loose non-plastic Fill	
2	S-1		4/3	Brown (mf) Sand 2'	SW		
3				Brown (mf) Sand, some (cmf) sub-angular to sub-rounded gravel			
4							
5							
6	S-2		4/2		SP	PID = 34.3 PPM Dry loose non-plastic Fill	
7							
8							
9				Brown (cmf) Sand 8'		PID = 31.9 PPM Dry loose non-plastic	
10	S-3		4/4		SP		
11							
12				White to Brown (mf) Sand 11'6"	SP	Native Soil @ 11'6"	

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

**Boring Log**

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 2 of 4		Sketch:		
Location: Rockville Centre, NY		Job Number:						
Boring: SB-5		Total Depth: 40'						
Drilling Co. EPI		Sample	Core	Casing				
Driller: Lauren		Type	4'					
Drilling Method: Direct Push		DIA.	2"					
Date: 1/19/2006		Weight						
Inspector: Dan Simpson		Fall						
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks	
13	S-4		4/2.5	White to Tan (mf) sand		SP	PID = 31.8 PPM Dry loose non-plastic	
14								
15								
16	S-5		4/3	White to Tan, (mf) sand, some (mf) sub-rounded gravel		SP	PID = 34.4 PPM moist loose non-plastic	
17								
18						White to Tan (mf) sand, some (mf) gravel		GP
19				White to Tan (F) sand			wet @ 18'6"	
20							compact	
21	S-6		4/4			SW	PID = 31.1 PPM Saturated compact non-plastic	
22								
23								
24								

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 3 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-5		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/19/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks	
25						PID = 18.8 PPM Wet Compact non-plastic	
26	S-7		4/2				
27						27'	
28				Orange to Brown (F) Sand, some (mf) rounded gravel	SP	28'	
29				White to Gray (F) Sand	SW	PID = 34.8 PPM Wet Compact non-plastic	
30	S-8		4/3			30'	
31				Brown (F) Sand	SW	31'6"	
32				Brown sandy clay	SC	32' Plastic	
33				Brown silty clay	CL	PID = 10.0 PPM Wet Compact Plastic	
34	S-9		4/4			34'	
35				Brown (F) sand, trace (mf) rounded gravel	SP	Saturated Compact non-plastic	
36							

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 4 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-5		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Lauren		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/19/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks	
37	S-10		4/4	Gray clayey sand	SC	PID = 7.5 PPM wet moderately compact Plastic	
38				Gray (H) sand	SW		
39				Brown (cmf) sand, trace rounded gravel	SP		
40							
41				End of boring			
42							
43							
44							
45							
46							
47							
48							



Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

**Boring Log**

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 1 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-6		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Tony Pressimone		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/30/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
1	S-1		4 1/2	Asphalt 10"			PID = 1.5 PPM Dry loose non-plastic Fill
2				Brown (cm) Sand	16"	SW	
3				Brown to Orange (cmf) Sand			
4						SP	
5	S-2		4 1/3	Brown to Red (cm) Sand 5'			PID = 3.7 PPM Dry loose non-plastic
6						SP	
7				Brown to Orange (cm) Sand 7'			
8	S-3		4 1/3			SW	PID = 2.9 PPM Dry loose non-plastic Native Soil @ 10'
9							
10				White to Brown (mf) Sand 10'		SP	
11							
12				White to Tan (f) Sand 11'6"		SW	

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 2 of 4		Sketch:			
Location: Rockville Centre, NY		Job Number:							
Boring: SB-6		Total Depth: 40'							
Drilling Co. EPI		Sample	Core	Casing					
Driller: Tony Pressimone		Type	4'						
Drilling Method: Direct Push		DIA.	2"						
Date: 1/30/2006		Weight							
Inspector: Dan Simpson		Fall							
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks			
13	S-4		4/35	Brown (mf) Sand	SP	12'5" PID = 2.3 PPM Dry non-plastic loose			
14									
15						Gray (cmf) sand	SP	14'10" 15' moist	
16						Brown (cm) Sand, some (cmf) rounded gravel	SP		
17	S-5		4/2	White to Tan (f) Sand	SW	17' Dry PID = 6.6 PPM loose non-plastic			
18								wet @ 18'	
19									
20									
21	S-6		4/3			PID = 2.7 PPM Saturated moderately compact non-plastic			
22									
23									
24									

