Quarterly Monitoring Report
First Quarter 2002
Utility Manufacturing Company
700 Main Street
Westbury, New York

0410a

April 2002

Prepared for:

Utility Manufacturing Company
700 Main Street
Westbury, New York 11590

Prepared by:

CA RICH CONSULTANTS, INC.
17 Dupont Street
Plainview, New York 11803

CA RICH CONSULTANTS, INC.
CERTIFIED GROUND-WATER AND
ENVIRONMENTAL SPECIALISTS

e-mail: eweinstock@carichinc.com
website: www.carichinc.com

April 9, 2002

NYSDEC
50 Wolf Road
Albany, New York 12233-7010

Attention: Jeffrey Dyber, P.E.

Re: **Quarterly Monitoring Report**
First Quarter 2002
Utility Manufacturing Company
700 Main Street
Westbury, New York

Dear Mr. Dyber:

Attached is our Quarterly Monitoring Report for the above-referenced site.

If there are any questions regarding this Report, please do not hesitate to call our office.

Sincerely,

CA RICH CONSULTANTS, INC.

Eric A. Weinstock
Associate

cc: Audie Kranz
Miriam Villani, Esq.
Alali Tamuno, Esq.
Jacqueline Nealson

Attachments

TABLE OF CONTENTS

First Quarter 2002
Quarterly Monitoring Report
Utility Manufacturing Company
700 Main Street
Westbury, New York
Site Number: 130043H

1.0 INTRODUCTION

The following Quarterly Monitoring Report was prepared by CA RICH Consultants, Inc. (CA RICH) on behalf of the Utility Manufacturing Company (Utility). This document was prepared in accordance with an Order on Consent, Index Number W1-0795-97-06. For the purposes of this document, the contaminants of concern are perchloroethene (a.k.a. PCE or tetrachloroethene); trichloroethene (TCE); 1,1,1-trichloroethane (TCA) and their degradation products.

The report addresses the remediation of an area of the Upper Glacial Aquifer located in the southwest portion of the property. The estimated thickness of the Upper Glacial Formation at this location is 100 feet and the depth to the water table is approximately 55 feet.

A series of previous investigations were performed at this site by both the NYSDEC and Utility. A detailed summary of these previous investigations is described in the Remedial Investigation prepared for this site. The following is a partial list of these previous investigations.

Investigation	Date
NYS Superfund Contract, Site Investigation Report New Cassel Industrial Area (Ref. 1)	February 1995
NYS Superfund Contract, Multisite PSA Report New Cassel Industrial Area (Ref. 2)	March 1996
NYS Superfund Contract, Multisite PSA Report New Cassel Industrial Area (Ref. 3)	March 1997
Focused Remedial Investigation, Utility Manufacturing/ Wonder King, Anson Environmental, Ltd. (Ref. 4)	January 1999
On-Site Groundwater Investigation, Utility Manufacturing/ Wonder King, Anson Environmental, Ltd. (Ref. 5)	December 2000
Interim Remedial Measures Report , Utility Manufacturing Company, 700 Main Street, Westbury, New York (Ref. 6)	December 2001

2.0 PHYSICAL SITE CHARACTERISTICS

2.1 Site History

The Utility Manufacturing / Wonder King site consists of a parcel approximately one acre in size. The property contains one building that was constructed in 1967. The ground surface around three sides of the building is improved with pavement. A narrow unpaved area exists on the west side of the building. A Site Plan is included as Figure 1.

Utility is a chemical blending and packaging plant that has operated at this facility since 1976. The company manufactures a variety of cleaning and lubricating products for commercial and industrial customers. The building is constructed with a concrete slab on grade and there are no known floor drains within the structure. Raw materials are stored in above ground tanks within the facility that are registered and inspected periodically. There are also two 4,000-gallon underground storage tanks below the rear of the property that store tetrahydrafuran and acetone.

The services of Safety Kleen are used to provide mineral spirits for use in cleaning silk screens in the plant. Safety Kleen disposes of the used mineral spirits and provides the plant with new product on a contract basis. This is the only chemical waste generated at this Facility.

2.2 Geologic Setting

Utility is situated upon the glacial outwash soil deposits of Long Island at an elevation of approximately 120 feet above mean sea level. The Upper Glacial Formation at this site includes a layer of clay that occurs at a depth of approximately 38 to 40 feet below grade in the rear of the parking lot. The configuration of this "40-foot" clay layer based on References 4 and 5 is included in the IRM Work Plan (Ref. 6). Based upon field measurements from the five wells installed during the Remedial Investigation, the regional direction of shallow groundwater flow is to the southwest. The depth of the water table occurring within the underlying Upper Glacial Formation is approximately 55 feet below land surface.

The Upper Glacial Formation is underlain at a depth of approximately 100 feet by the Magothy Formation, the principal water supply aquifer for most of Nassau County. The Magothy Formation is, in turn, underlain by the Raritan Formation. The Raritan Formation is composed of the upper Raritan Clay, a regional confining layer, followed by the more permeable Lloyd Sand. The Lloyd Sand sits directly upon crystalline bedrock.

2.3 Evaluation of Previous Groundwater Sample Analyses

Based on the Remedial Investigation (RI), site wells MW- 1, 2 and 3 are located along the upgradient property boundary of the facility and monitor the quality of the groundwater entering the property. Well MW-4 is installed to monitor perched groundwater that collects on the surface of the "40-foot" clay layer discussed earlier. Well MW-5 is a water table well that monitors the area with the highest levels of VOCs identified at the site. The location of these wells are illustrated on Figure 1. A summary of the May, 1998 RI results for PCE, TCE and TCA are tabulated below:

Compound (in ppb)	Well Numbers MW-1	MW-2	MW-3	MW-4	MW-5
PCE	12.2	148	142	118	876
TCE	ND	ND	11.4	52.1	69.6
TCA	ND	ND	ND	ND	24.4

3.0 GROUNDWATER MONITORING PROCEDURES

During the course of work at this Site, numerous wells were installed at different points in time. For the purposes of this Report, the groundwater analytical results from the November 2001 IRM will serve as a starting point with regard to plotting the data versus time. As part of the IRM, a series of compliance wells were designated. The network of monitoring wells consists of the following:

• MW-1	• MW-6
• MW-2	• MDCW-7S
• MW-3	• MDCW-7I
• MW-4	• MDCW-7D
• MW-5	

A map illustrating the locations of these wells is presented on Figure 1. On November 13, 2001 CA RICH returned to these compliance wells and collected a final round of pre-start up samples to serve as a base line for the remediation system.

CA RICH performed the first quarter 2002 round of groundwater sampling on March 14, 2002. Three casing volumes of groundwater were purged from each of these wells using a Groundfos™ groundwater sampling pump. Two 40 mil vials were then filled directly from the pump discharge and placed in a cooler with ice packs. The purge water was containerized and sampled as well. All samples were transported under chain-of-custody documentation by an overnight courier to Chemtech Laboratories in New Jersey.

The results of the sampling program are presented on a well-by-well basis on Tables 1 through 9. In addition to the tabular presentation, plots for the concentration of tertachloroethene verses time are also included.

As shown on the data plots, the air sparging system has resulted in a significant improvement in the quality of the groundwater below this site since the operation of the equipment was initiated. The concentration of tertachloroethene in the site wells decreased to less than 50 ug/l in all of the wells during the past quarter.

At the multi-depth cluster well (MDCW-7), located along the southwestern property line, the intermediate depth well (well MDCW-7I) displayed a decreased tetrachloroethene concentration of 260 ug/l to no detection. The tetrachloroethene reading for well MDCW-7D remained non detect (less than 1 ug/l). The shallow well at this location, MDCW-7S increased in tetrachloroethene concentration from no detection to 31 ug/l. Wells MW-2, 4 and 5 were dry due to a regional lowering of the water table. Wells MW-1, 3 and 6 contained tetrachloroethene at less that 50 ug/l.

4.0 SOIL VAPOR MONITORING PROCEDURES

On March 14, 2002, one soil vapor sample was collected from the SVE blower discharge using a SKC™ 0.1 to 1.0 liter per minute field rotameter and two SKC Anasorb CSC sorbent tubes connected in series. The sampling equipment was connected to a sample port located between the blower discharge and the first carbon unit. In addition to the sorbent tube samples, field readings were also measured using an HNU with an 10.2 ev bulb.

Results of the soil vapor sampling program are summarized on Table 10. In addition, plots of the sorbent tube laboratory results and the HNU readings verses days in operation are included. The initial sample collected during the November 15, 2001 pilot test contained 97,000 ug/m^3 of total VOCs – 53,000 ug/m^3 of which were tetrachloroethene. These concentrations decreased steadily during the first quarter of operation, to a VOC total of 5,400 ug/m^3 and 4,100 ug/m^3 of tetrachloroethene.

As described in the O&M Manual, sorbent tube samples are collected on a quarterly basis. The results were added to Table 10 and plotted. This information will be included in future quarterly reports.

5.0 REMEDIATION SYSTEM EQUIPMENT TERMINATION CRITERIA

The following monitoring schedule has been developed in our IRM Work Plan for the operation of the SVE unit and the AS system. Evaluation of historical plots of the data generated during the operation of this equipment will be used to determine when it is appropriate to shut off the remediation equipment.

5.1 SVE Unit Monitoring and Termination Criteria

Once the SVE equipment was installed and was ready to be placed into operation, an initial "base line" soil vapor sample of the untreated vapor stream between the exhaust side of the blower and the inlet side of the carbon canisters was collected on November 15, 2001 using absorbent tubes. The sample tubes were sent to an ELAP-approved laboratory for analysis of halogenated volatile organics including PCE, TCE & TCA and their degradation products using GC methodologies. In addition, an 10.2ev HNU™ was also used to screen the amount of VOCs in the untreated vapor stream. Complete laboratory results are attached.

Total VOC measurements using a Photo Ionization Detector (PID) and sorbent tube samples are currently being collected on a quarterly frequency. As the operation of the SVE unit progresses, the PID and sorbent tube data will be plotted versus time of operation on a graph. Once the levels of total VOCs in the SVE wells decreases to a near constant or asymptotic concentration, operation of the system will be suspended. Graphs of the concentration of total VOCs versus time will be compiled after each round of quarterly monitoring.

The SVE also serves to capture off-gassing contaminants from the AS system. Therefore, regardless of the criteria described above, the SVE system will remain in operation as long as the AS system described in the next section is in operation.

As of the date of this report, these termination criteria have not been achieved.

5.2 AS System Monitoring and Termination Criteria

The on-site multi-depth well cluster (MW-7S, I & D), and well MW-5 will serve as compliance points for the operation of this remediation system. (Well MW-5 is currently dry). Wells MW-1 & 3 will serve as up-gradient monitoring points. Prior to start up of the AS system, "base line" samples were collected from these compliance wells.

The samples from well MW-1 & 3 serve as upgradient monitoring wells to determine the quality of ground water entering the property from upgradient areas. Once placed in full operation, the compliance wells will be sampled on a quarterly basis and analyzed for halogenated volatile organics using EPA method 8010 or 8021. Graphs of the concentration of PCE versus time will

be compiled after each round of quarterly monitoring. The system will be kept in operation until the concentration of PCE, TCE, TCA and their degradation products meets the following criteria.

The AS/SVE system will remain in operation until the groundwater samples from the compliance wells indicate that: 1) they meet the Standards, Criteria and Guidance (SCGs) for PCE, TCE, TCA and their degradation products; 2) the data shows that PCE, TCE, TCA and their degradation products have reached an asymptotic condition and the system is no longer effectively removing the contaminants of concern; or, 3) the concentration of PCE, TCE, TCA and their degradation products in the downgradient compliance wells is equal to or less than the concentrations in the up-gradient monitoring wells.

As of the date of this report, these termination criteria have not been achieved.

6.0 CONCLUSION

The AS/SVE system remained in operation throughout the first quarter of 2002 with no down time. The concentration of tertachloroethene in all of the site wells ranged from a high of 46 ug/l to no detection. As of the date of this report, the termination criteria have not been achieved. The system will remain in continuous operation during the following quarter of operation.

7.0 REFERENCES

1. NYSDEC (February 1995), NYS Superfund Contract, Site Investigation Report, New Cassel Industrial Area.

2. NYSDEC, (March 1996), NYS Superfund Contract, Multisite PSA Report, New Cassel Industrial Area.

3. NYSDEC, (March 1997), NYS Superfund Contract, Multisite PSA Report, New Cassel Industrial Area.

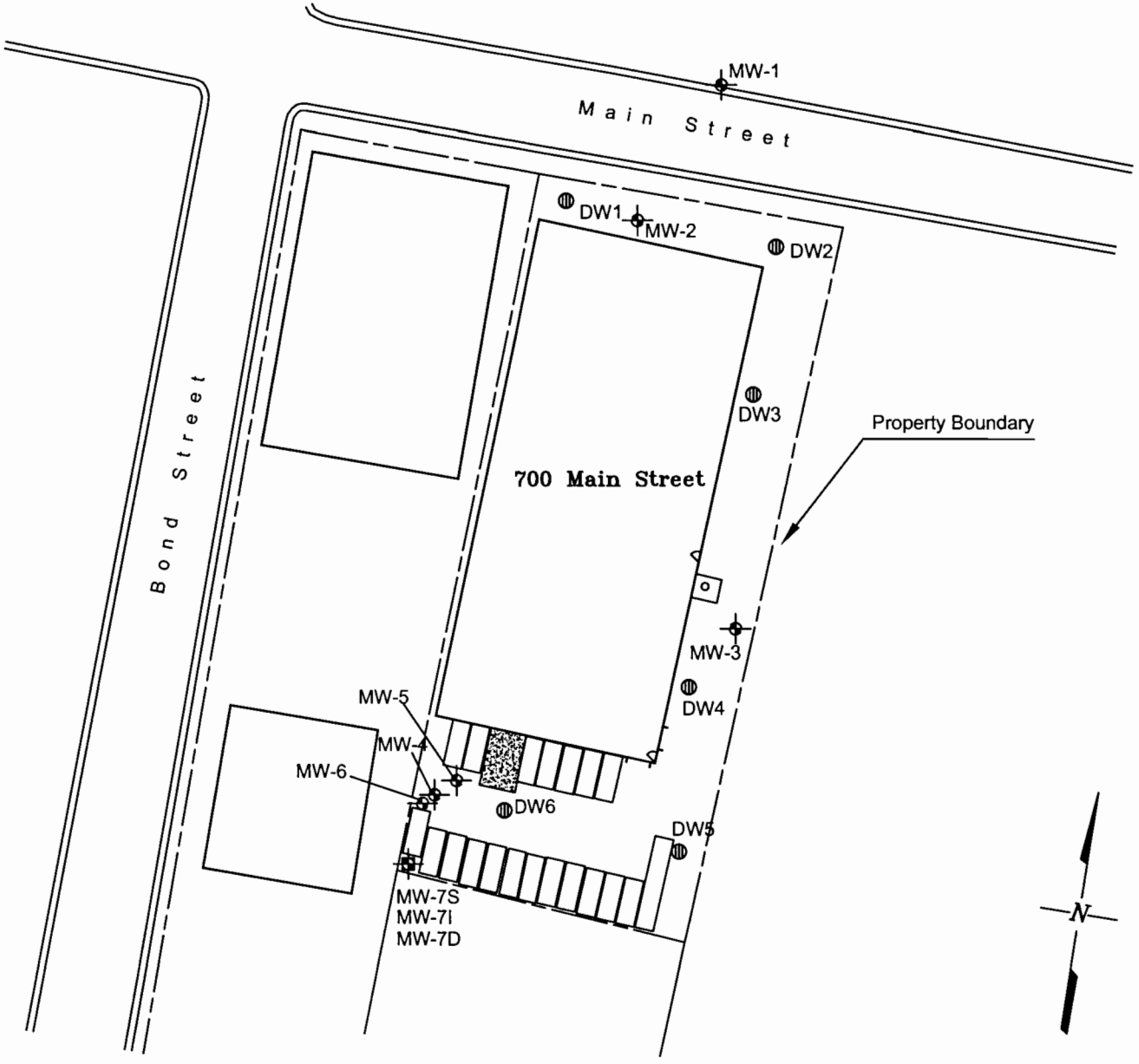
4. Anson Environmental, Ltd., (January 1999), Focused Remedial Investigation, Utility Manufacturing/Wonder King,

5. Anson Environmental, Ltd , (December 2000), On-Site Groundwater Investigation, Utility Manufacturing/Wonder King.

6. CA RICH, December 2001, Interim Remedial Measures Report, Utility Manufacturing Company, 700 Main Street, Westbury, New York

NT Server/Users/Eric/Docs/Utility/qtr mom rpts/1qtr 2002 Report

FIGURES



Legend

- Drywell
- Monitoring Well
- Storage Trailer
- Concrete Pad For USTs
- Multi-Depth Cluster Well

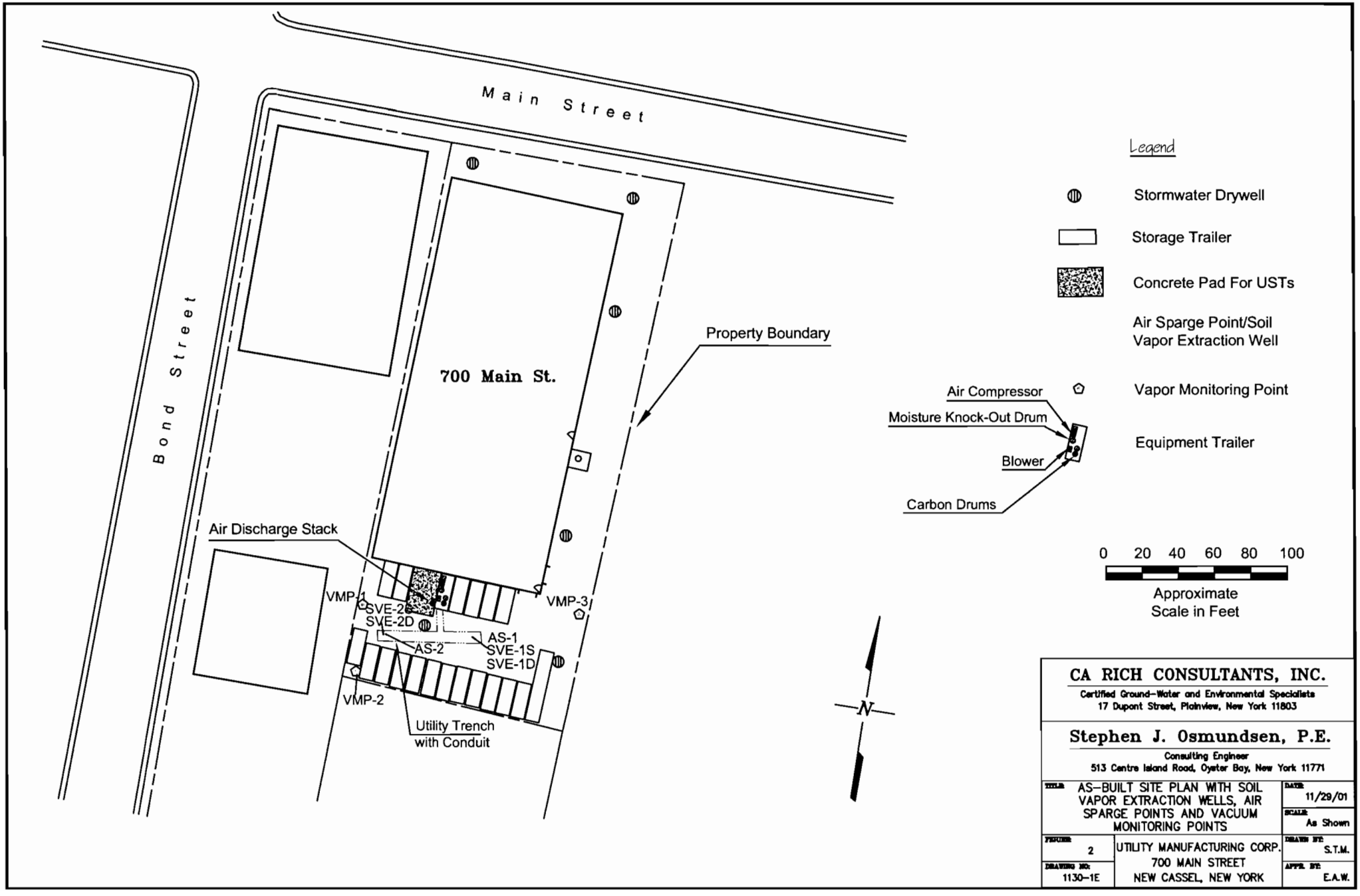
0 20 40 60 80 100

Approximate
Scale in Feet

CA RICH CONSULTANTS, INC.
Certified Ground-Water and Environmental Specialists
17 Dupont Street, Plainview, New York 11803

Stephen J. Osmundsen, P.E.
Consulting Engineer
513 Centre Island Road, Oyster Bay, New York 11771

TITLE: SITE PLAN WITH EXISTING MONITORING WELL LOCATIONS		DATE: 11/29/01
		SCALE: As Shown
FIGURE: 1	UTILITY MANUFACTURING CORP. 700 MAIN STREET NEW CASSEL, NEW YORK	DRAWN BY: S.T.M.
DRAWING NO: 1130-1A		APPR. BY: E.A.W.



CA RICH CONSULTANTS, INC.
Certified Ground-Water and Environmental Specialists
17 Dupont Street, Plainview, New York 11803

Stephen J. Osmundsen, P.E.
Consulting Engineer
513 Centre Island Road, Oyster Bay, New York 11771

TITLE: AS-BUILT SITE PLAN WITH SOIL VAPOR EXTRACTION WELLS, AIR SPARGE POINTS AND VACUUM MONITORING POINTS		DATE: 11/29/01
		SCALE: As Shown
FIGURE: 2	UTILITY MANUFACTURING CORP. 700 MAIN STREET NEW CASSEL, NEW YORK	DRAWN BY: S.T.M.
DRAWING NO: 1130-1E		APPR. BY: E.A.W.

TABLES

Table 1
Summary of Analytical Detections in Well MW-1
Utility Manufacturing, Westbury, NY

Well ID	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	MW-1	NYSDEC
Comments/Calendar Quarter	Baseline Data	1 Qtr 2002	2 Qtr 2002	3 Qtr 2002	4 Qtr 2002	1 Qtr 2003	2 Qtr 2003	3 Qtr 2003	4 Qtr 2003	TOGS*
Sample depth in feet	55 to 60	55 to 60								values
Date Sampled	10/29/2001	03/14/2002								
Days since system start up	-17	119								
Days since initial sample	0	136								
Volatile Organics (EPA METHOD 8021)										
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Tetrachloroethene	5.4	2.8								5.00
Trichloroethene	ND	ND								5.00
cis-1,2-Dichloroethene	ND	ND								5.00
trans-1,2-Dichloroethene	ND	ND								5.00
Vinyl Choride	ND	ND								2.00
1,1,1 Trichloroethane	ND	ND								5.00
1,1Dichloroethane	ND	ND								5.00
Chloroethane	ND	ND								5.00

Notes:
ND: Indicates compound analyzed but not detected at laboratory detection level.
ug/L: micrograms per liter or parts per billion.
Date of system start up: 11/15/2001

*NYSDEC Technical and Operational Guidance Series (1.1.1)
Ambient Water Quality Standards and Guidance Values; June 1998

Prepared by CA Rich Consultants Inc.

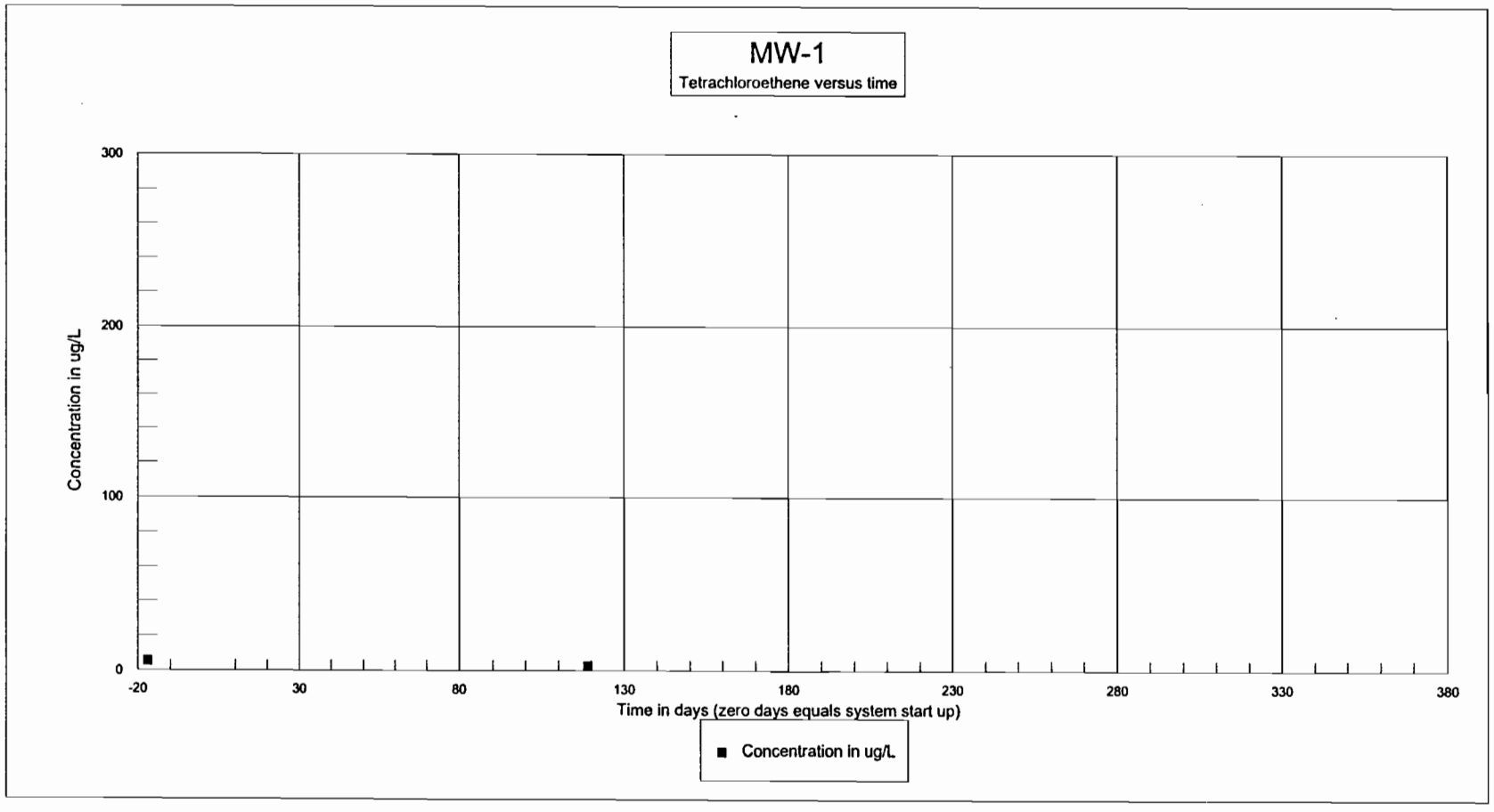

MW-1
Tetrachloroethene versus time
300
200
100
0
Concentration in ug/L
-20
30
80
130
180
230
280
330
380
Time in days (zero days equals system start up)
Concentration in ug/L

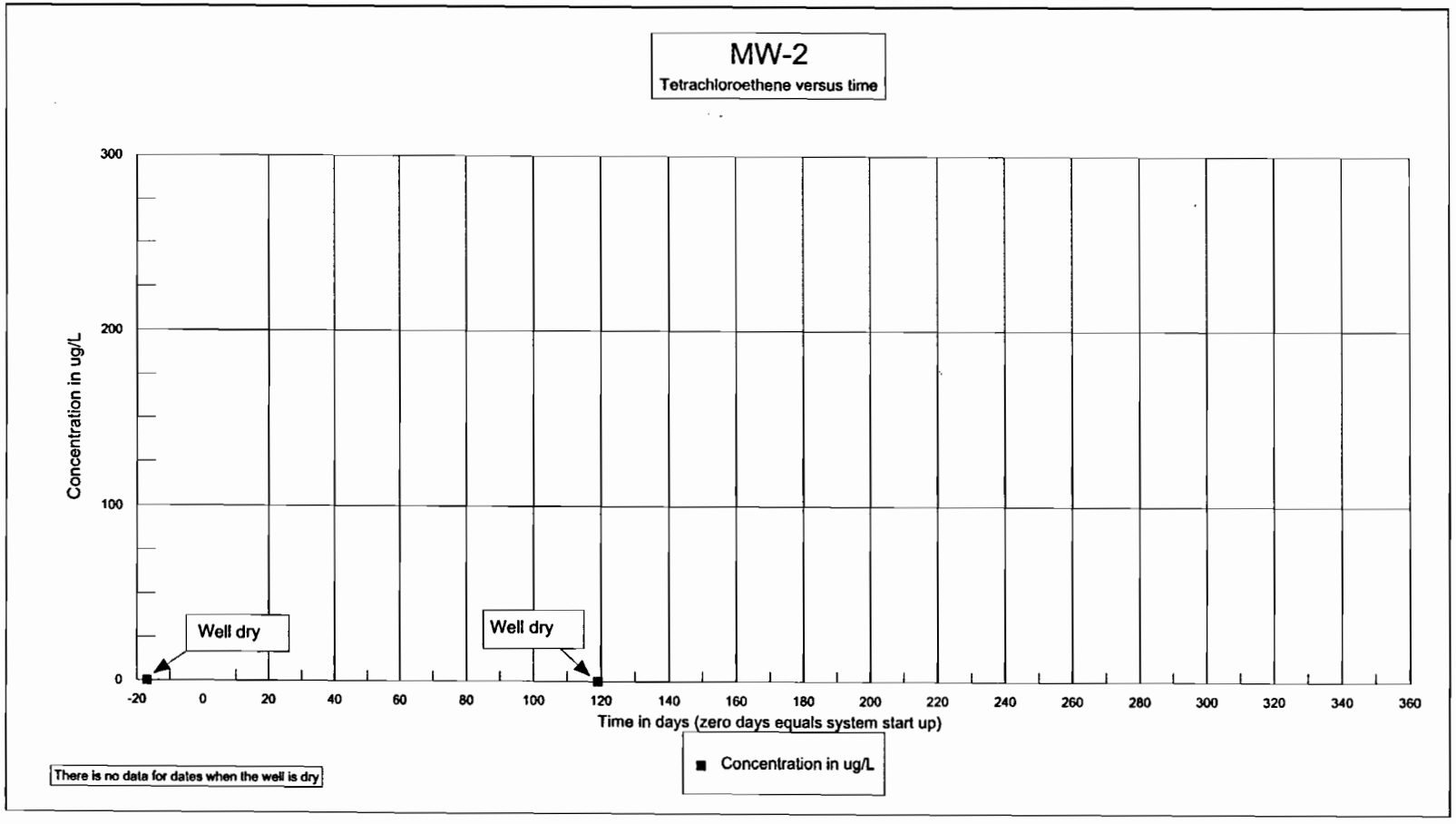
Table 2
Summary of Analytical Detections in Well MW-2
for Volatile Organics Compounds in Groundwater
Utility Manufacturing, Westbury, NY

Well ID Comments/Calendar Quarter Sample depth in feet Date Sampled Days since system start up Days since initial sample	MW-2 Baseline Data dry 10/29/2001 -17 0	MW-2 1 Qtr 2002 dry 03/14/2002 119 136	MW-2 2 Qtr 2002	MW-2 3 Qtr 2002	MW-2 4 Qtr 2002	MW-2 1 Qtr 2003	MW-2 2 Qtr 2003	MW-2 3 Qtr 2003	MW-2 4 Qtr 2003	NYSDEC TOGS* values
Volatile Organics (EPA METHOD 8021) Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Tetrachloroethene	dry	dry								5.00
Trichloroethene	dry	dry								5.00
cis-1,2-Dichloroethene	dry	dry								5.00
trans-1,2-Dichloroethene	dry	dry								5.00
Vinyl Choride	dry	dry								2.00
1,1,1 Trichloroethane	dry	dry								5.00
1,1Dichloroethane	dry	dry								5.00
Chloroethane	dry	dry								5.00

Notes:
ND: Indicates compound analyzed but not detected at laboratory detection level.
ug/L: micrograms per liter or parts per billion.
Date of system start up: 11/15/2001

*NYSDEC Technical and Operational Guidance Series (1.1.1)
Ambient Water Quality Standards and Guidance Values; June 1998

Prepared by CA Rich Consultants Inc.



CA RICH Consultants, Inc.

Users\Eric\SS\Utility\O&M-D

Table 3
Summary of Analytical Detections in Well MW-3
for Volatile Organics Compounds in Groundwater
Utility Manufacturing, Westbury, NY

Well ID Comments/Calendar Quarter Sample depth in feet Date Sampled Days since system start up Days since initial sample	MW-3 Baseline Data 55 to 70 10/29/2001 -17 0	MW-3 1 Qtr 2002 55 to 70 03/14/2002 119 136	MW-3 2 Qtr 2002	MW-3 3 Qtr 2002	MW-3 4 Qtr 2002	MW-3 1 Qtr 2003	MW-3 2 Qtr 2003	MW-3 3 Qtr 2003	MW-3 4 Qtr 2003	NYSDEC TOGS* values
Volatile Organics (EPA METHOD 8021) Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Tetrachloroethene	49	14								5.00
Trichloroethene	2.9	ND								5.00
cis-1,2-Dichloroethene	ND	ND								5.00
trans-1,2-Dichloroethene	ND	ND								5.00
Vinyl Choride	ND	ND								2.00
1,1,1 Trichloroethane	3.1	ND								5.00
1,1Dichloroethane	ND	ND								5.00
Chloroethane	ND	ND								5.00

Notes:
ND: Indicates compound analyzed but not detected at laboratory detection level.
ug/L: micrograms per liter or parts per billion.
Date of system start up: 11/15/2001

*NYSDEC Technical and Operational Guidance Series (1.1.1)
Ambient Water Quality Standards and Guidance Values; June 1998

Prepared by CA Rich Consultants Inc.

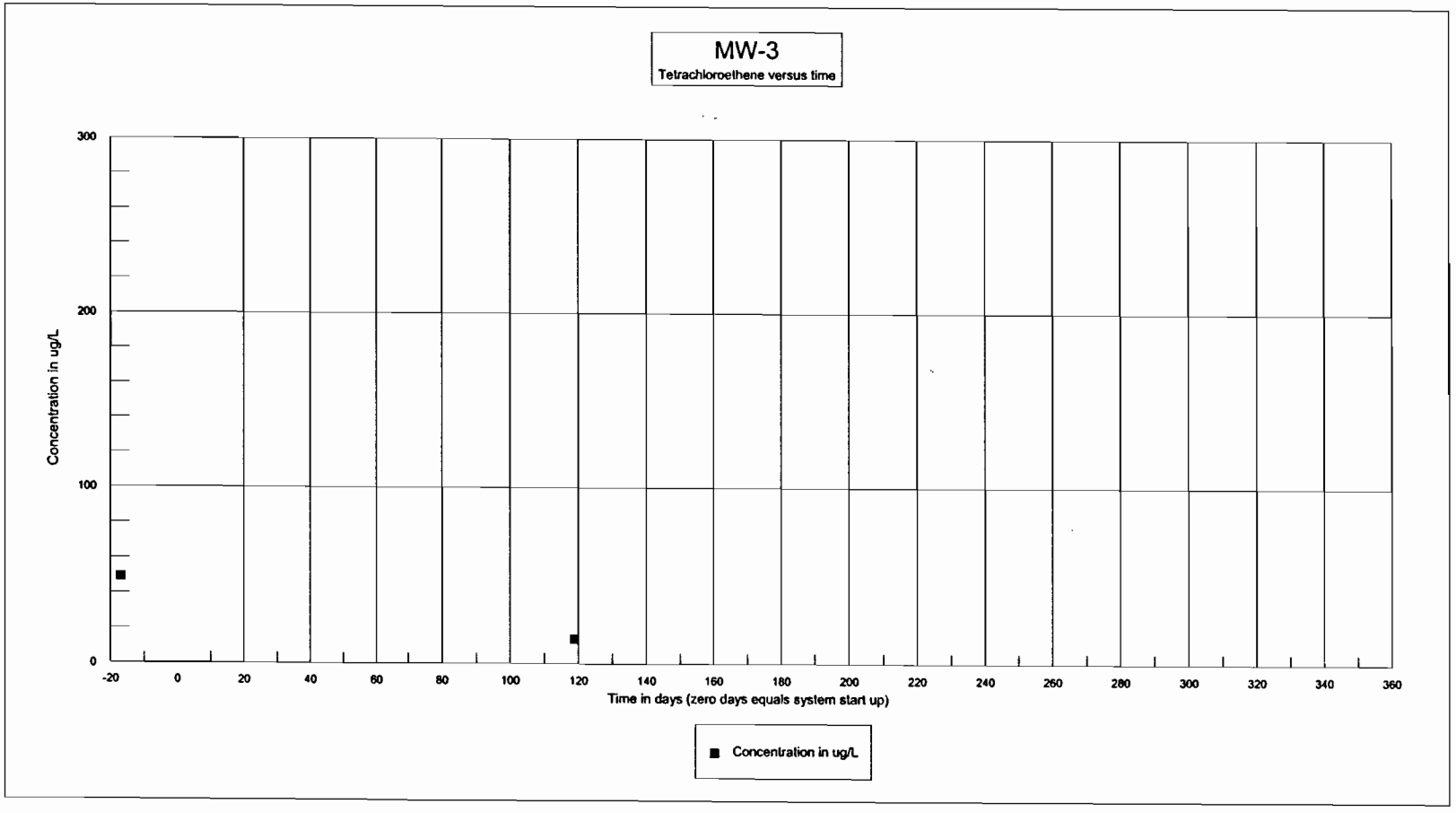

MW-3
Tetrachloroethene versus time
Concentration in ug/L
300
200
100
0
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Concentration in ug/L

Table 4
Summary of Analytical Detections in Well MW-4
for Volatile Organics Compounds in Groundwater
Utility Manufacturing, Westbury, NY

Well ID Comments/Calendar Quarter Sample depth in feet Date Sampled Days since system start up Days since initial sample	MW-4 Baseline Data dry 10/29/2001 -17 0	MW-4 1 Qtr 2002 dry 03/14/2002 119 136	MW-4 2 Qtr 2002	MW-4 3 Qtr 2002	MW-4 4 Qtr 2002	MW-4 1 Qtr 2003	MW-4 2 Qtr 2003	MW-4 3 Qtr 2003	MW-4 4 Qtr 2003	NYSDEC TOGS* values
Volatile Organics (EPA METHOD 8021) Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Tetrachloroethene	dry	dry								5.00
Trichloroethene	dry	dry								5.00
cis-1,2-Dichloroethene	dry	dry								5.00
trans-1,2-Dichloroethene	dry	dry								5.00
Vinyl Choride	dry	dry								2.00
1,1,1 Trichloroethane	dry	dry								5.00
1,1Dichloroethane	dry	dry								5.00
Chloroethane	dry	dry								5.00

Notes:
ND: Indicates compound analyzed but not detected at laboratory detection level.
ug/L: micrograms per liter or parts per billion.
Date of system start up: 11/15/2001

*NYSDEC Technical and Operational Guidance Series (1.1.1)
Ambient Water Quality Standards and Guidance Values; June 1998

Prepared by CA Rich Consultants Inc.

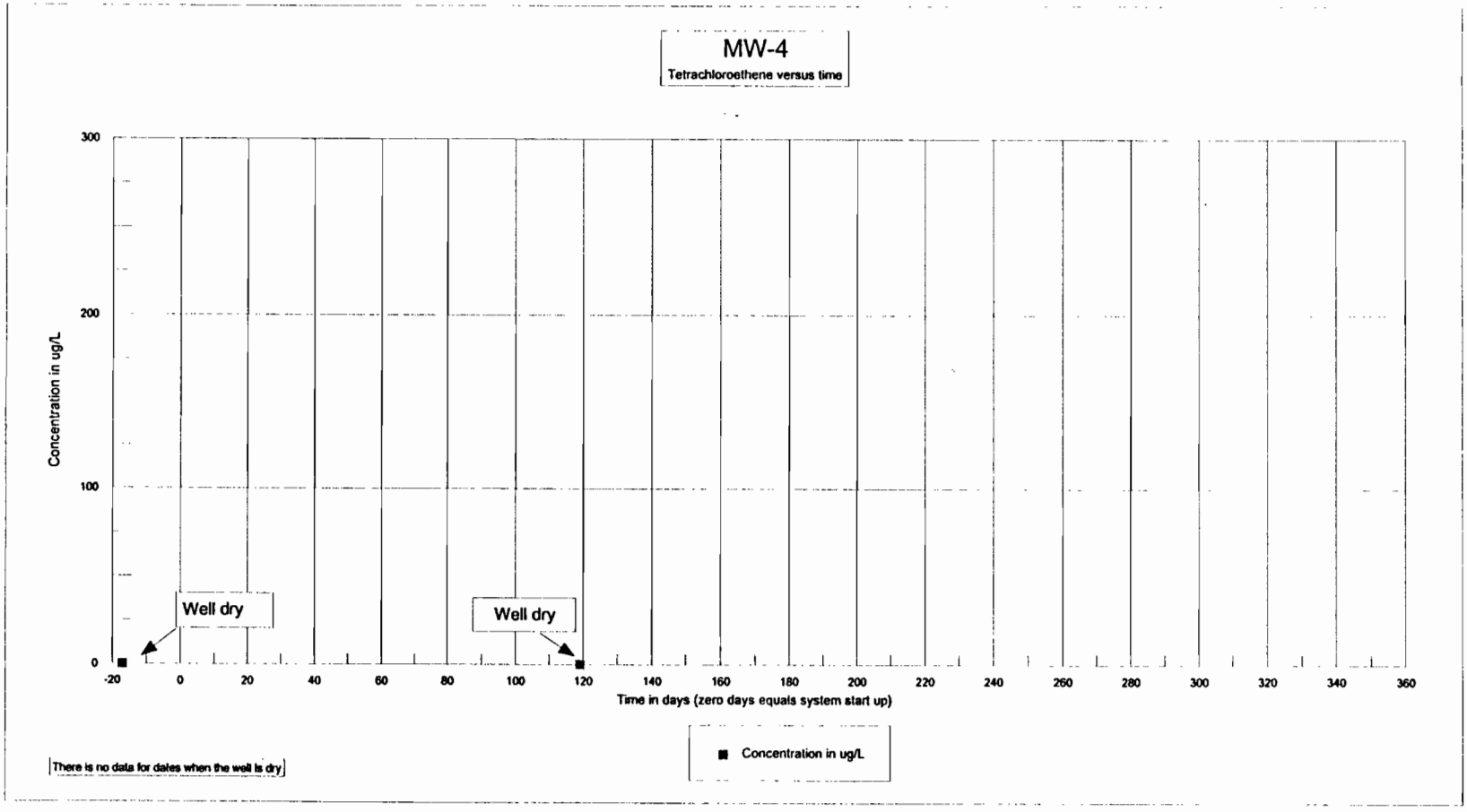

MW-4
Tetrachloroethene versus time
300
200
100
0
Concentration in ug/L
Well dry
Well dry
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Concentration in ug/L
There is no data for dates when the well is dry

Table 5
Summary of Analytical Detections in Well MW-5
for Volatile Organics Compounds in Groundwater
Utility Manufacturing, Westbury, NY

Well ID	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	MW-5	NYSDEC
Comments/Calendar Quarter	Baseline Data	1 Qtr 2002	2 Qtr 2002	3 Qtr 2002	4 Qtr 2002	1 Qtr 2003	2 Qtr 2003	3 Qtr 2003	4 Qtr 2003	TOGS*
Sample depth in feet	55 to 61.5	dry								values
Date Sampled	10/29/2001	03/14/2002								
Days since system start up	-17	119								
Days since initial sample	0	136								
Volatile Organics (EPA METHOD 8021) Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Tetrachloroethene	220	dry								5.00
Trichloroethene	24	dry								5.00
cis-1,2-Dichloroethene	25	dry								5.00
trans-1,2-Dichloroethene	ND	dry								5.00
Vinyl Choride	ND	dry								2.00
1,1,1 Trichloroethane	10	dry								5.00
1,1Dichloroethane	ND	dry								5.00
Chloroethane	ND	dry								5.00

Notes:
ND: Indicates compound analyzed but not detected at laboratory detection level.
ug/L: micrograms per liter or parts per billion.
Date of system start up: 11/15/2001

*NYSDEC Technical and Operational Guidance Series (1.1.1)
Ambient Water Quality Standards and Guidance Values; June 1998

Prepared by CA Rich Consultants Inc.

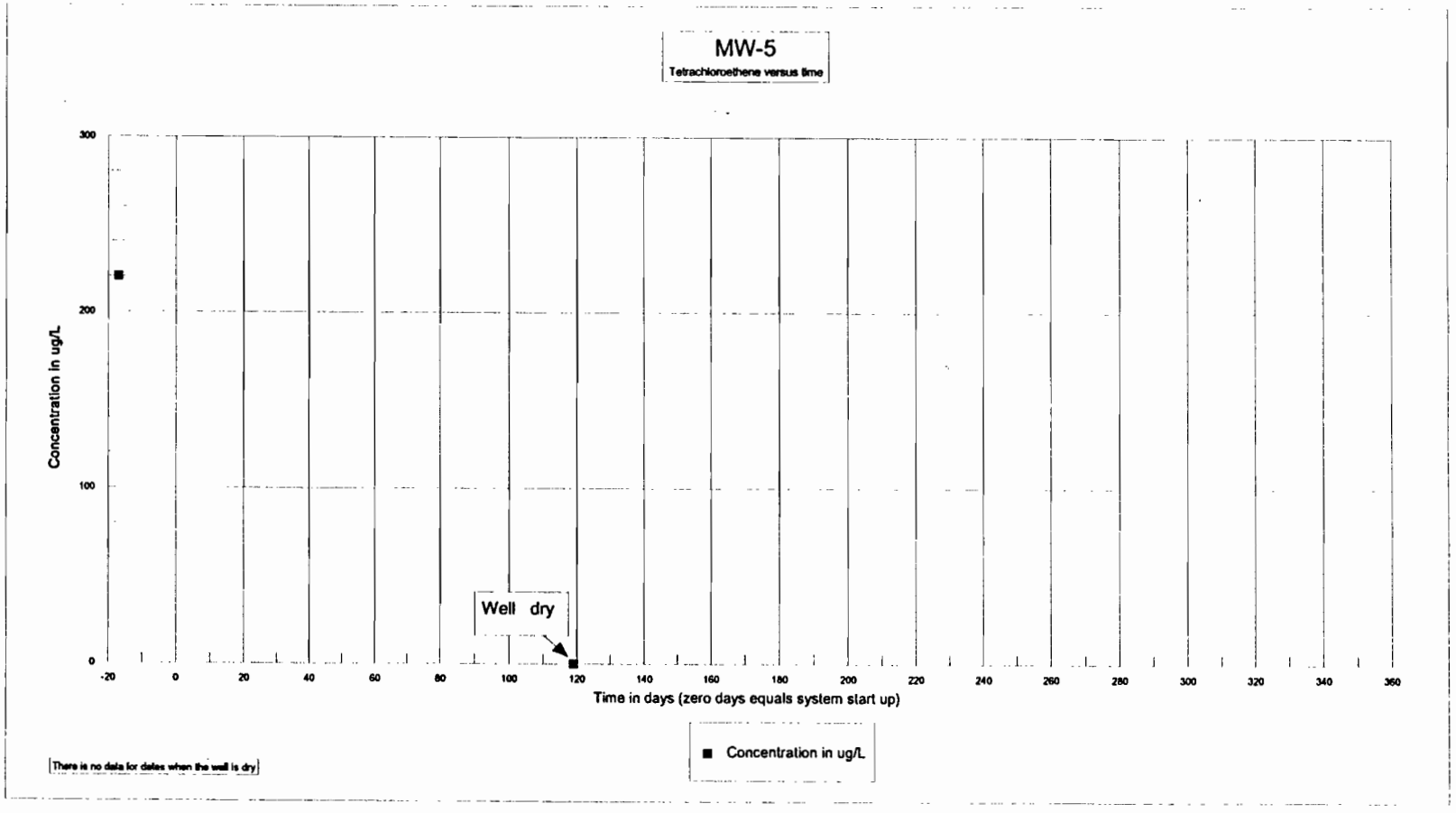

MW-5
Tetrachloroethene versus time
Concentration in ug/L
300
200
100
0
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Well dry
Time in days (zero days equals system start up)
Concentration in ug/L
There is no data for dates when the well is dry

Table 6
Summary of Analytical Detections in Well MW-6
for Volatile Organics Compounds in Groundwater
Utility Manufacturing, Westbury, NY

Well ID	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	MW-6	NYSDEC
Comments/Calendar Quarter	Baseline Data	1 Qtr 2002	2 Qtr 2002	3 Qtr 2002	4 Qtr 2002	1 Qtr 2003	2 Qtr 2003	3 Qtr 2003	4 Qtr 2003	TOGS* values
Sample depth in feet	55 to 95	55 to 95								
Date Sampled	10/29/2001	03/14/2002								
Days since system start up	-17	119								
Days since initial sample	0	136								
Volatile Organics (EPA METHOD 8021) Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Tetrachloroethene	40	46								5.00
Trichloroethene	4	3.7								5.00
cis-1,2-Dichloroethene	8.9	13								5.00
trans-1,2-Dichloroethene	ND	ND								5.00
Vinyl Choride	ND	ND								2.00
1,1,1 Trichloroethane	1.5	2.4								5.00
1,1Dichloroethane	ND	ND								5.00
Chloroethane	ND	ND								5.00

Notes:
ND: Indicates compound analyzed but not detected at laboratory detection level.
ug/L: micrograms per liter or parts per billion.
Date of system start up: 11/15/2001

*NYSDEC Technical and Operational Guidance Series (1.1.1)
Ambient Water Quality Standards and Guidance Values; June 1998

Prepared by CA Rich Consultants Inc.

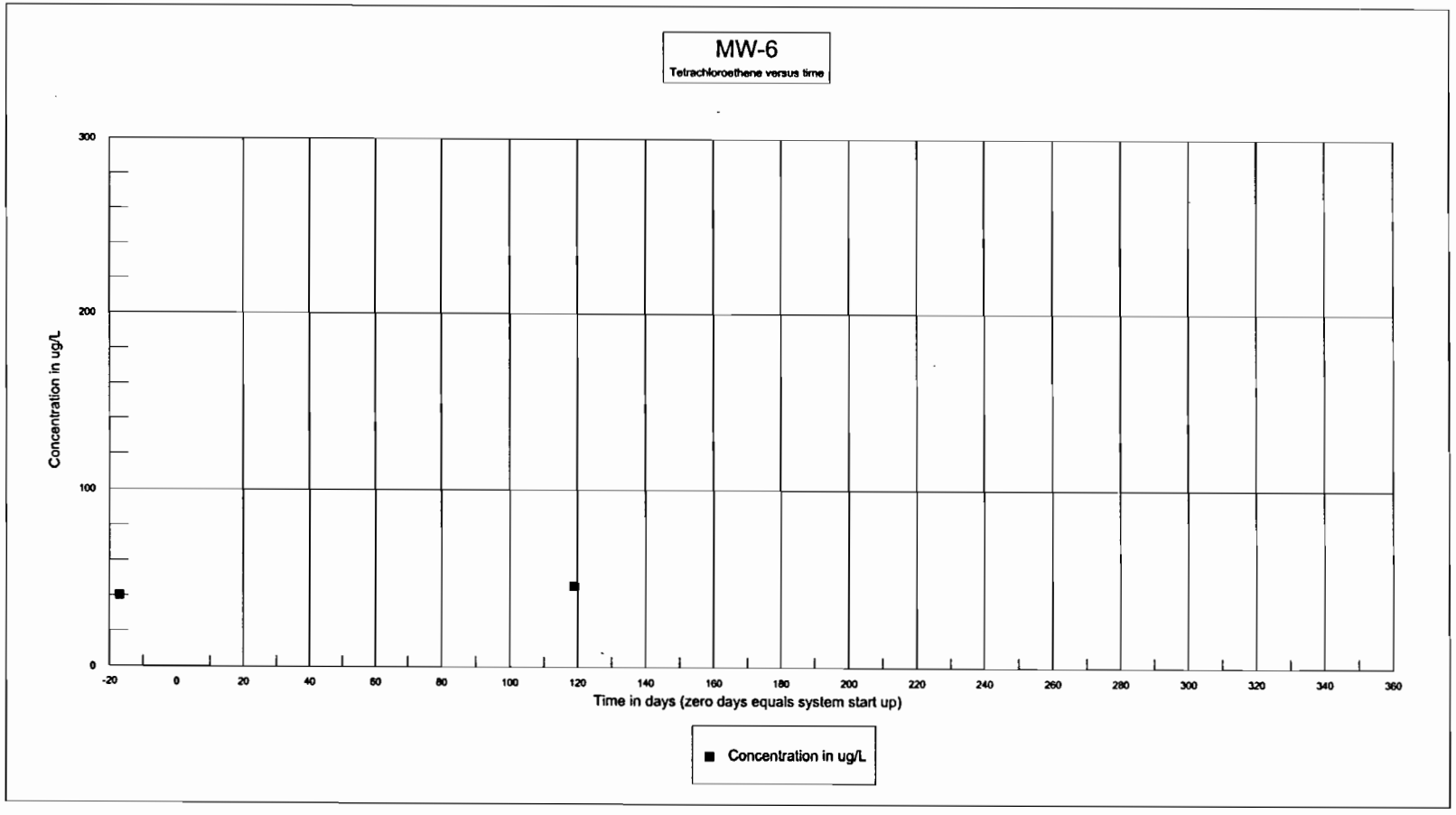

MW-6
Tetrachloroethene versus time
Concentration in ug/L
300
200
100
0
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Concentration in ug/L

Table 7
Summary of Analytical Detections in Well MW-7S
for Volatile Organics Compounds in Groundwater
Utility Manufacturing, Westbury, NY

Well ID Comments/Calendar Quarter Sample depth in feet Date Sampled Days since system start up Days since initial sample	MW-7S Baseline Data 55 to70 10/29/2001 -17 0	MW-7S 1 Qtr 2002 55 to70 03/14/2002 119 136	MW-7S 2 Qtr 2002	MW-7S 3 Qtr 2002	MW-7S 4 Qtr 2002	MW-7S 1 Qtr 2003	MW-7S 2 Qtr 2003	MW-7S 3 Qtr 2003	MW-7S 4 Qtr 2003	NYSDEC TOGS* values
Volatile Organics (EPA METHOD 8021) Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Tetrachloroethene	ND	31								5.00
Trichloroethene	ND	2.7								5.00
cis-1,2-Dichloroethene	ND	7.1								5.00
trans-1,2-Dichloroethene	ND	ND								5.00
Vinyl Choride	ND	ND								2.00
1,1,1 Trichloroethane	ND	1.5								5.00
1,1Dichloroethane	ND	ND								5.00
Chloroethane	ND	ND								5.00

Notes:
ND: Indicates compound analyzed but not detected at laboratory detection level.
ug/L: micrograms per liter or parts per billion.
Date of system start up: 11/15/2001

*NYSDEC Technical and Operational Guidance Series (1.1.1)
Ambient Water Quality Standards and Guidance Values; June 1998

Prepared by CA Rich Consultants Inc.

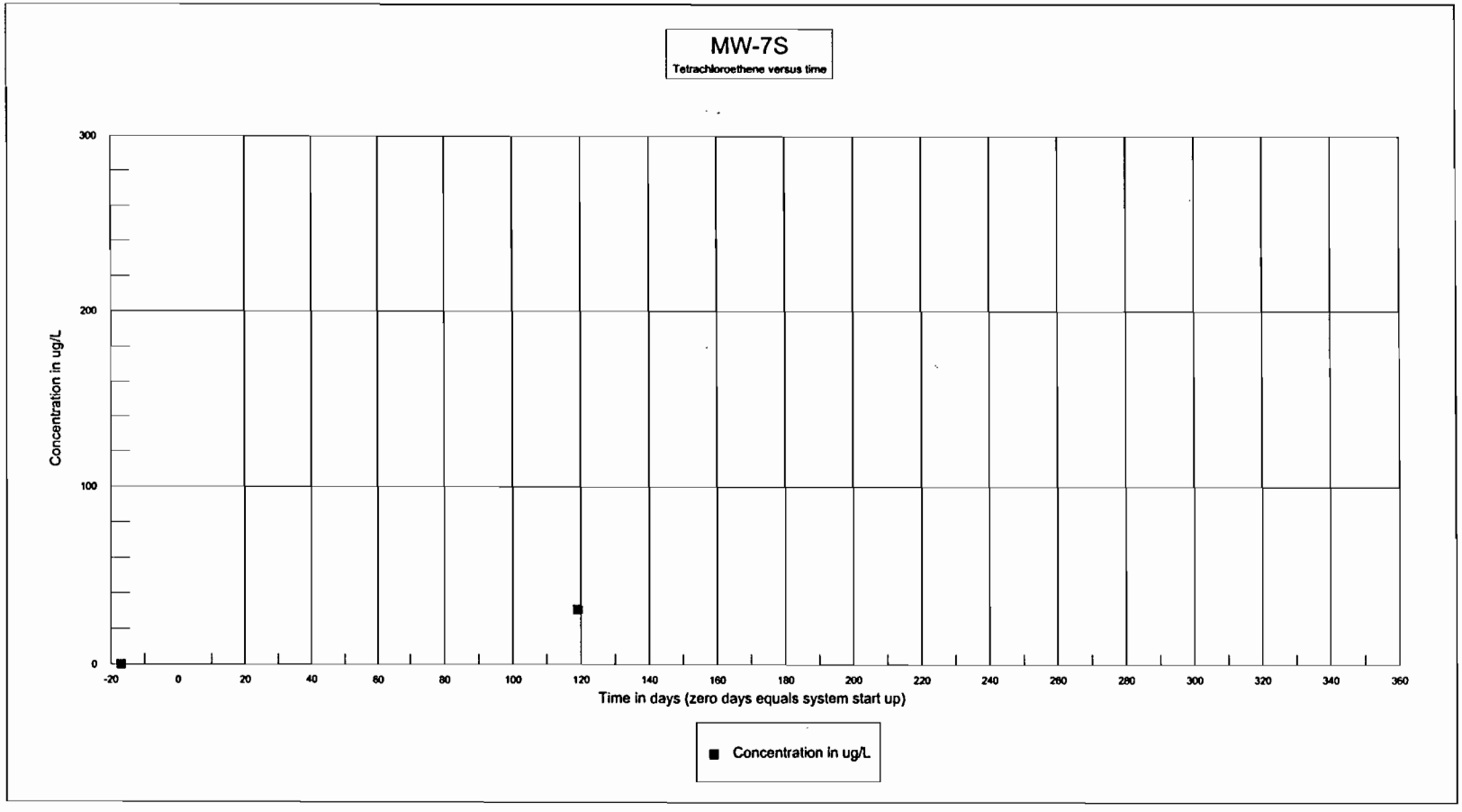

MW-7S
Tetrachloroethene versus time
Concentration in ug/L
300
200
100
0
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Concentration in ug/L

Table 8
Summary of Analytical Detections in Well MW-7I
for Volatile Organics Compounds in Groundwater
Utility Manufacturing, Westbury, NY

Well ID	MW--7I	MW--7I	MW--7I	MW--7I	MW--7I	MW--7I	MW--7I	MW--7I	MW--7I	NYSDEC
Comments/Calendar Quarter	Baseline Data	1 Qtr 2002	2 Qtr 2002	3 Qtr 2002	4 Qtr 2002	1 Qtr 2003	2 Qtr 2003	3 Qtr 2003	4 Qtr 2003	TOGS* values
Sample depth in feet	78 to 88	78 to 88								
Date Sampled	10/29/2001	03/14/2002								
Days since system start up	-17	119								
Days since initial sample	0	136								
Volatile Organics (EPA METHOD 8021) Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Tetrachloroethene	260	ND								5.00
Trichloroethene	30	ND								5.00
cis-1,2-Dichloroethene	32	ND								5.00
trans-1,2-Dichloroethene	ND	ND								5.00
Vinyl Choride	ND	ND								2.00
1,1,1 Trichloroethane	19	ND								5.00
1,1Dichloroethane	ND	ND								5.00
Chloroethane	ND	ND								5.00

Notes:
ND: Indicates compound analyzed but not detected at laboratory detection level.
ug/L: micrograms per liter or parts per billion.
Date of system start up: 11/15/2001

*NYSDEC Technical and Operational Guidance Series (1.1.1)
Ambient Water Quality Standards and Guidance Values; June 1998

Prepared by CA Rich Consultants Inc.

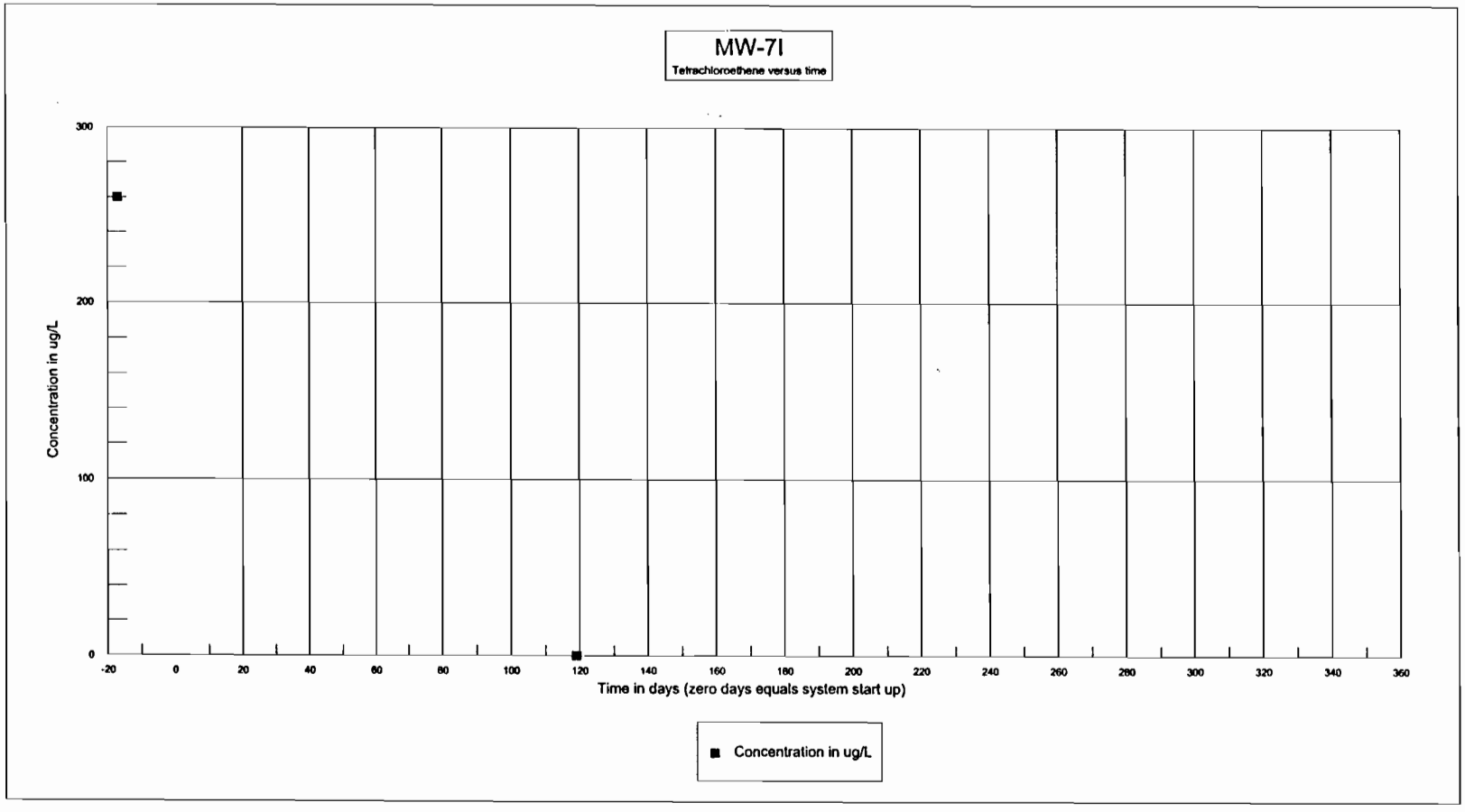

MW-7I
Tetrachloroethene versus time
300
200
100
0
Concentration in ug/L
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Concentration in ug/L

Table 9
Summary of Analytical Detections in Well MW-7D
for Volatile Organics Compounds in Groundwater
Utility Manufacturing, Westbury, NY

Well ID	MW-7D	MW-7D	MW-7D	MW-7D	MW-7D	MW-7D	MW-7D	MW-7D	MW-7D	NYSDEC
Comments/Calendar Quarter	Baseline Data	1 Qtr 2002	2 Qtr 2002	3 Qtr 2002	4 Qtr 2002	1 Qtr 2003	2 Qtr 2003	3 Qtr 2003	4 Qtr 2003	TOGS*
Depth in feet	95 to 105	95 to 105								values
Date Sampled	10/29/2001	03/14/2002								
Days since system start up	-17	119								
Days since initial sample	0	136								
Volatile Organics (EPA METHOD 8021)										
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Tetrachloroethene	ND	ND								5.00
Trichloroethene	ND	ND								5.00
cis-1,2-Dichloroethene	ND	ND								5.00
trans-1,2-Dichloroethene	ND	ND								5.00
Vinyl Choride	ND	ND								2.00
1,1,1 Trichloroethane	2.6	1.2								5.00
1,1Dichloroethane	ND	ND								5.00
Chloroethane	ND	ND								5.00

Notes:
ND: Indicates compound analyzed but not detected at laboratory detection level.
ug/L: micrograms per liter or parts per billion.
Date of system start up: 11/15/2001

*NYSDEC Technical and Operational Guidance Series (1.1.1)
Ambient Water Quality Standards and Guidance Values; June 1998

Prepared by CA Rich Consultants Inc.

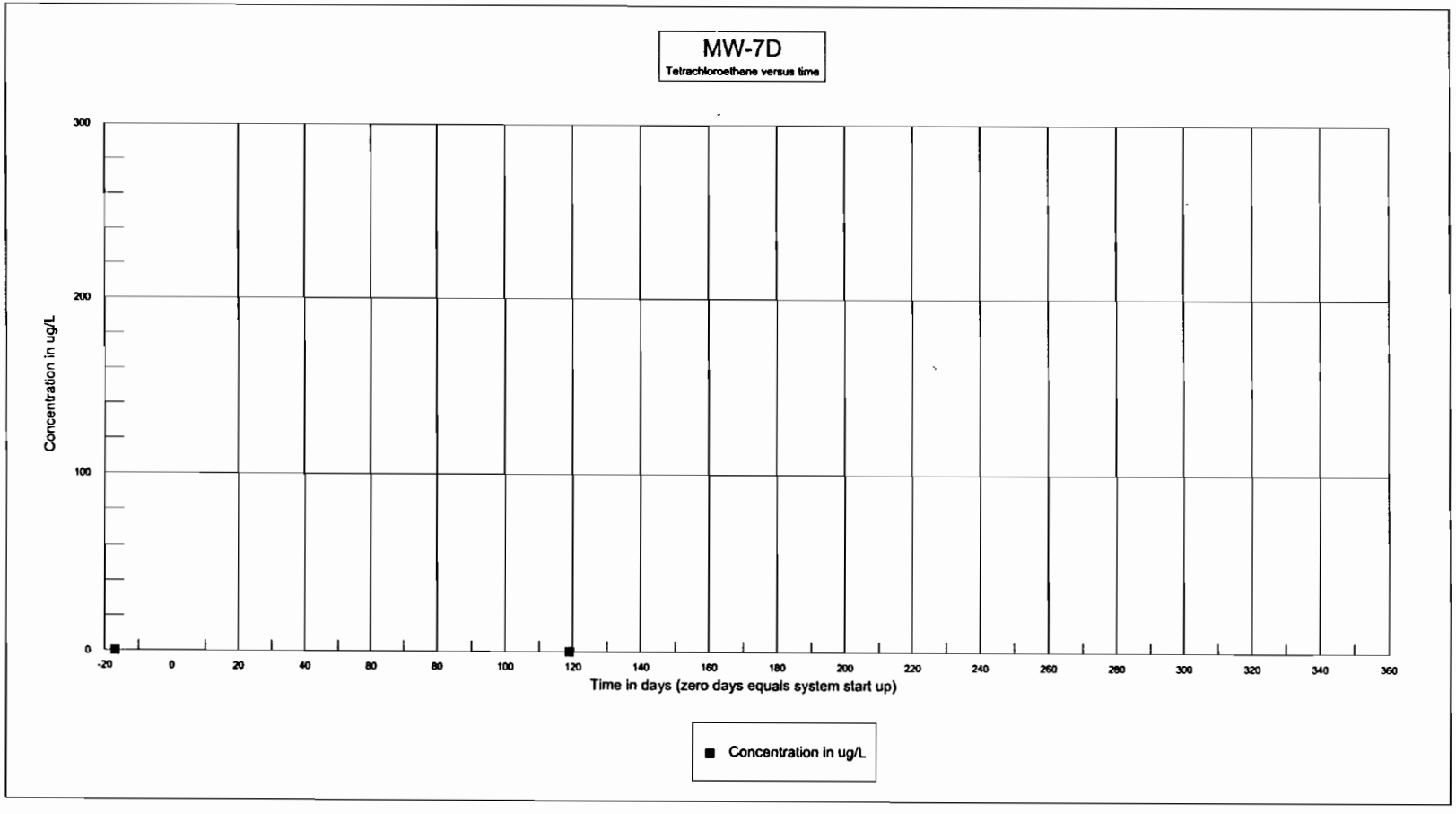
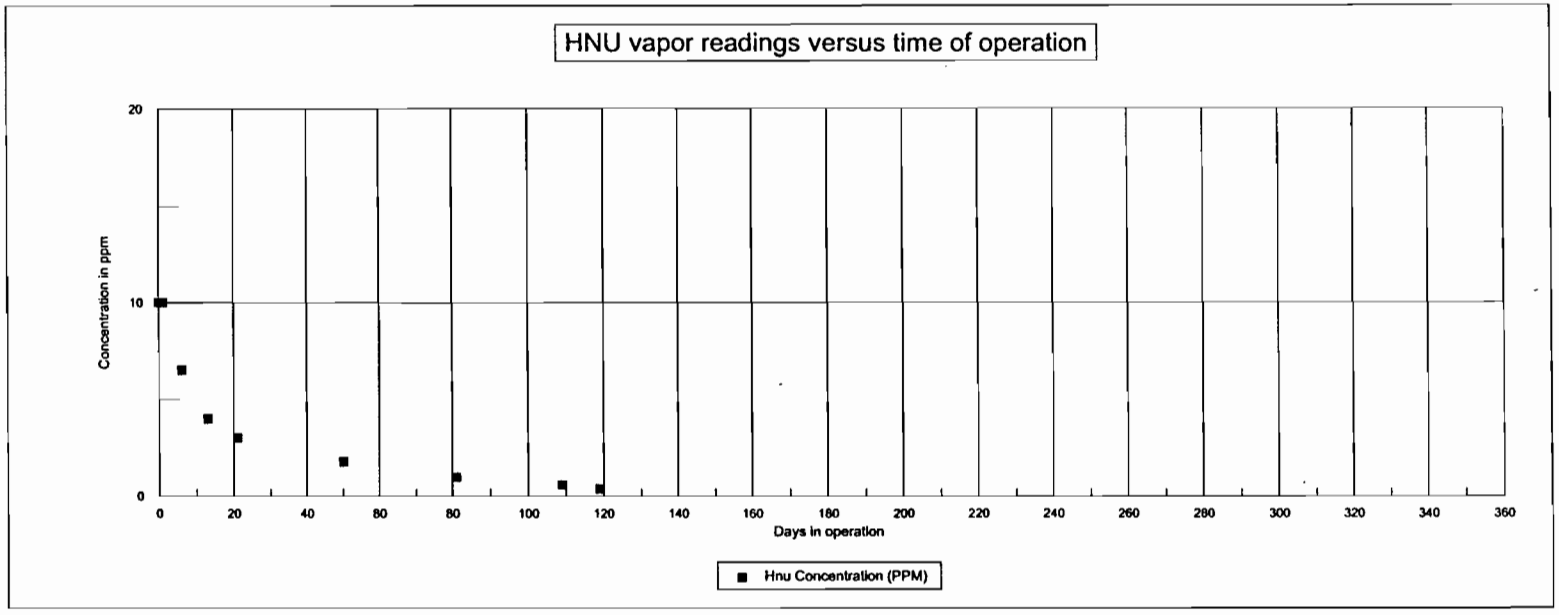
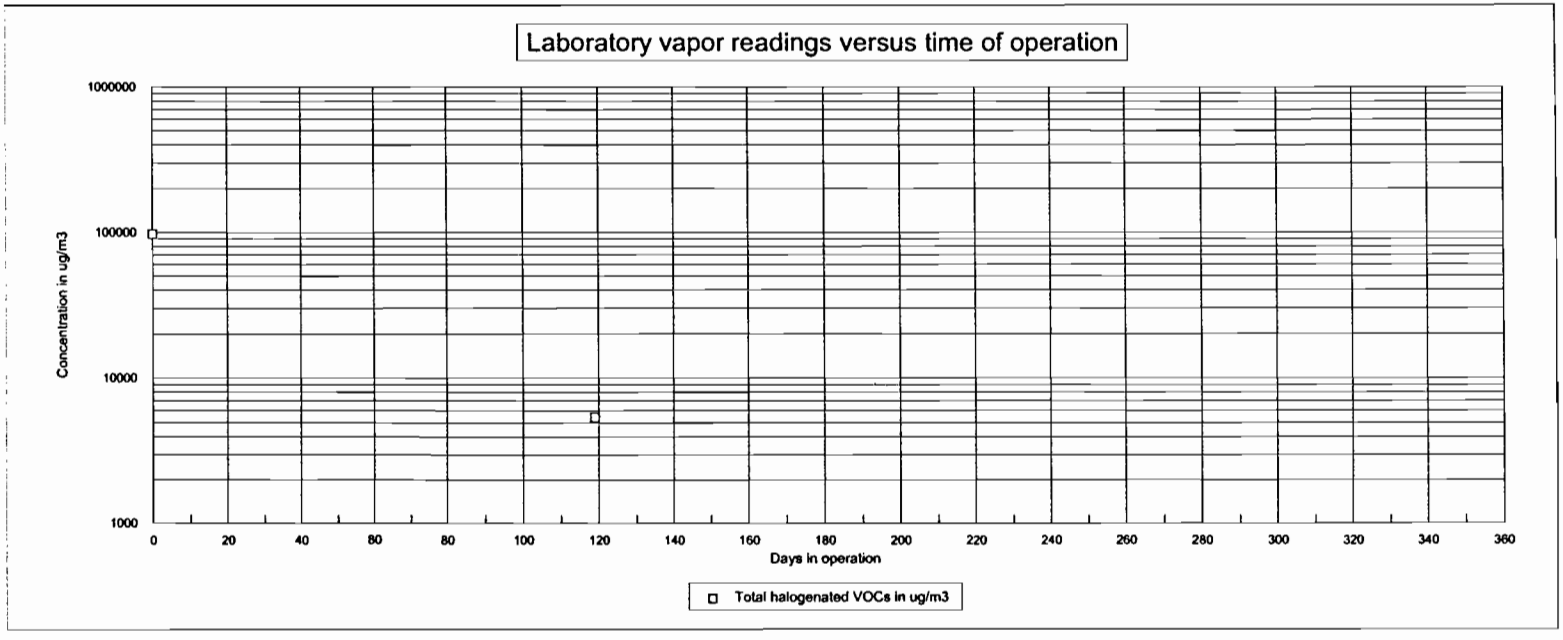

MW-7D
Tetrachloroethene versus time
Concentration in ug/L
300
200
100
0
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Concentration in ug/L

Table 10
Soil Vapor Extraction Readings
Utility Manufacturing Company
700 Main Street, Westbury, NY

Date	Number of Days in Operation	HNU Before Carbon*	PCE Before Carbon**	TCE Before Carbon**	DCE Before Carbon**	TCA Before Carbon**	Total VOCs Before Carbon**	Comments
11/15/2001	0	10	53,000	14,000	22,000	8,000	97,000	Pilot Test & System Start-up - tube sample
11/16/2001	1	10						
11/21/2001	6	6.5						
11/28/2001	13	4						
12/06/2001	21	3						
01/04/2002	50	1.8						
02/04/2002	81	1						
03/04/2002	109	0.6						
03/14/2002	119	0.4	4,100	470	370	460	5,400	1st Qtr.2002 Monitoring - tube sample

Notes: * - HNU field meter with 10.2 ev lamp measures total VOCs in PPM
** - All laboratory analyses reported in ug/m3
NA - Not Applicable.


HNU vapor readings versus time of operation
Concentration in ppm
20
10
0
0
20
40
80
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Days in operation
Hnu Concentration (PPM)


Laboratory vapor readings versus time of operation
Concentration in ug/m3
1000000
100000
10000
1000
0
20
40
80
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Days in operation
Total halogenated VOCs in ug/m3

APPENDIX A

CHEMTECH 284 Sheffield Street • Mountainside, NJ 07092 Phone: 908.789.8900 Fax: 908.789.8922

ANALYTICAL RESULTS SUMMARY

PROJECT NAME: UTILITY

CA RICH CONSULTANTS
17 DUPONT STREET
PLAINVIEW, NY 11803
516-576-8844

CHEMTECH PROJECT # P1852
ATTENTION: ERIC WEINSTOCK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-1
LAB ID: P1852-1 5.0ML
FILENAME: F:\DATA1\U032105.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/21/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	U		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	U		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	U		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	2.8		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	U		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-3
LAB ID: P1852-2 5.0ML
FILENAME: F:\DATA1\U032106.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/21/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	U		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	U		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	U		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	14		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	U		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-6
LAB ID: P1852-3 5.0ML
FILENAME: F:\DATA1\U032107.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/21/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	U		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	13		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	2.4		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	3.7		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	46		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	U		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7S
LAB ID: P1852-4 5.0ML
FILENAME: F:\DATA1\U032108.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/22/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	U		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	7.1		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	1.5		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	2.7		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	31		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	U		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7I
LAB ID: P1852-5 5.0ML
FILENAME: F:\DATA1\U032109.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/22/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	U		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	U		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	U		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	U		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	U		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7D
LAB ID: P1852-6 5.0ML
FILENAME: F:\DATA1\U032110.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/22/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	1.2		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	1.2		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	U		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	U		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	1.5		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: DW-1
LAB ID: P1852-7 5.0ML
FILENAME: F:\DATA1\U032111.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/22/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	U		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	3.1		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	U		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	U		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	14		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	U		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

CHEMTECH 284 Sheffield Street • Mountainside, NJ 07092 Phone: 908.789.8900 Fax: 908.789.8922

DATA PACKAGE FOR GC VOLATILE ORGANICS

PROJECT NAME: UTILITY

CA RICH CONSULTANTS
17 DUPONT STREET
PLAINVIEW, NY 11803
516-576-8844

CHEMTECH PROJECT # P1852
ATTENTION: ERIC WEINSTOCK

CHEMTECH

284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900

COVER PAGE

CHEMTECH

205 Campus Plaza 1 Raritan Center Edison, NJ 08837
Tel: 732-225-4111 Fax 732-225-4110

COVER PAGE

ProjectID: utility

Order P1852

CustomerName Rich Consultants

LAB SAMPLE NO.	CLIENT SAMPLE NO
P1852-01	MW-1
P1852-02	MW-3
P1852-03	MW-6
P1852-04	MW-7S
P1852-05	MW-7I
P1852-06	MW-7D
P1852-07	DW-1

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature: Mildred V. Reyes Name: Mildred V. Reyes

Date: 4/2/02 Title: QA/QC

NYDOH CERTIFICATION NO.11376

NJDEP CERTIFICATION NO. 12013

CHEMTECH

QA/QC DELIVERABLES CHECKLIST

Project Number: P1852

THIS FORM HAS BEEN COMPLETED BY CHEMTECH LABORATORY AND ACCOMPANIES ALL DATA DELIVERABLES PACKAGES.

The following laboratory deliverables are included in this analytical report. Any deviations from the accepted methodology and procedures, or performance values outside acceptable ranges are summarized in the Non- Conformance Summary.

		Yes	NA
I.	Report Cover Page, Laboratory Certification and Field Sample to Lab Sample ID Cross Reference	✓	
II.	Table of Contents	✓	
III.	Chain of Custody Documents	✓	
IV.	Methodology Summaries	✓	
V.	Laboratory Chronicle and Hold Time Checks	✓	
VI.	Non-Conformance Summary	✓	
VII.	Tabulated Analytical Results	✓	
VIII.	Initial and Continuing Calibration Information	___	✓
IX.	Tune and Internal Standard Area Summaries (GC/MS)	___	✓
X.	Quality Control Summary Reports	✓	___
XI.	Surrogate Recovery Summary	✓	___
XII.	Raw Data Chromatogram, Blank, Samples and QC when applicable	___	✓
XIII.	Subcontract Data	___	✓

Mildred U. Reyes
QA/QC Data Reviewer

4/2/02
Date

☐ 110 Route 4
Englewood, NJ 07631
Phone: 201.568.7400 Fax: 201.567.3331

☑ 284 Sheffield Street
Mountainside, NJ 07092
Tel 908.789.8900 Fax: 908.789.8922

NYSDOH Certification No. 10624

NYSDOH Certification No. 11376
NJDEP Certification No. 20012

TABLE OF CONTENTS
PROJECT NUMBER: P1852RQ

CHEMTECH

284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900

CHAIN OF CUSTODY RECORD

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

CHEMTECH JOB NO.: P1852 QC
CHEMTECH QUOTE NO.:

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: CA Rich Consultants
ADDRESS: 17 Dupont Street
CITY: Plainview STATE: NY ZIP: 11803
ATTENTION: Linda Ross
PHONE: 516-576-8844 FAX: 516-576-0093

PROJECT INFORMATION

PROJECT NAME: Utility Manufacturing
PROJECT NO.: Utility 1st Quarter O+M
PROJECT MANAGER: Linda Ross
LOCATION: 700 Main Street Westbury NY
PHONE: 516-576-8844 FAX: 516-576-0093

BILLING INFORMATION

BILL TO: CA Rich Consultants PO #:
ADDRESS: 17 Dupont Street
CITY: Plainview STATE: NY ZIP: 11803
ATTENTION: Linda Ross PHONE: 516-576-8844

DATA TURNAROUND INFORMATION

FAX: _____ DAYS *
HARD COPY: _____ DAYS *
EDD: _____ DAYS *
* TO BE APPROVED BY CHEMTECH
** NORMAL TURNAROUND TIME - 14 DAYS

DATA DELIVERABLE INFORMATION

☐ RESULTS ONLY ☐ NY STATE CATEGORY A
☒ RESULTS PLUS QC ☐ NY STATE CATEGORY B
☐ REGULATORY FORMAT, STATE: _____
☐ NEW JERSEY REDUCED DELIVERABLES
☐ CLP
☐ EDD FORMAT: _____

ANALYSIS

1 EPA 8021 Halogenated Volatiles
2
3
4
5
6
7
8
9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1 (A)	2	3	4	5	6	7	8	9	COMMENTS
1. 1	MW-1	W		X	3/14/02	10:00AM	2	X									
2. 2	MW-3	W		X	3/14/02	11:50AM	2	X									
3. 3	MW-6	W		X	3/14/02	3:20 PM	2	X									
4. 4	MW-7S	W		X	3/14/02	1:25PM	2	X									
5. 5	MW-7I	W		X	3/14/02	1:17AM	2	X									
6. 6	MW-7D	W		X	3/14/02	2:43AM	2	X									
7. 7	DW-1	W		X	3/14/02	3:00PM	2	X									
8.																	

← Specify Preservatives
A – HCl B – HNO_3
C – H_2SO_4 D – NaOH
E – ICE F – Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. Linda Ross	3/15/02 8:30	1. UPS
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
2. UPS		2.
RELINQUISHED BY:	DATE/TIME:	RECEIVED FOR LAB BY:
3. UPS	3/18/02 1030	3. George Stathis

Conditions of bottles or coolers at receipt: ☑ Compliant ☐ Non-Compliant ☑ Temp. of Cooler 3.0
Comments:

Page 1 of 1

SHIPPED VIA: CLIENT: ☐ HAND DELIVERED ☑ OVERNIGHT
CHEMTECH: ☐ PICKED UP ☐ OVERNIGHT

Shipment Complete: ☑ YES ☐ NO

Ver. 7/2001

WHITE – CHEMTECH COPY FOR RETURN TO CLIENT YELLOW – CHEMTECH COPY PINK – SAMPLER COPY

16275

CHEMTECH

284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
J	Indicates an estimated value. This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as "12 B".
E	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P".
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.

CHEMTECH

284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900

METHODOLOGY REVIEW

CHEMTECH

284 Sheffield Street, Mountainside 07092
Tel: 908-789-8900 Fax: 908-789-8922

METHODOLOGY

Volatile Organic by GC
*Test Methods for Evaluating Solid Wastes, SW846, 3rd Edition
** Method 8021B

* Indicates Reference
** Indicates Method

CHEMTECH

284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900

LABORATORY CHRONICLE

CHEMTECH

284 Sheffield Street, Mountainside 07092
Tel: 908-789-8900 Fax: 908-789-8922

LABORATORY CHRONICLE

CLIENT: CA RICH CONSULTANTS
CLIENT PROJECT: UTILITY
DATE RECEIVED: 03/18/02
LABORATORY PROJECT: P1852

SAMPLE DATE	ANALYSIS DATES	ANALYSIS
03/14/02	03/21,22/02	GC VOLATILE ORGANICS

CHEMTECH

284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900

CONFORMANCE/ NON-CONFORMANCE SUMMARY

CHEMTECH 284 Sheffield Street, Mountainside New Jersey 07092

NEW JERSEY LAB ID#:12013 : NEW YORK LAB ID#: 11376

GC VOA ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT LAB NUMBER: P1152 MATRIX: Waters

METHOD: 8010

	YES	NA	NO
1. Chromatograms Labeled/Compounds Identified. (Field samples and Method Blanks)	✓		
2. Standards Summary Submitted	✓		
3. Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis, 12 HOURS IF 8000 SERIES METHOD	✓		
4. Blank Contamination - If yes, list compounds and concentrations in each blank:			✓

VOA Fraction _____

Other _____

5. Surrogate Recoveries Meet Criteria	✓		

If not met, list those compounds and their recoveries which fall outside the acceptable ranges

VOA Fraction _____

Other _____

6. Matrix Spike/Matrix Spike Duplicate Recoveries Meet Criteria.			✓

If not met, list those compounds and their recoveries which fall outside the acceptable range.

VOA Fraction Please check MS/MSD table

Other _____

CHEMTECH 284 Sheffield Street, Mountainside New Jersey 07092

NEW JERSEY LAB ID#: 12013 : NEW YORK LAB ID#: 11376

GC VOA ANALYSIS CONFORMANCE/NON-CONFORMANCE SUMMARY(CONTINUED)

	YES	NA	NO
7. Extraction Holding Time Met	___	✓	___

If not met, list number of days exceeded for each sample:

_____

_____

_____

8. Analysis Holding Time Met	✓	___	___

If not met, list number of days exceeded for each sample:

_____

_____

_____

_____

Additional

Comments: _____

_____

_____

_____

Analyst _____ Date 4-1-02

QA REVIEW _____ Date 4/2/02

CHEMTECH

TABULATED ANALYTICAL RESULTS

GC VOLATILE ORGANICS

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-1
LAB ID: P1852-1 5.0ML
FILENAME: F:\DATA1\U032105.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/21/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	U		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	U		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	U		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	2.8		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	U		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-3
LAB ID: P1852-2 5.0ML
FILENAME: F:\DATA1\U032106.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/21/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	U		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	U		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	U		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	14		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	U		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-6
LAB ID: P1852-3 5.0ML
FILENAME: F:\DATA1\U032107.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/21/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	U		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	13		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	2.4		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	3.7		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	46		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	U		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7S
LAB ID: P1852-4 5.0ML
FILENAME: F:\DATA1\U032108.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/22/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	U		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	7.1		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	1.5		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	2.7		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	31		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	U		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7I
LAB ID: P1852-5 5.0ML
FILENAME: F:\DATA1\U032109.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/22/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	U		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	U		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	U		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	U		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	U		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7D
LAB ID: P1852-6 5.0ML
FILENAME: F:\DATA1\U032110.RAW
BATCH: LB20083

MATRIX: AQUEOUS
DATE ANALYZED: 3/22/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P1852

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		0.7
74-87-3	CHLOROMETHANE	U		0.4
75-01-4	VINYL CHLORIDE	U		0.7
74-83-9	BROMOMETHANE	U		0.1
75-00-3	CHLOROETHANE	U		0.4
75-69-4	TRICHLOROFLOUROMETHANE	U		0.7
75-35-4	1,1 DICHLOROETHENE	U		0.5
75-09-2	METHYLENE CHLORIDE	1.2		0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U		0.5
75-34-3	1,1 DICHLOROETHANE	U		0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		0.6
67-66-3	CHLOROFORM	U		0.4
74-97-5	BROMOCHLOROMETHANE	U		0.6
71-55-6	1,1,1 TRICHLOROETHANE	1.2		0.4
563-58-6	1,1 DICHLOROPROPENE	U		0.3
56-23-5	CARBON TETRACHLORIDE	U		0.5
107-06-2	1,2 DICHLOROETHANE	U		0.8
79-01-6	TRICHLOROETHENE	U		0.4
78-87-5	1,2 DICHLOROPROPANE	U		0.4
75-27-4	BROMODICHLOROMETHANE	U		0.6
74-95-3	DIBROMOMETHANE	U		0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		0.2
79-00-5	1,1,2-TRICHLOROETHANE	U		0.6
142-28-9	1,3 DICHLOROPROPANE	U		0.2
127-18-4	TETRACHLOROETHENE	U		0.4
124-48-1	DIBROMOCHLOROMETHANE	U		0.9
106-93-4	1,2 DIBROMOETHANE	U		0.8
108-90-7	CHLOROBENZENE	U		0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		0.6
75-25-2	BROMOFORM	U		0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U		0.4
108-86-1	BROMOBENZENE	U		0.6
95-49-8	2, CHLOROTOLUENE	U		0.5
106-43-4	4, CHLOROTOLUENE	U		0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		0.8
87-68-3	HEXACHLOROBUTADIENE	1.5		0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U		0.7

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW
B = PRESENT IN THE ASSOCIATED BLANK

CHEMTECH

QUALITY CONTROL SUMMARY REPORTS

GC VOLATILE ORGANICS

GC VOLATILES
SURROGATE SUMMARY FORM

PROJECT UTILITY
Matrix WATER
Analyst PHM

LAB SAMPLE ID	LAB FILENAME	DATE ANALYZED	TIME ANALYZED	1,4-DCB % REC		BCB % REC	
BLANK	U032104.RAW	3/21/02	19:09	103%		79%	
BLANK SPIKE	U032114.RAW	3/22/02	7:11	144%		144%	
P1852-5 MS 5.0ML	U032112.RAW	3/22/02	4:47	46%		47%	
P1852-5 MSD 5.0ML	U032113.RAW	3/22/02	5:59	44%		42%	
P1852-1 5.0ML	U032105.RAW	3/21/02	20:22	79%		50%	
P1852-2 5.0ML	U032106.RAW	3/21/02	21:36	50%		43%	
P1852-3 5.0ML	U032107.RAW	3/21/02	22:48	109%		62%	
P1852-4 5.0ML	U032108.RAW	3/22/02	0:01	88%		48%	
P1852-5 5.0ML	U032109.RAW	3/22/02	1:12	53%		42%	
P1852-6 5.0ML	U032110.RAW	3/22/02	2:23	96%		52%	
P1852-7 5.0ML	U032111.RAW	3/22/02	3:36	71%		50%	

1.4 DCB = 1,4 Dichlorobutane (LIMITS: 40-160)
BCB = Bromochlorobenzene (LIMITS: 40-185)
* Values outside of QC limits

* Denotes surrogate outside control limits

Initial and Continuing Calibration Summary
Method 8021

Initial Calibration Date:	2/23/02									
Analyte	5 ppb	10 ppb	20 ppb	40 ppb	50 ppb	Ave CF	Std Dev	% RSD		CORR
	Cal Fac 1	Cal Fac 2	Cal Fac 3	Cal Fac	Cal Fac 5				Flag	COEFF
DICHLORODIFLUOROMETHAN	71	159	207	217	218	174	63	36	*	0.9997
CHLOROMETHANE	330	342	303	340	324	328	16	5		0.9984
VINYL CHLORIDE	695	675	635	601	599	641	43	7		0.9999
BROMOMETHANE	21	19	20	20	20	20	1	4		0.9999
CHLOROETHANE	437	477	550	488	464	483	42	9		0.9962
TRICHLOROFLOUROMETHANE	383	439	363	411	386	397	29	7		0.9973
1,1 DICHLOROETHENE	430	631	560	627	588	567	82	14		0.9977
METHYLENE CHLORIDE	1354	1232	1160	1237	1058	1208	109	9		0.9920
TRANS-1,2-DICHLOROETHE	729	782	771	853	862	799	57	7		0.9994
1,1 DICHLOROETHANE	464	660	764	739	772	680	128	19		0.9993
22DCPRPA+CI12DC	1101	1234	1403	1427	1559	1345	179	13		0.9981
CHLOROFORM	914	894	1137	959	1037	988	100	10		0.9956
BROMOCHLOROMETHANE	433	415	540	492	452	466	50	11		0.9942
1,1,1 TRICHLOROETHANE	547	690	669	666	642	643	56	9		0.9992
1,1 DICHLOROPROPENE	560	744	682	639	546	634	83	13		0.9887
CARBONTETRACHLORIDE	1123	1451	1309	1243	1279	1281	118	9		0.9989
1,2 DICHLOROETHANE	568	726	715	684	738	686	69	10		0.9981
TRICHLOROETHENE	645	969	1006	1043	991	931	162	17		0.9987
1,2 DICHLOROPROPANE	814	716	823	748	689	758	59	8		0.9957
BROMODICHLOROMETHANE	295	282	429	395	379	356	64	18		0.9957
DIBROMOMETHANE	721	555	692	728	635	666	72	11		0.9926
CIS 1,3 DICHLOROPROPEN	536	503	655	653	638	597	72	12		0.9989
TRANS 1,3 DICHLOROPROP	335	401	497	486	445	433	66	15		0.9959
1,1,2 TRICHLOROETHANE	733	626	689	675	634	671	44	6		0.9983
1,3 DICHLOROPROPANE	235	305	352	315	341	310	46	15		0.9974
TETRACHLOROETHENE	1412	1576	1235	1383	1350	1391	123	9		0.9979
DIBROMOCHLOROMETHANE	621	462	501	497	475	511	64	12		0.9988
1,2 DIBROMOETHANE	103	165	160	154	160	148	26	17		0.9988
CHLOROBENZENE	162	264	299	287	285	259	56	22	*	0.9988
1,1,1,2 TETRACHLOROETH	1206	1318	1632	1437	1172	1353	187	14		0.9783
BROMOFORM	69	120	135	153	158	127	36	28	*	0.9997
1,1,2,2 TETRACHLOROETH	743	728	605	525	511	623	109	18		0.9984
1,2,3 TRICHLOROPROPANE	311	393	348	303	350	341	36	11		0.9920
BROMOBENZENE	386	492	476	370	441	433	54	12		0.9871
2, CHLOROTOLUENE	264	317	341	296	365	317	39	12		0.9881
4, CHLOROTOLUENE	489	489	498	425	442	469	33	7		0.9978
1,2DIBRMO3CHLOROPROPAN	8	8	14	14	15	12	3	29	*	0.9988
HEXACHLOROBUTADIENE	1541	1546	1131	1235	1236	1338	193	14		0.9972
1,2,3 TRICHLOROBENZENE	367	443	420	489	462	436	47	11		0.9980

Std	Filename
5	U022314
10	U022313
20	U022312
40	U022311
50	U022310

26

20% RSD for initial calibration, > 0.995 correlation coefficient; 15% diff for continuing calibration
(When calibration factor fails linear regresion is used for initial calibration and continuing as per section 7 of SW8000)

Initial and Continuing Calibration Summary
Method 8021

Continuing Control Verification		Filename:	F:\DATA1\U032102.RAW					
Analysis Date	3/21/02			Conc		Lower	Upper	
Analyte	Cal Fac	% Diff	Flag	ug/L	% Rec	Limit	Limit	Flag
DICHLORODIFLUOROMETHAN	214	23	*	21	107	85	115	
CHLOROMETHANE	343	5		21	105	85	115	
VINYL CHLORIDE	697	9		22	109	85	115	
BROMOMETHANE	18	11		18	89	85	115	
CHLOROETHANE	528	9		22	109	85	115	
TRICHLOROFLOUROMETHANE	436	10		22	110	85	115	
1,1 DICHLOROETHENE	626	10		21	106	85	115	
METHYLENE CHLORIDE	1235	2		20	102	85	115	
TRANS-1,2-DICHLOROETHE	778	3		19	95	85	115	
1,1 DICHLOROETHANE	777	14		23	114	85	115	
22DCPRPA+CI12DC	1481	10		44	110	85	115	
CHLOROFORM	1134	15		23	115	85	115	
BROMOCHLOROMETHANE	472	1		20	101	85	115	
1,1,1 TRICHLOROETHANE	621	3		19	97	85	115	
1,1 DICHLOROPROPENE	710	12		22	112	85	115	
CARBONTETRACHLORIDE	1175	8		18	92	85	115	
1,2 DICHLOROETHANE	733	7		21	107	85	115	
TRICHLOROETHENE	1042	12		22	112	85	115	
1,2 DICHLOROPROPANE	808	7		21	107	85	115	
BROMODICHLOROMETHANE	409	15		23	115	85	115	
DIBROMOMETHANE	624	6		19	94	85	115	
CIS 1,3 DICHLOROPROPEN	680	14		23	114	85	115	
TRANS 1,3 DICHLOROPROP	491	13		23	113	85	115	
1,1,2 TRICHLOROETHANE	733	9		22	109	85	115	
1,3 DICHLOROPROPANE	335	8		22	108	85	115	
TETRACHLOROETHENE	1565	12		22	112	85	115	
DIBROMOCHLOROMETHANE	486	5		19	95	85	115	
1,2 DIBROMOETHANE	171	15		22	110	85	115	
CHLOROBENZENE	305	18	*	22	109	85	115	
1,1,1,2 TETRACHLOROETH	1519	12		22	112	85	115	
BROMOFORM	154	21	*	22	108	85	115	
1,1,2,2 TETRACHLOROETH	651	5		21	105	85	115	
1,2,3 TRICHLOROPROPANE	346	1		20	101	85	115	
BROMOBENZENE	444	3		21	103	85	115	
2, CHLOROTOLUENE	357	13		23	113	85	115	
4, CHLOROTOLUENE	513	9		22	109	85	115	
1,2DIBRMO3CHLOROPROPAN	12	4		19	94	85	115	
HEXACHLOROBUTADIENE	1240	7		19	93	85	115	
1,2,3 TRICHLOROBENZENE	415	5		19	95	85	115	

27

20% RSD for initial calibration, > 0.995 correlation coefficient; 15% diff for continuing calibration
(When calibration factor fails linear regresion is used for initial calibration and continuing as per section 7 of SW8000)

Method Blank

Batch:J:\DATA1\V032102.SEQ
Matrix:Water

Filename: F:\DATA1\U032104.RAW
Date: 3/21/02

CAS #	COMPOUNDS	RESULTS (ug/L)	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U	0.7
74-87-3	CHLOROMETHANE	U	0.4
75-01-4	VINYL CHLORIDE	U	0.7
74-83-9	BROMOMETHANE	U	0.1
75-00-3	CHLOROETHANE	U	0.4
75-69-4	TRICHLOROFLOUROMETHANE	U	0.7
75-35-4	1,1 DICHLOROETHENE	U	0.5
75-09-2	METHYLENE CHLORIDE	0	0.8
156-60-5	TRANS-1,2-DICHLOROETHENE	U	0.5
75-34-3	1,1 DICHLOROETHANE	U	0.3
	2,2-DCPRPA+CIS-1,2DICHLOROETH	U	0.6
67-66-3	CHLOROFORM	U	0.4
74-97-5	BROMOCHLOROMETHANE	U	0.6
71-55-6	1,1,1 TRICHLOROETHANE	U	0.4
563-58-6	1,1 DICHLOROPROPENE	U	0.3
56-23-5	CARBON TETRACHLORIDE	U	0.5
107-06-2	1,2 DICHLOROETHANE	U	0.8
79-01-6	TRICHLOROETHENE	U	0.4
78-87-5	1,2 DICHLOROPROPANE	U	0.4
75-27-4	BROMODICHLOROMETHANE	U	0.6
74-95-3	DIBROMOMETHANE	U	0.4
10061-01-5	CIS 1,3 DICHLOROPROPENE	U	0.3
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U	0.2
79-00-5	1,1,2-TRICHLOROETHANE	U	0.6
142-28-9	1,3 DICHLOROPROPANE	U	0.2
127-18-4	TETRACHLOROETHENE	U	0.4
124-48-1	DIBROMOCHLOROMETHANE	U	0.9
106-93-4	1,2 DIBROMOETHANE	U	0.8
108-90-7	CHLOROBENZENE	U	0.4
630-20-6	1,1,1,2 TETRACHLOROETHANE	U	0.6
75-25-2	BROMOFORM	U	0.1
79-34-5	1,1,2,2 TETRACHLOROETHANE	U	0.7
96-18-4	1,2,3 TRICHLOROPROPANE	U	0.4
108-86-1	BROMOBENZENE	U	0.6
95-49-8	2, CHLOROTOLUENE	U	0.5
106-43-4	4, CHLOROTOLUENE	U	0.9
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U	0.8
87-68-3	HEXACHLOROBUTADIENE	U	0.5
87-61-6	1,2,3 TRICHLOROBENZENE	U	0.7

MDL - Method Detection Limit
U - Undetected below MDL
COMMENTS:

QC BS/BSD 20PPB Spike

Filename MS:U032112
Filename MSD:U032113
Matrix:WATER

Date: 2/24/02

CAS #	Analyte	Spike Added	Sample Conc	MS Conc PPB	% Rec	Flag	MSD Conc PPB	% Rec	MSD Flag	RPD	RPD Flag	Lower Limits	Upper Limits	RPD Limits
75-71-8	DICHLORODIFLUOROMETHANE	20	0	9	45	*	8	39	*	14		50	150	<20%
74-87-3	CHLOROMETHANE	20	0	28	142		24	119		18		50	150	<20%
75-01-4	VINYL CHLORIDE	20	0	18	91		10	52		54	*	50	150	<20%
74-83-9	BROMOMETHANE	20	0	22	110		26	128		16		50	150	<20%
75-00-3	CHLOROETHANE	20	0	14	68		12	60		12		50	150	<20%
75-69-4	TRICHLOROFLOUROMETHANE	20	0	27	133		20	102		26	*	50	150	<20%
75-35-4	1,1 DICHLOROETHENE	20	0	10	50		5	24	*	71	*	50	150	<20%
75-09-2	METHYLENE CHLORIDE	20	0	13	65		13	62		4		50	150	<20%
156-60-5	TRANS-1,2-DICHLOROETHENE	20	0	12	61		12	58		4		50	150	<20%
75-34-3	1,1 DICHLOROETHANE	20	0	10	51		10	52		2		50	150	<20%
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	40	0	36	90		30	76		17		50	150	<20%
67-66-3	CHLOROFORM	20	0	14	72		12	60		19		50	150	<20%
74-97-5	BROMOCHLOROMETHANE	20	0	16	79		14	68		16		50	150	<20%
71-55-6	1,1,1 TRICHLOROETHANE	20	0	31	156	*	24	120		26	*	50	150	<20%
563-58-6	1,1 DICHLOROPROPENE	20	0	14	71		12	58		19		50	150	<20%
56-23-5	CARBON TETRACHLORIDE	20	0	13	64		11	55		14		50	150	<20%
107-06-2	1,2 DICHLOROETHANE	20	0	12	58		10	48	*	19		50	150	<20%
79-01-6	TRICHLOROETHENE	20	0	15	75		14	68		10		50	150	<20%
78-87-5	1,2 DICHLOROPROPANE	20	0	12	60		12	62		4		50	150	<20%
75-27-4	BROMODICHLOROMETHANE	20	0	11	55		10	50	*	11		50	150	<20%
74-95-3	DIBROMOMETHANE	20	0	10	52		10	51		3		50	150	<20%
10061-01-5	CIS 1,3 DICHLOROPROPENE	20	0	11	54		11	56		2		50	150	<20%
10061-02-6	TRANS 1,3 DICHLOROPROPENE	20	0	10	48	*	9	47	*	3		50	150	<20%
79-00-5	1,1,2-TRICHLOROETHANE	20	0	10	49	*	10	52		6		50	150	<20%
142-28-9	1,3 DICHLOROPROPANE	20	0	16	81		14	68		18		50	150	<20%
127-18-4	TETRACHLOROETHENE	20	0	38	188	*	33	166	*	12		50	150	<20%
124-48-1	DIBROMOCHLOROMETHANE	20	0	17	86		16	81		6		50	150	<20%
106-93-4	1,2 DIBROMOETHANE	20	0	15	75		14	71		6		50	150	<20%
108-90-7	CHLOROBENZENE	20	0	10	49	*	9	46	*	6		50	150	<20%
630-20-6	1,1,1,2 TETRACHLOROETHANE	20	0	13	67		15	75		11		50	150	<20%
75-25-2	BROMOFORM	20	0	10	52		10	49	*	7		50	150	<20%
79-34-5	1,1,2,2 TETRACHLOROETHANE	20	0	11	54		10	51		4		50	150	<20%
96-18-4	1,2,3 TRICHLOROPROPANE	20	0	11	57		10	51		10		50	150	<20%
108-86-1	BROMOBENZENE	20	0	13	63		12	62		2		50	150	<20%
95-49-8	2, CHLOROTOLUENE	20	0	13	63		11	57		11		50	150	<20%
106-43-4	4, CHLOROTOLUENE	20	0	15	77		15	74		4		50	150	<20%
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	20	0	12	58		11	53		10		50	150	<20%
87-68-3	HEXACHLOROBUTADIENE	20	0	14	68		13	64		7		50	150	<20%
87-61-6	1,2,3 TRICHLOROBENZENE	20	0	10	48	*	6	32	*	40	*	50	150	<20%

QC Spike - 20 ppb std

Filename:F:\DATA1\U032114.RAW
Date: 3/22/02

CAS #	Analyte	Spike Added PPB	Sample Conc	% Rec	Lower Limits	Upper Limits	Flag
75-71-8	DICHLORODIFLUOROMETHANE	20	14	72	50	150	
74-87-3	CHLOROMETHANE	20	24	121	50	150	
75-01-4	VINYL CHLORIDE	20	29	143	50	150	
74-83-9	BROMOMETHANE	20	28	138	50	150	
75-00-3	CHLOROETHANE	20	20	102	50	150	
75-69-4	TRICHLOROFLOUROMETHANE	20	29	147	50	150	
75-35-4	1,1 DICHLOROETHENE	20	24	119	50	150	
75-09-2	METHYLENE CHLORIDE	20	19	93	50	150	
156-60-5	TRANS-1,2-DICHLOROETHENE	20	21	106	50	150	
75-34-3	1,1 DICHLOROETHANE	20	25	123	50	150	
	2,2-DCPRPA+CIS-1,2DICHLOROE	40	56	140	50	150	
67-66-3	CHLOROFORM	20	26	129	50	150	
74-97-5	BROMOCHLOROMETHANE	20	23	117	50	150	
71-55-6	1,1,1 TRICHLOROETHANE	20	30	149	50	150	
563-58-6	1,1 DICHLOROPROPENE	20	29	143	50	150	
56-23-5	CARBON TETRACHLORIDE	20	26	130	50	150	
107-06-2	1,2 DICHLOROETHANE	20	23	117	50	150	
79-01-6	TRICHLOROETHENE	20	29	143	50	150	
78-87-5	1,2 DICHLOROPROPANE	20	19	95	50	150	
75-27-4	BROMODICHLOROMETHANE	20	27	134	50	150	
74-95-3	DIBROMOMETHANE	20	25	123	50	150	
10061-01-5	CIS 1,3 DICHLOROPROPENE	20	25	127	50	150	
10061-02-6	TRANS 1,3 DICHLOROPROPENE	20	28	142	50	150	
79-00-5	1,1,2-TRICHLOROETHANE	20	25	123	50	150	
142-28-9	1,3 DICHLOROPROPANE	20	29	145	50	150	
127-18-4	TETRACHLOROETHENE	20	27	135	50	150	
124-48-1	DIBROMOCHLOROMETHANE	20	28	139	50	150	
106-93-4	1,2 DIBROMOETHANE	20	28	139	50	150	
108-90-7	CHLOROBENZENE	20	26	132	50	150	
630-20-6	1,1,1,2 TETRACHLOROETHANE	20	24	119	50	150	
75-25-2	BROMOFORM	20	29	143	50	150	
79-34-5	1,1,2,2 TETRACHLOROETHANE	20	24	121	50	150	
96-18-4	1,2,3 TRICHLOROPROPANE	20	24	120	50	150	
108-86-1	BROMOBENZENE	20	26	128	50	150	
95-49-8	2, CHLOROTOLUENE	20	26	130	50	150	
106-43-4	4, CHLOROTOLUENE	20	24	120	50	150	
96-12-8	1,2-DIBROMO-3-CHLOROPROPA	20	26	131	50	150	
87-68-3	HEXACHLOROBUTADIENE	20	24	122	50	150	
87-61-6	1,2,3 TRICHLOROBENZENE	20	21	107	50	150	

CHEMTECH

284 Sheffield Street Mountainside NJ 07092
Tel. 908-789-8900

END OF ANALYTICAL RESULTS

APPENDIX B

ECOTEST LABORATORIES, INC. *ENVIRONMENTAL TESTING*

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (631) 422-5777• FAX (631) 422-5770

Email: ecotestlab@aol.com Website: www.ecotestlabs.com

LAB NO.221179.00 03/22/02

C.A. Rich Consultants, Incorporated
17 Dupont Street
Plainview, NY 11803

ATTN: Eric Weinstock PO#:

SOURCE OF SAMPLE: Utility. 1st Quarter 2002 O&M
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:03/14/02 RECEIVED:03/15/02
TIME COL'D:1400
MATRIX:Air SAMPLE: Utility 3/14/02

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Chloromethane	ug/m3	< 190		03/21/02	190	EPA8260
Bromomethane	ug/m3	< 190		03/21/02	190	EPA8260
Dichlordifluomethane	ug/m3	< 190		03/21/02	190	EPA8260
Vinyl Chloride	ug/m3	< 190		03/21/02	190	EPA8260
Chloroethane	ug/m3	< 190		03/21/02	190	EPA8260
Methylene Chloride	ug/m3	< 190		03/21/02	190	EPA8260
Trichlorofluomethane	ug/m3	< 190		03/21/02	190	EPA8260
1,1 Dichloroethene	ug/m3	< 190		03/21/02	190	EPA8260
1,1 Dichloroethane	ug/m3	< 190		03/21/02	190	EPA8260
1,2 Dichloroethene	ug/m3	370		03/21/02	190	EPA8260
Chloroform	ug/m3	< 190		03/21/02	190	EPA8260
1,2 Dichloroethane	ug/m3	< 190		03/21/02	190	EPA8260
111 Trichloroethane	ug/m3	460		03/21/02	190	EPA8260
Carbon Tetrachloride	ug/m3	< 190		03/21/02	190	EPA8260
Bromodichloromethane	ug/m3	< 190		03/21/02	190	EPA8260
1,2 Dichloropropane	ug/m3	< 190		03/21/02	190	EPA8260
t-1,3Dichloropropene	ug/m3	< 190		03/21/02	190	EPA8260
Trichloroethylene	ug/m3	470		03/21/02	190	EPA8260
Chlorodibromomethane	ug/m3	< 190		03/21/02	190	EPA8260
112 Trichloroethane	ug/m3	< 190		03/21/02	190	EPA8260
c-1,3Dichloropropene	ug/m3	< 190		03/21/02	190	EPA8260
2chloroethvinylether	ug/m3	< 960		03/21/02	950	EPA8260
Bromoform	ug/m3	< 190		03/21/02	190	EPA8260
1122Tetrachloroethane	ug/m3	< 190		03/21/02	190	EPA8260
Tetrachloroethene	ug/m3	4100		03/21/02	190	EPA8260

cc:

LRL=Laboratory Reporting Limit

REMARKS: Volume sampled: 1.04 Liters.
NIOSH Sorbent tube collection.

DIRECTOR