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 3 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-6		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Tony Pressimone		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/30/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
25							PID = 5.0 PPM lib. moderately compact non-plastic
26	S-7		4/3				
27							
28				<del>Brown (f) sand 27'6"</del> <del>Brown (f) sand, some (fine) rounded gravel 27'8"</del> White to Orange, (mf) Sand 28' Brown (f) Sand 28'3"		SW SP SP	PID = 2.5 PPM loose wet non-plastic
29							
30	S-8		4/3			SW	
31							
32				Brown (f) Sandy clay 31'3"		SC	moderately compact Plastic
33				Brown (f) Sand with interbedded clay lenses 32'6"			PID = 4.5 PPM wet moderately compact non-plastic
34	S-9		4/4			SC	
35							
36				Gray (f) Sandy clay 35'6"		SW	Plastic

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

**Boring Log**

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 4 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-6		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Tony Pressimone		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 1/30/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
37	S-10		4/4				PID = 6.1 PPM Wet moderately compact Plastic
38				<del>Brown to rust (mf) sand</del> 37'10"		SP	
				<del>Brown (mf) sand</del> 39'			
39						SP	
40							
41				End of boring			
42							
43							
44							
45							
46							
47							
48							

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 1 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-7		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Tony Pressimone		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 3/2/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks	
1				Concrete 10"		PID = 4.5 PPM Dry loose non-plastic Fill	
2	S-1		4 1/2	Brown (M) Sand			
3							
4							
5					SW	PID = 0.0 PPM Dry loose non-plastic Fill	
6	S-2		4 1/3				
7							
8							
9				Brown (cm) Sand some (cm) sub-rounded gravel 7'9"		PID = 2.6 PPM Dry loose non-plastic	
10	S-3		4 1/3		SP	Native soil @ 8'	
11							
12							

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

**Boring Log**

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 2 of 4		Sketch:		
Location: Rockville Centre, NY		Job Number:						
Boring: SB-7		Total Depth: 40'						
Drilling Co. EPI		Sample	Core	Casing				
Driller: Tony Pressimone		Type	4'					
Drilling Method: Direct Push		DIA.	2"					
Date: 3/2/2006		Weight						
Inspector: Dan Simpson		Fall						
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks		
13	S-4		4/3	Brown (m) Sandy Gravel $\nabla$ 12'6"	SP	PID = 0.0 PPM Wet @ 12'6" loose non-plastic		
14				Tan (F) Sand 13'6"		compact non-plastic		
15								
16	S-5		4/1		SW	PID = 2.7 PPM Wet compact non-plastic		
17								
18								
19	S-6		4/2.5		GP	PID = 1.2 PPM Wet compact non-plastic		
20								
21						Brown Sandy Gravel (mf) 21' Tan (F) Sand 21'3"		
22					SW			
23				Brown silty (F) Sand 22'6"				
24					ML	low-plastic		

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

**Boring Log**

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 3 of 4		Sketch:			
Location: Rockville Centre, NY		Job Number:							
Boring: SB-7		Total Depth: 40'							
Drilling Co. EPI		Sample	Core	Casing					
Driller: Tony Pressimone		Type	4'						
Drilling Method: Direct Push		DIA.	2"						
Date: 3/2/2006		Weight							
Inspector: Dan Simpson		Fall							
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks			
25	S-7		4 1/2	Tan to Brown (f) Sand	SW	PID = 1.4 PPM Wet moderately compact low-plastic			
26							non-plastic		
27							Tan to Orange (f) Sand	24'6"	
28	S-8		4 1/3		SW	non-plastic PID = 2.2 PPM moist compact plastic			
29									
30							Brown silty clay	CL	tight clay
31				Gray (f) silty clay	CL				
32				Gray (f) Sand	SW	moist compact non-plastic			
33	S-9		4 1/3	Gray clayey (f) Sand	SC	PID = 5.4 PPM Wet compact plastic			
34							Gray (f) Sand	non-plastic	
35									
36				Tan and Red (f) Sand	SW	compact non-plastic			

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

**Boring Log**

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 4 of 4		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-7		Total Depth: 40'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Tony Pressimone		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 3/2/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
37	S-10		4/3	Brown (mf) Sand, some (cm) sub-rounded gravel		SP	PID = 6.1 PPM Wet fine non-plastic
38							
39							
40							
41				End of boring			
42							
43							
44							
45							
46							
47							
48							



Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 1 of 3		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-8		Total Depth: 36'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Tony Pressimone		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 3/3/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description	Class USCS	Remarks	
1				Concrete 10"		PID = 0.9 PPM Dry loose non-plastic Fill	
2	S-1		4/2.5	Brown (m) Sand			
3							
4					SW		
5	S-2		4/2			PID = 0.6 PPM Dry loose non-plastic Fill	
6							
7							
8				Brown (mf) Sand		PID = 0.9 PPM Dry loose non-plastic Native Soil @ 8'	
9					SP		
10	S-3		4/3.5	Brown (mf) Sand, some rounded (in gravel)	SP		
11				Brown (mf) Sand			
12					SP		

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

**Boring Log**

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 2 of 3		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-8		Total Depth: 36'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Tony Pressimone		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 3/3/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
13	S-4		4/4	Tan to white sandy (Lmf) rounded Gravel <span style="float: right;">▽ 13'</span>		SP	PID = 0.4 PPM Wet @ 13' loose non-plastic
14							
15							
16	S-5		4/3	White to Tan (f) Sand <span style="float: right;">15'6"</span>		SW	compact PID = 0.9 PPM wet compact non-plastic
17							
18							
19	S-6		4/3.5			SW	PID = 2.0 PPM wet compact non-plastic
20							
21							
22				Orange (f) Sand <span style="float: right;">22'</span>	SW		
23				White to Tan (f) Sand <span style="float: right;">22'3"</span>	SW		
24					SW		

Yec, Inc.  
 612 Corporate Way  
 Valley Cottage, NY 10989

Boring Log

Tel # (845) 268-3203  
 Fax # (845) 268-5313

Project: GEM		Client: O'Brien & Gere		Page 3 of 3		Sketch:	
Location: Rockville Centre, NY		Job Number:					
Boring: SB-8		Total Depth: 36'					
Drilling Co. EPI		Sample	Core	Casing			
Driller: Tony Pressimone		Type	4'				
Drilling Method: Direct Push		DIA.	2"				
Date: 3/3/2006		Weight					
Inspector: Dan Simpson		Fall					
Depth (ft)	Sample	Blow Count	Penetration/ Recovery	Geologic Description		Class USCS	Remarks
25							PID = 1.7 PPM wet loose non-plastic
26	S-7		4/2			SW	
27				27'6"			
28				Brown Sandy silt			PID = 0.7 PPM moist compact low-plastic
29						ML	
30	S-8		4/4				
31				Gray Sandy silt			
				30'6"			
				31'		ML	
				Brown to Orange (f) sand			
32				32'		SW	
				Gray (f) sand		SW	PID = 0.0 PPM wet moderately compact low-plastic
33				Gray Sandy silt			
34	S-9		4/4			ML	
35							
				35'6"			
				35'9"		SW	Non-plastic
36				Gray (f) sand			
				Brown (LMF) sand		SP	

End of boring

# WELL PURGING LOG

**YEC Inc**

PROJECT TITLE: GEM Cleaner WELL NO.: MW - GEMMW-1A

PROJECT NO.: \_\_\_\_\_

STAFF: Dan Simpson, Chris Burke

DATE(S): 1/19/06 10:30

			WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	<u>59.00</u>	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	<u>17.10</u>	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	<u>41.90</u>	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	<u>0.17</u>	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	<u>7.12</u>	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(>=3 x #5)	=	<u>21.37</u>	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	<u>21.5</u>	8"	2.60

OR  
V=0.0408 x (CASING DIAMETER)<sup>2</sup>

PARAMETERS	ACCUMULATED VOLUME REMOVED (GALLONS)									
	INITIAL		7		14		21			
pH	6.41		5.89		5.60		5.58			
SPEC. COND. (umhos)	0.02		0.21		0.25		0.25			
TEMPERATURE (°F)	51.80		58.00		58.60		53.90			
APPEARANCE/TURBIDITY	clear		clear		clear		clear			

COMMENTS:

# WELL PURGING LOG

**YEC Inc**

PROJECT TITLE: GEM Cleaner WELL NO.: MW - GEMMW-2  
 PROJECT NO.: \_\_\_\_\_  
 STAFF: Dan Simpson, Chris Burke  
 DATE(S): 1/19/06 9:30

		WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	= <u>20.00</u>	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	= <u>16.75</u>	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	= <u>3.25</u>	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	= <u>0.17</u>	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	= <u>0.55</u>	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(>=3 x #5)	= <u>1.65</u>	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	= <u>1.8</u>	8"	2.60

OR  
 $V=0.0408 \times (\text{CASING DIAMETER})^2$

PARAMETERS	ACCUMULATED VOLUME REMOVED (GALLONS)									
	INITIAL		0.55		1.1		1.65			
pH	7.36		7.15		7.05		6.99			
SPEC. COND. (umhos)	0.50		0.46		0.43		0.44			
TEMPERATURE (°F)	55.00		53.90		58.30		57.30			
APPEARANCE/TURBIDITY	red-brown		red-brown		red-brown		red-brown			

COMMENTS: