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

0712

July 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

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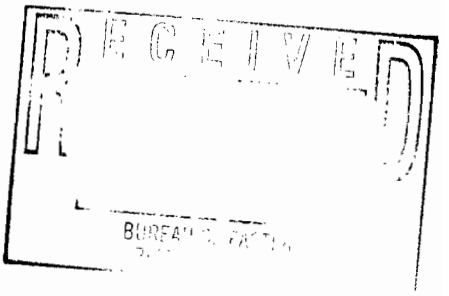
July 22, 2002



NYSDEC
50 Wolf Road
Albany, New York 12233-7010

Attention: Jeffrey Dyber, P.E.

Re: **Quarterly Monitoring Report**
Second 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. We appear to be approaching the termination criteria in both the soil vapor and air sparging systems. As such, we will begin a program of pulsed sparging in August 2002.

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

Sincerely,

CA RICH CONSULTANTS, INC.

Linda Ross
Project Geologist

Eric Weinstock
Associate

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

Attachments

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Second Quarter 2002
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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 second quarter 2002 round of groundwater sampling on June 24, 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. 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 15 ug/l in all of the wells during the past quarter. It should be noted that the 15 ug/l was detected in an upgradient well. The next highest concentration was 8.6 ug/l in a downgradient well.

The multi-depth cluster well (MDCW-7) is located along the southwestern property line. The shallow well at this location, MDCW-7S decreased in tetrachloroethene concentration from 31 ug/l to 8.6 ug/l. The intermediate depth well (well MDCW-7I) once again showed non detect for tetrachloroethene (less than 1 ug/l). The tetrachloroethene reading for well MDCW-7D remained

non detect. Wells MW-2, and 5 were dry due to a regional lowering of the water table. Wells MW-1, 3, 4 and 6 contained tetrachloroethene at less than 15 ug/l.

4.0 SOIL VAPOR MONITORING PROCEDURES

On June 24, 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. During the second quarter of operation the concentrations decreased to a VOC total of 4,580 ug/m^3 and 3,400 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, the SVE system appears to be approaching the termination criteria.

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.

According to Tables 1 through 9, the concentration of PCE, TCE, TCA and their degradation products appear to be approaching an asymptotic condition. In addition, 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 upgradient monitoring wells. Two of the compliance points MW-7I and MW-7D are less than their SCGs for PCE, TCE, TCA and their degradation products. As such, a program of "pulsed" sparging will be initiated beginning in August of 2002.

6.0 CONCLUSION

The AS/SVE system remained in operation throughout the second quarter of 2002 with no down time. The concentration of tertachloroethene in all of the site wells ranged from a high of 15 ug/l in the upgradient well to no detection. As of the date of this report, we appear to be approaching the termination criteria. The system will remain in operation during the following quarter of operation with the following modification.

The system will be "pulsed" to maximize contaminant removal. We will operate the system from Monday morning to Thursday evening of each week and then turn the compressor off on Thursday evening to Monday morning. The SVE unit will remain in continuous operation. This should facilitate cleanup of the Site.

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.

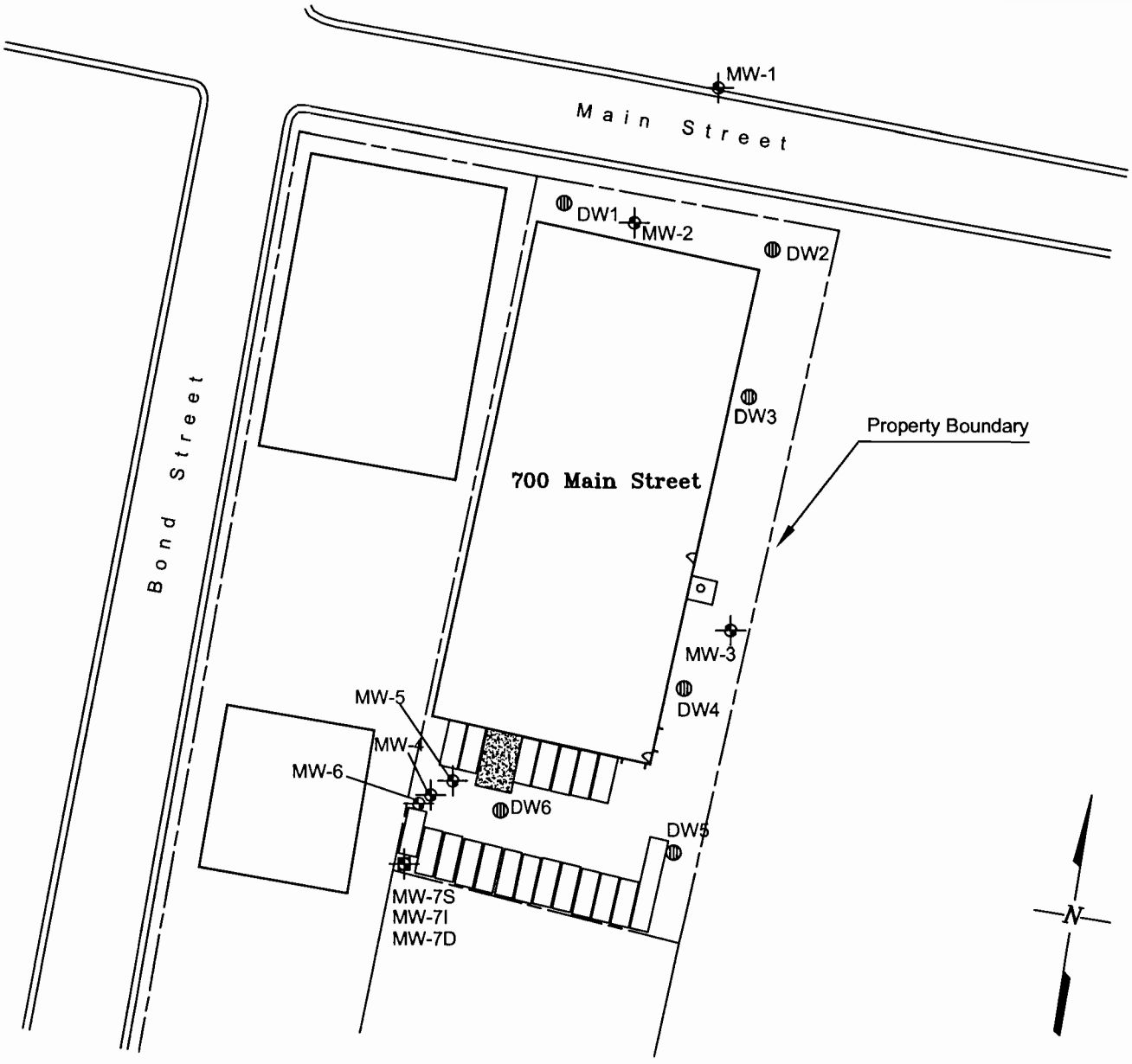
4. Anson Environmental, Ltd., (January 1999), Focused Remedial Investigation, Utility Manufacturing/Wonder King,

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/2nd qtr 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

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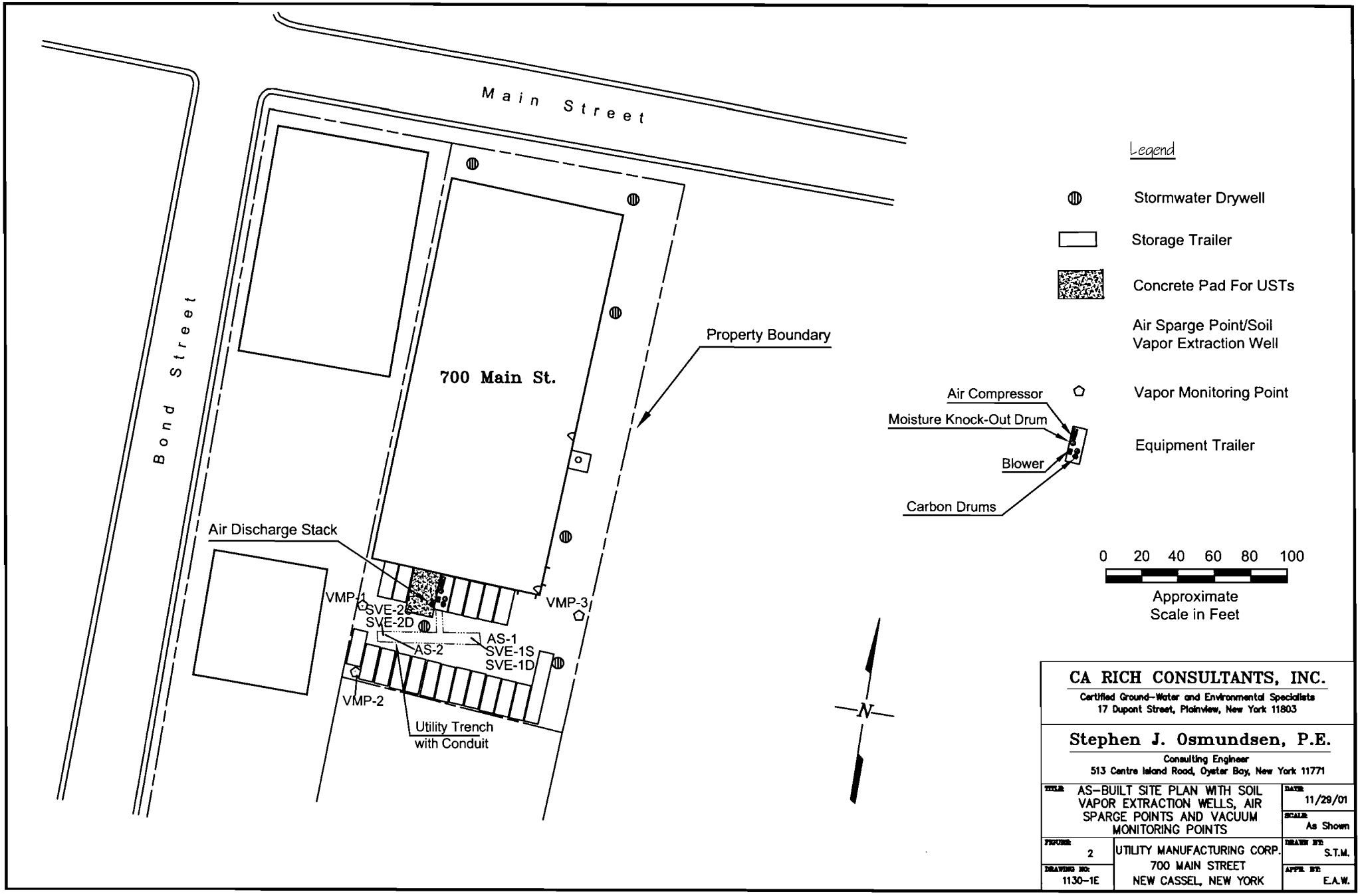
Certified Ground-Water and Environmental Specialists
17 Dupont Street, Plainview, New York 11803

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.
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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	55 to 60							values
Date Sampled	10/29/2001	03/14/2002	06/24/2002							
Days since system start up	-17	119	221							
Days since initial sample	0	136	238							
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	1.7							5.00
Trichloroethene	ND	ND	ND							5.00
cis-1,2-Dichloroethene	ND	ND	ND							5.00
trans-1,2-Dichloroethene	ND	ND	ND							5.00
Vinyl Choride	ND	ND	ND							2.00
1,1,1 Trichloroethane	ND	ND	ND							5.00
1,1Dichloroethane	ND	ND	ND							5.00
Chloroethane	ND	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.

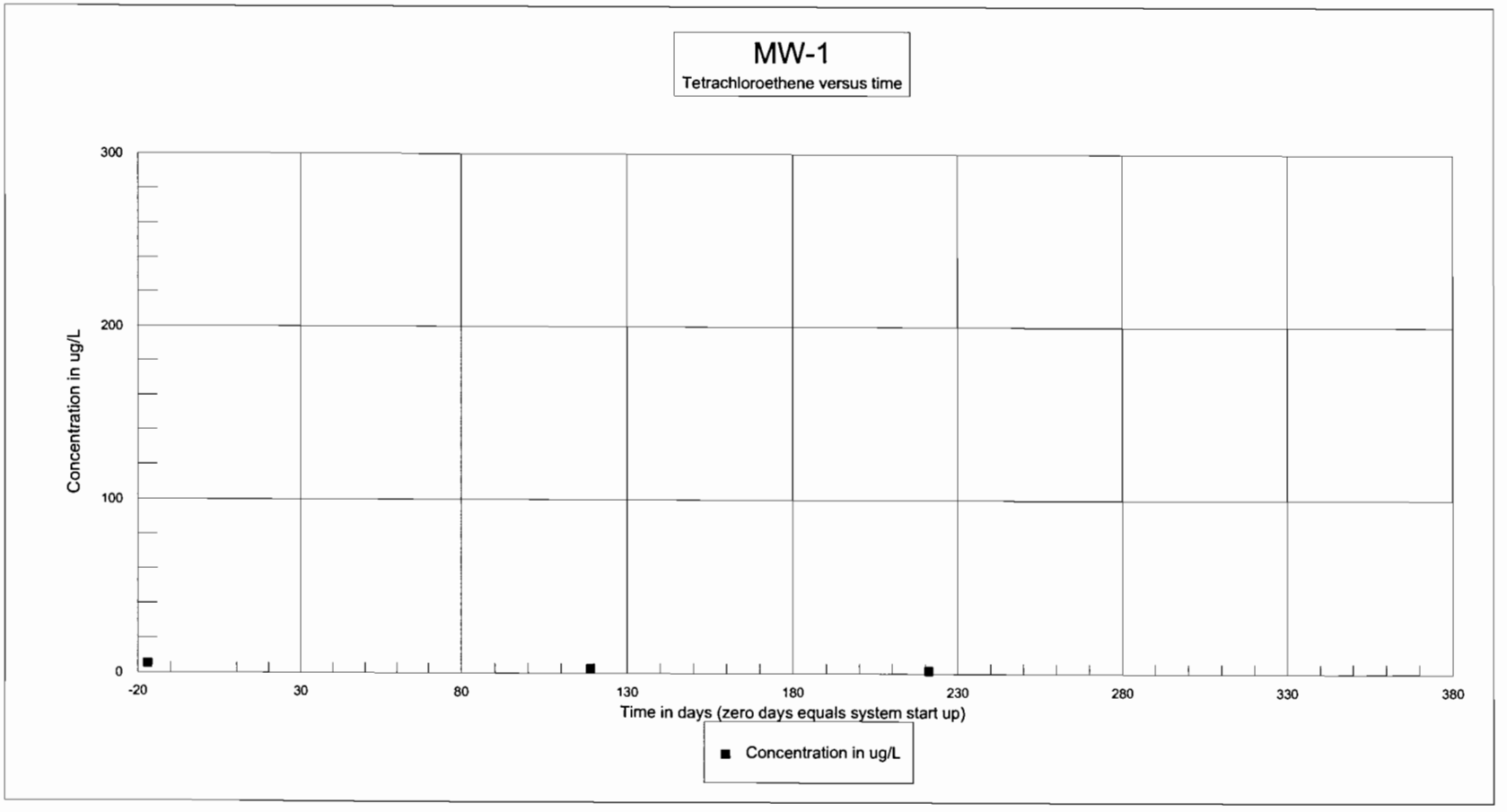

MW-1
Tetrachloroethene versus time
300
200
100
0
Concentration in ug/L
-20
30
80
130
180
230
280
330
380
Time in days (zero days equals system start up)
Concentration in ug/L

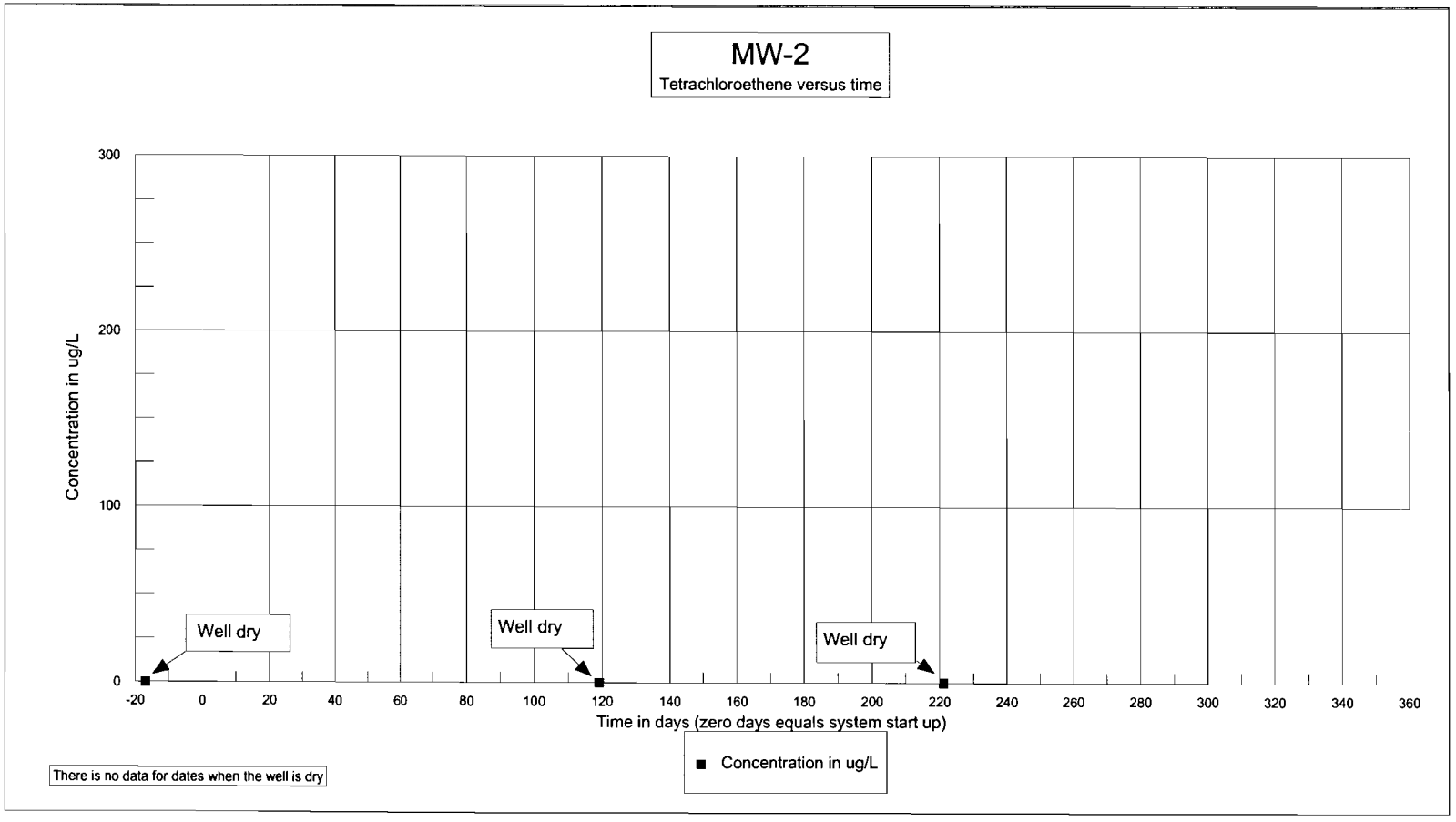
Table 2
Summary of Analytical Detections in Well MW-2
for Volatile Organics Compounds in Groundwater
Utility Manufacturing, Westbury, NY

Well ID	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	MW-2	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	dry	dry	dry							
Date Sampled	10/29/2001	03/14/2002	06/24/2002							
Days since system start up	-17	119	221							
Days since initial sample	0	136	238							
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	dry							5.00
Trichloroethene	dry	dry	dry							5.00
cis-1,2-Dichloroethene	dry	dry	dry							5.00
trans-1,2-Dichloroethene	dry	dry	dry							5.00
Vinyl Choride	dry	dry	dry							2.00
1,1,1 Trichloroethane	dry	dry	dry							5.00
1,1Dichloroethane	dry	dry	dry							5.00
Chloroethane	dry	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	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	MW-3	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 70	55 to 70	55 to 70							
Date Sampled	10/29/2001	03/14/2002	06/24/2002							
Days since system start up	-17	119	221							
Days since initial sample	0	136	238							
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	15							5.00
Trichloroethene	2.9	ND	ND							5.00
cis-1,2-Dichloroethene	ND	ND	ND							5.00
trans-1,2-Dichloroethene	ND	ND	ND							5.00
Vinyl Choride	ND	ND	ND							2.00
1,1,1 Trichloroethane	3.1	ND	ND							5.00
1,1Dichloroethane	ND	ND	ND							5.00
Chloroethane	ND	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.

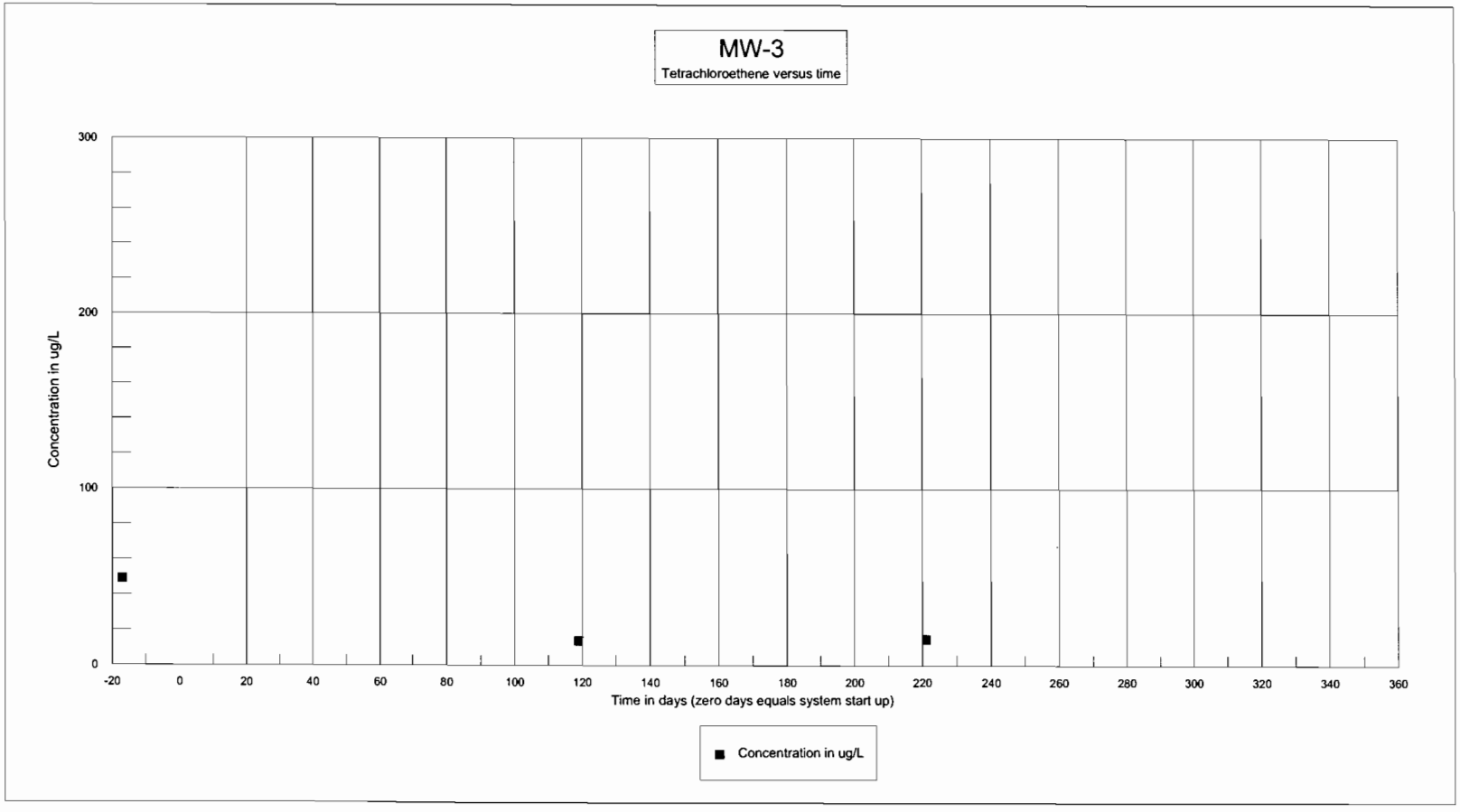

MW-3
Tetrachloroethene versus time
Concentration in ug/L
300
200
100
0
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Concentration in ug/L

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

Well ID	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	MW-4	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	dry	dry	29 to 39							values
Date Sampled	10/29/2001	03/14/2002	06/24/2002							
Days since system start up	-17	119	221							
Days since initial sample	0	136	238							
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	1.4							5.00
Trichloroethene	dry	dry	1.4							5.00
cis-1,2-Dichloroethene	dry	dry	ND							5.00
trans-1,2-Dichloroethene	dry	dry	ND							5.00
Vinyl Chonde	dry	dry	ND							2.00
1,1,1 Trichloroethane	dry	dry	ND							5.00
1,1Dichloroethane	dry	dry	ND							5.00
Chloroethane	dry	dry	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.

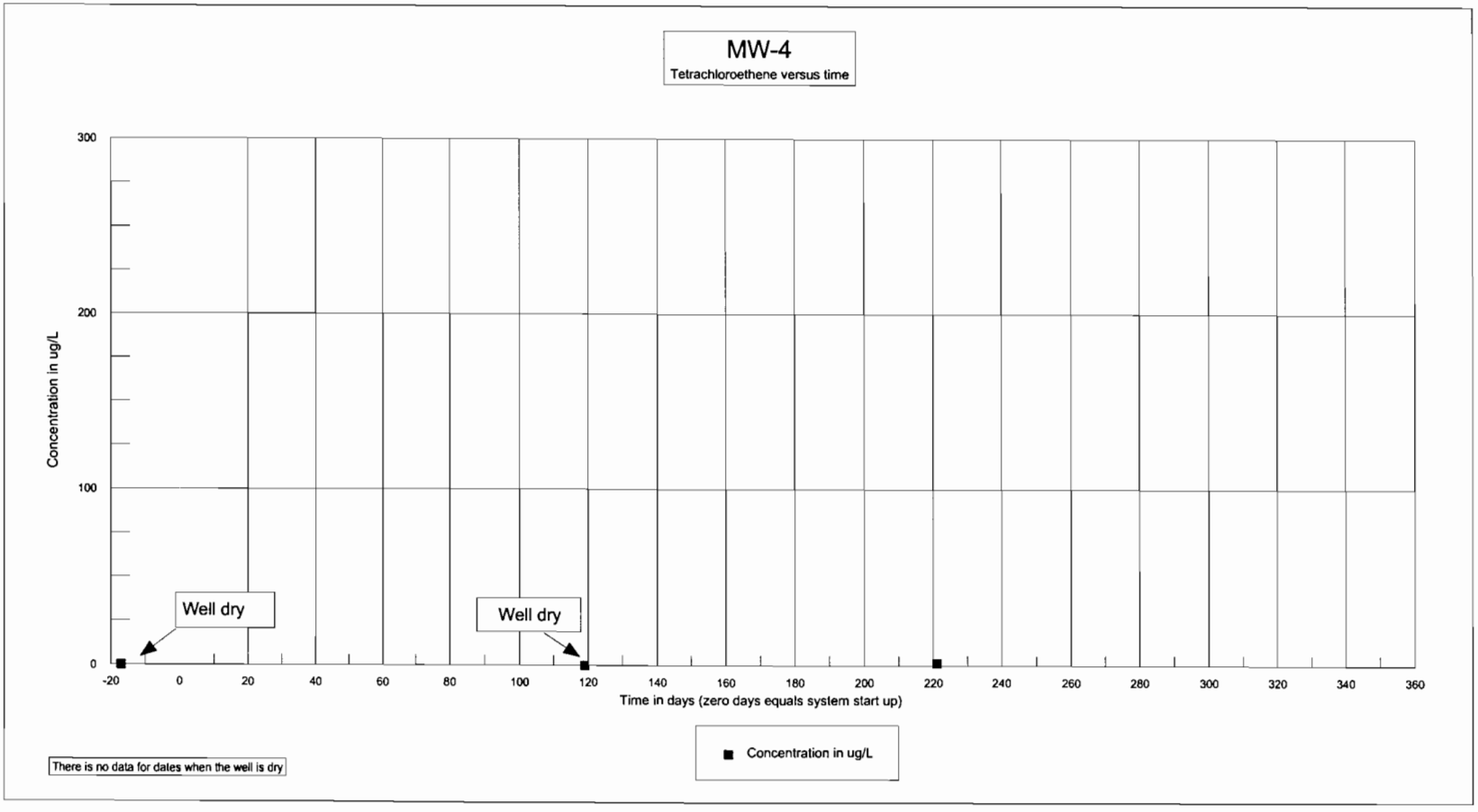

MW-4
Tetrachloroethene versus time
Concentration in ug/L
300
200
100
0
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Well dry
Well dry
Concentration in ug/L
There is no data for dates when the well is dry

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	dry							values
Date Sampled	10/29/2001	03/14/2002	06/24/2002							
Days since system start up	-17	119	221							
Days since initial sample	0	136	238							
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	dry							5.00
Trichloroethene	24	dry	dry							5.00
cis-1,2-Dichloroethene	25	dry	dry							5.00
trans-1,2-Dichloroethene	ND	dry	dry							5.00
Vinyl Choride	ND	dry	dry							2.00
1,1,1 Trichloroethane	10	dry	dry							5.00
1,1Dichloroethane	ND	dry	dry							5.00
Chloroethane	ND	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.

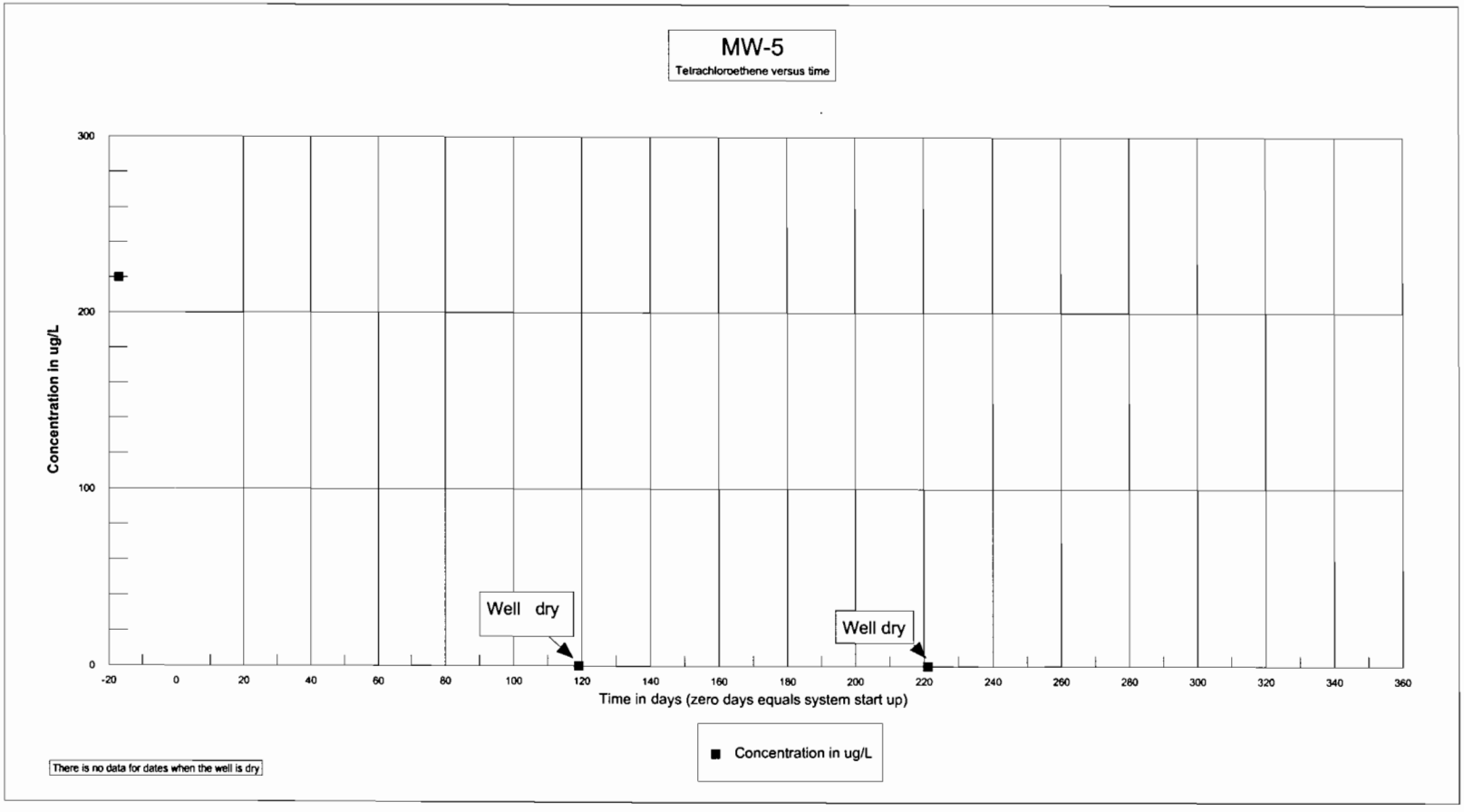

MW-5
Tetrachloroethene versus time
Concentration in ug/L
300
200
100
0
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Well dry
Well dry
There is no data for dates when the well is dry
Concentration in ug/L

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	55 to 95							
Date Sampled	10/29/2001	03/14/2002	06/24/2002							
Days since system start up	-17	119	221							
Days since initial sample	0	136	238							
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	8.6							5.00
Trichloroethene	4	3.7	ND							5.00
cis-1,2-Dichloroethene	8.9	13	4.1							5.00
trans-1,2-Dichloroethene	ND	ND	ND							5.00
Vinyl Choride	ND	ND	ND							2.00
1,1,1 Trichloroethane	1.5	2.4	ND							5.00
1,1Dichloroethane	ND	ND	ND							5.00
Chloroethane	ND	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.

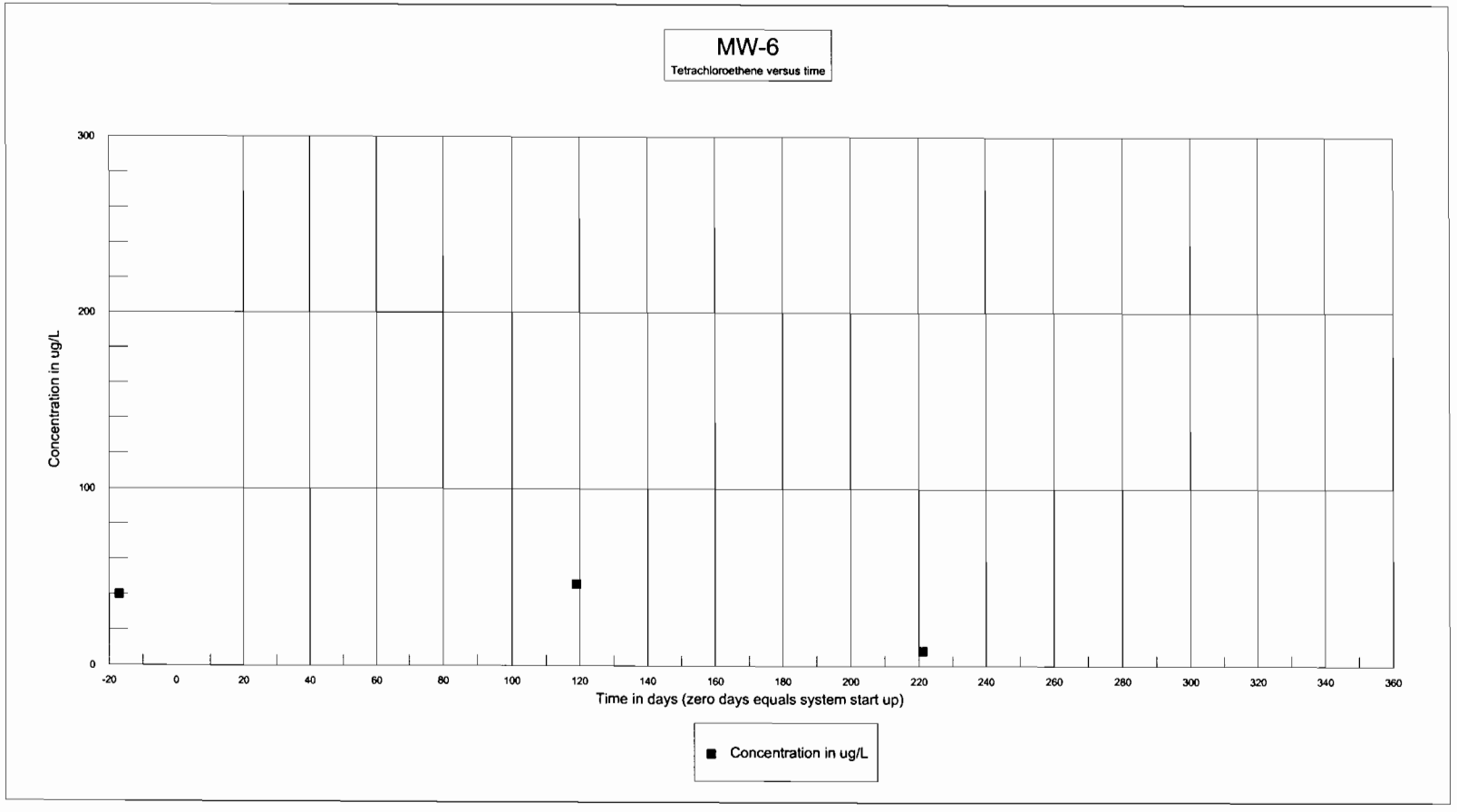

MW-6
Tetrachloroethene versus time
Concentration in ug/L
300
200
100
0
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Concentration in ug/L

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

Well ID	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	MW-7S	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 to70	55 to70	55 to70							values
Date Sampled	10/29/2001	03/14/2002	06/24/2002							
Days since system start up	-17	119	221							
Days since initial sample	0	136	238							
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	8.6							5.00
Trichloroethene	ND	2.7	ND							5.00
cis-1,2-Dichloroethene	ND	7.1	2.9							5.00
trans-1,2-Dichloroethene	ND	ND	ND							5.00
Vinyl Choride	ND	ND	ND							2.00
1,1,1 Trichloroethane	ND	1.5	ND							5.00
1,1Dichloroethane	ND	ND	ND							5.00
Chloroethane	ND	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.

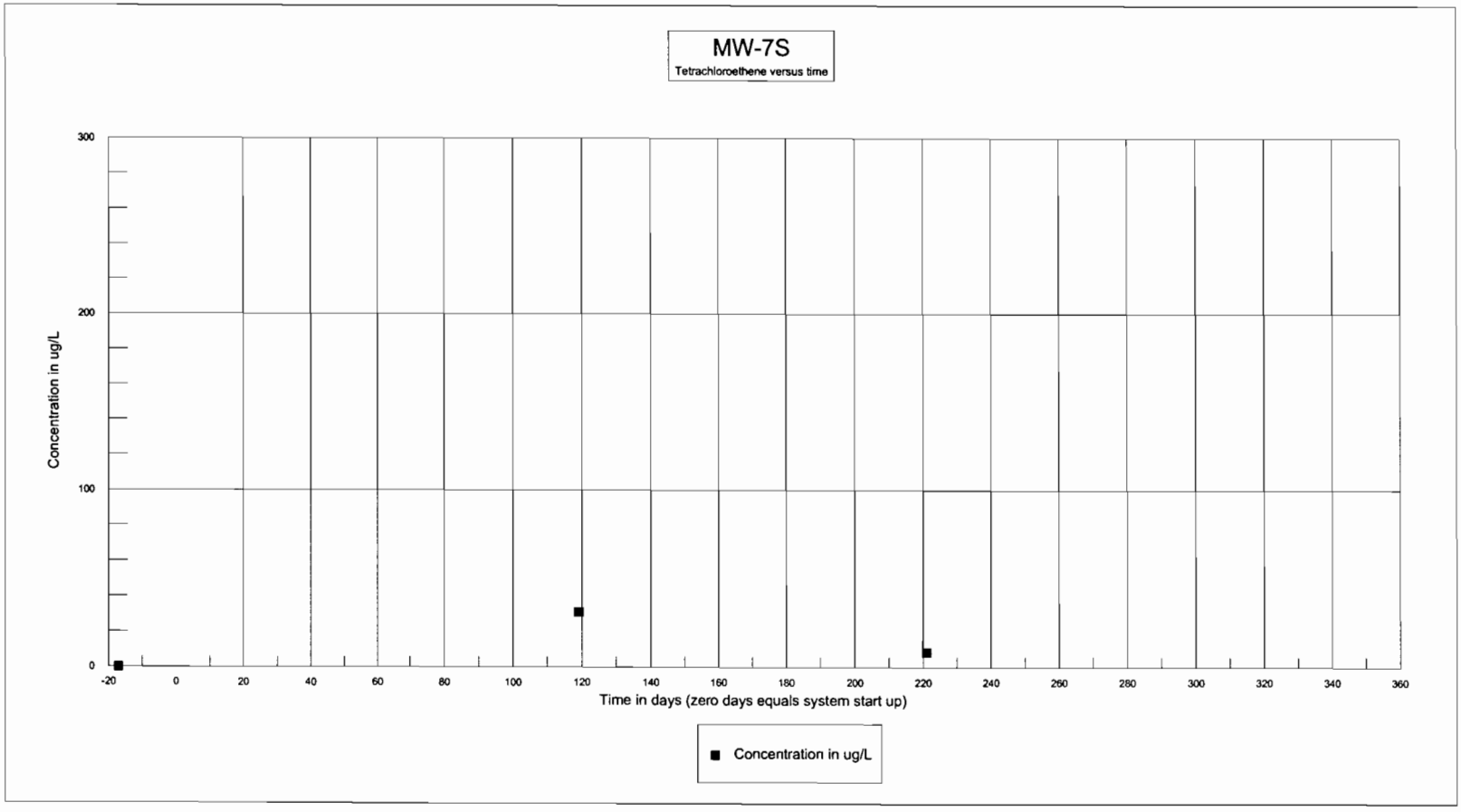

MW-7S
Tetrachloroethene versus time
Concentration in ug/L
300
200
100
0
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Concentration in ug/L

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*
Sample depth in feet	78 to 88	78 to 88	78 to 88							values
Date Sampled	10/29/2001	03/14/2002	06/24/2002							
Days since system start up	-17	119	221							
Days since initial sample	0	136	238							
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	ND							5.00
Trichloroethene	30	ND	ND							5.00
cis-1,2-Dichloroethene	32	ND	ND							5.00
trans-1,2-Dichloroethene	ND	ND	ND							5.00
Vinyl Chonde	ND	ND	ND							2.00
1,1,1 Trichloroethane	19	ND	ND							5.00
1,1Dichloroethane	ND	ND	ND							5.00
Chloroethane	ND	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.

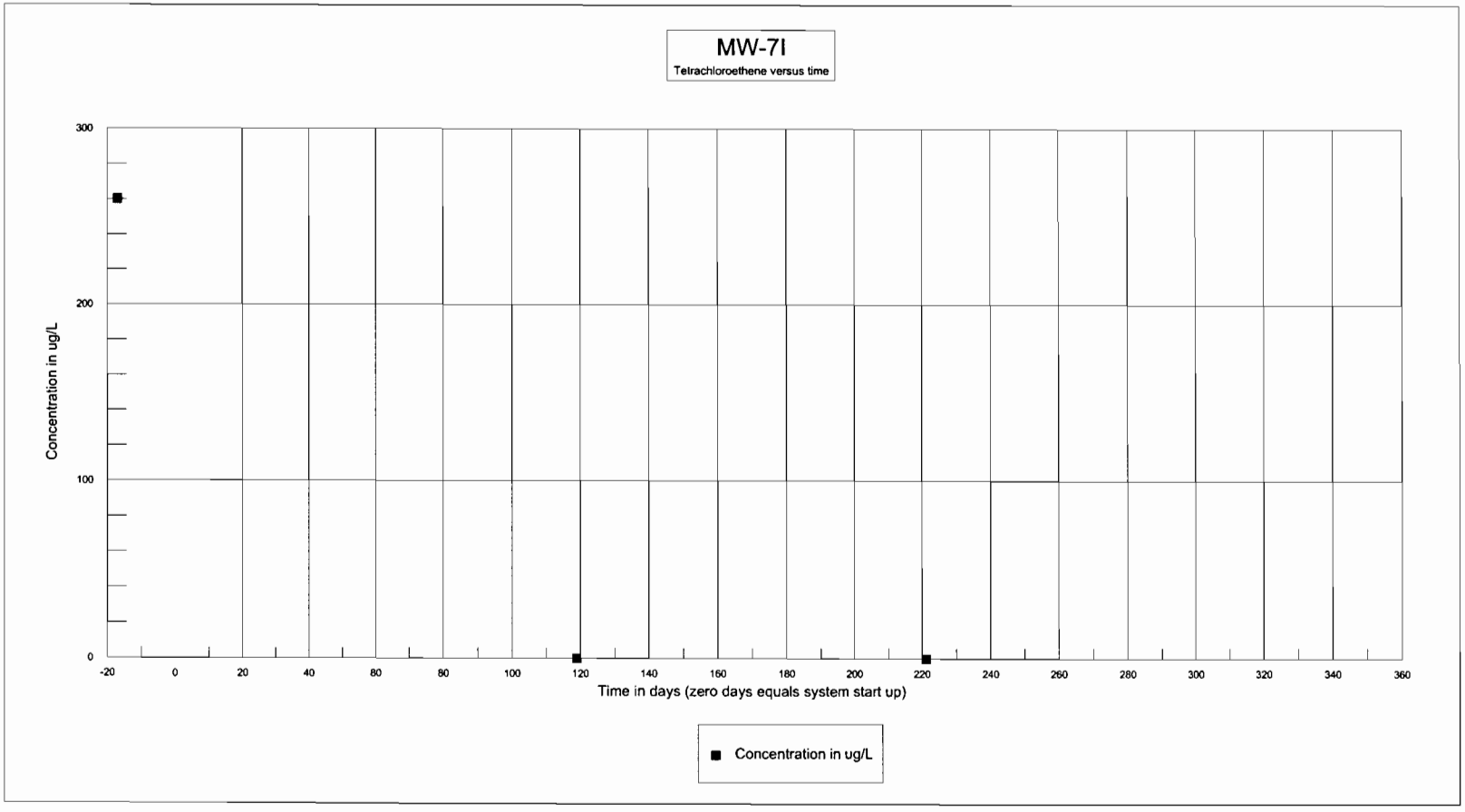

MW-7I
Tetrachloroethene versus time
300
200
100
0
Concentration in ug/L
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Concentration in ug/L

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* values
Depth in feet	95 to 105	95 to 105	95 to 105							
Date Sampled	10/29/2001	03/14/2002	06/24/2002							
Days since system start up	-17	119	221							
Days since initial sample	0	136	238							
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	ND							5.00
Trichloroethene	ND	ND	ND							5.00
cis-1,2-Dichloroethene	ND	ND	ND							5.00
trans-1,2-Dichloroethene	ND	ND	ND							5.00
Vinyl Choride	ND	ND	ND							2.00
1,1,1 Trichloroethane	2.6	1.2	1.6							5.00
1,1Dichloroethane	ND	ND	ND							5.00
Chloroethane	ND	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.

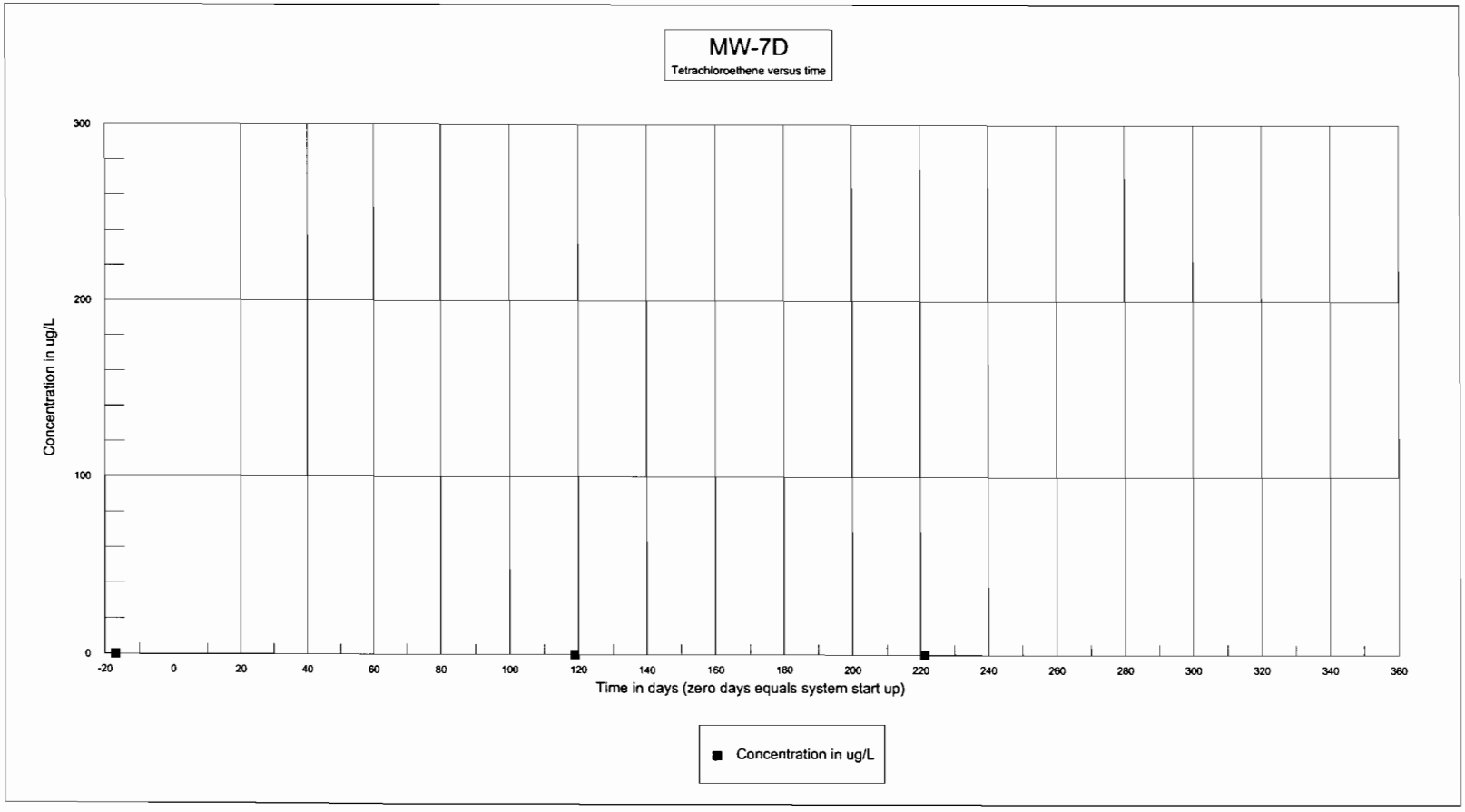
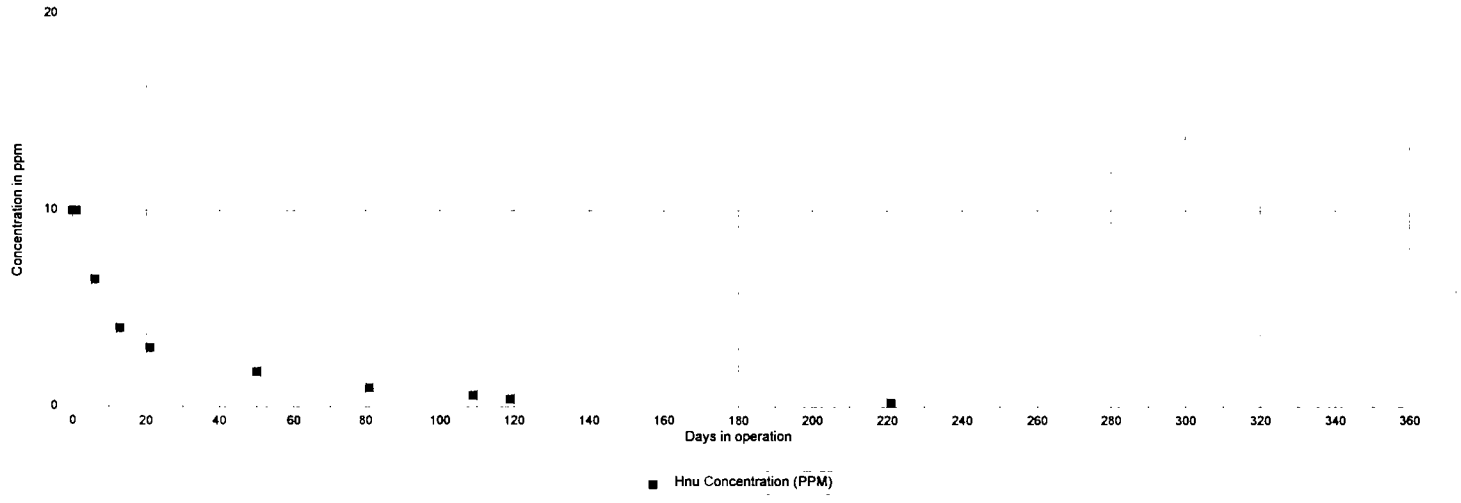

MW-7D
Tetrachloroethene versus time
Concentration in ug/L
300
200
100
0
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
Time in days (zero days equals system start up)
Concentration in ug/L

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

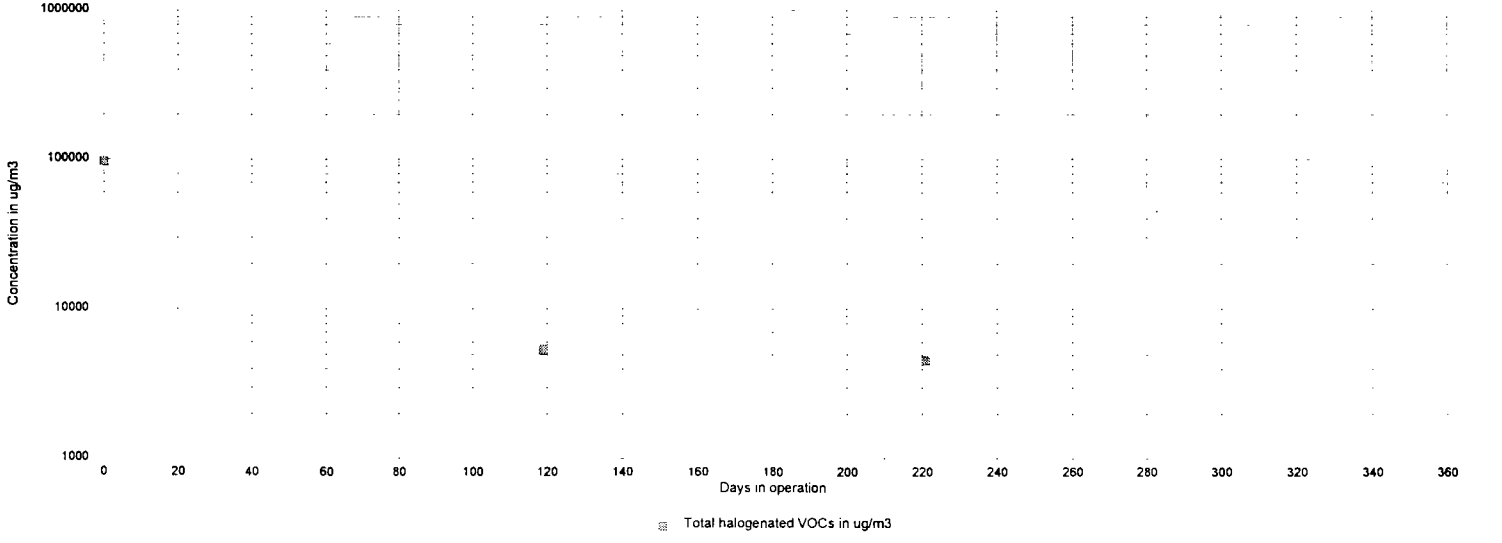
Date	Number of Days in Operation	HNU Before Carbon*	PCE Before Carbon**	TCE Before Carbon**	DCE Before Carbon**	TCA Before Carbon**	Total VOCs Before Carbon**	Comments
11/15/2001	0	10	53,000	14,000	22,000	8,000	97,000	Pilot Test & System Start-up - tube sample
11/16/2001	1	10						
11/21/2001	6	6.5						
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
06/24/2002	221	0.2	3,400	320	380	480	4,580	2 nd 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



Laboratory vapor readings versus time of operation



APPENDIX A

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

DATA PACKAGE FOR RESULTS SUMMARY

PROJECT NAME: UTILITY MANUFACTURING
PROJECT # UTILITY 2ND QTR O&M

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

CHEMTECH PROJECT # P3122
ATTENTION : MICHAEL YAGER

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-1
LAB ID: P3122-01
FILENAME: E:\DATA1\U070814.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/8/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	1.7		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-3
LAB ID: P3122-02
FILENAME: E:\DATA1\U070815.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	15		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-4
LAB ID: P3122-03
FILENAME: E:\DATA1\U070816.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	1.4		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	1.4		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-6
LAB ID: P3122-04
FILENAME: E:\DATA1\U070817.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	4.1		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	8.6		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7S
LAB ID: P3122-05
FILENAME: E:\DATA1\U070818.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	2.9		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	8.6		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7I
LAB ID: P3122-06
FILENAME: E:\DATA1\U070820.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	U		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
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E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7D
LAB ID: P3122-07
FILENAME: E:\DATA1\U070821.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	1.6		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	U		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

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

DATA PACKAGE FOR GC VOLATILE ORGANIC

PROJECT NAME: UTILITY MANUFACTURING
PROJECT # UTILITY 2ND QTR O&M

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

CHEMTECH PROJECT # P3122
ATTENTION : MICHAEL YAGER

CHEMTECH

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

COVER PAGE

CHEMTECH

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

COVER PAGE

ProjectID: utility

Order P3122

CustomerName Rich Consultants

LAB SAMPLE NO.	CLIENT SAMPLE NO
P3122-01	MW-1
P3122-02	MW-3
P3122-03	MW-4
P3122-04	MW-6
P3122-05	MW-7S
P3122-06	MW-7I
P3122-07	MW-7D

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: Carole Collins Name: Carole Collins

Date: 7/9/20 Title: QA/QC

NYDOH CERTIFICATION NO.11376

NJDEP CERTIFICATION NO. 20012

CHEMTECH

QA/QC DELIVERABLES CHECKLIST

Project Number: P3122

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		↘

Carole Collins
QA/QC Data Reviewer

7/9/02
Date

☐ 110 Route 4
Englewood, NJ 07631
Phone: 201.568.7400 Fax: 201.567.3231

NYSDOH Certification No. 10624

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

NYSDOH Certification No. 11376
NJDEP Certification No. 20012

TABLE OF CONTENTS
PROJECT NUMBER: P3122RQ

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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.: P3122RQ
CHEMTECH QUOTE NO.:

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: CA Rich Consultants, Inc.
ADDRESS: 17 Dupont St.
CITY: Plainview STATE: NY ZIP: 11803
ATTENTION: Michael Yager
PHONE: 516 576 8844 FAX: 516 576 0093

PROJECT INFORMATION

PROJECT NAME: Utility Manufacturing
PROJECT NO.: Utility 2nd Qtr O+M
PROJECT MANAGER: M. Yager
LOCATION: 700 Main St Westbury, N.Y.
PHONE: 516 576 8844 FAX:

BILLING INFORMATION

BILL TO: CA Rich Consultants PO #:
ADDRESS: 17 Dupont St.
CITY: Plainview STATE: N.Y. ZIP: 11803
ATTENTION: Mike Yager 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

EPA 8021 Halogenated VOC only

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES A (1)	2	3	4	5	6	7	8	9	COMMENTS
1. 01	MW-1	W		X	6/24/02	8:55	2	X									
2. 02	MW-3	W		X		10:14am	2	X									
3. 03	MW-4	W		X		10:45am	2	X									
4. 04	MW-6	W		X		11:20	2	X									
5. 05	MW-7S	W		X		12pm	2	X									
6. 06	MW-7I	W		X		12:40	2	X									
7. 07	MW-7D	W		X		1:05	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. Alex Rowe	6/24/02	1.
RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:
2.		2.
RELINQUISHED BY:	DATE/TIME:	RECEIVED FOR LAB BY:
3. UPS	6/25/02 10:00	3. Sunny Patel

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

Page _____ of _____

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

25623

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

METHODOLOGY

Volatile Organics by GC

*Test Methods for Evaluating Solid Wastes, SW846, 3rd Edition

** Method 8021B

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

LABORATORY CHRONICLE

CHEMTECH

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

LABORATORY CHRONICLE

CLIENT: CA RICH CONSULTANTS
CLIENT PROJECT: UTILITY MANUFACTURING
DATE RECEIVED: 6/25/02
LABORATORY PROJECT: P3122

EXTRACTION DATE: N/A

SAMPLE DATE	ANALYSIS DATES	ANALYSIS
6/24/02	7/5,6,8,9/02	VOLATILE ORGANICS

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

CONFORMANCE/ NON-CONFORMANCE SUMMARY

PEER REVIEW CHECKLIST FOR GC DATA

Fraction: ~~8010~~ 8021 LMx 7/9/02 Project #: P3122

Sample Numbers: 1-7

QA DATA:

ITEM	Completed
Check instrument log for samples in batch. Highlights.	✓
Make sure correct lab numbers are listed on all data.	
Check Chain Custody and Login Sheet for project specific information.	✓
Check that all manual integrations are initialed and dated.	
BLANKS:	
Check quant report for compounds called and quantitation.	✓
Check if any compounds need to be flagged with a J.	
Check that blank meets contamination criteria.	✓
Check blank chromatograms to ensure that all peaks are accounted for.	✓
Check that all compounds not called are crossed off, initialed and dated on quantitation reports.	✓
CALIBRATION:	
Check that the proper initial and continuing calibration forms are included.	✓
Compare initial curves to continuing curve to make sure correct curves are included.	
Verify dates on curves.	✓
Verify that extra compound initial calibration and continuing are included.	✓
Verify that a continuous calibration check is run every 12 hrs for 8000 series and CLP and every 24hrs for 600 series	✓
Check that the criteria is met on the initial and continuing calibrations.	
20% RSD for initial calibration and 15% for continuing calibration for 8000 series,	✓
25% for CLP and 10% RSD and Table on SOP for continuing for 600 series	
Verify a closing check is analyzed for each 8021 sequence	✓
SURROGATES:	
Check that surrogate recoveries are reported on appropriate form (i.e. water, soil, sludge).	✓
Check that surrogate recoveries meet QC limits listed on the form. Make sure values outside of limits are flagged and tallied.	✓
Check that appropriate action was taken for surrogate recoveries which did not meet QC criteria (samples are re-analyzed to prove matrix interference).	✓
Verify surrogates reported to the quantitation reports.	✓
SPIKES:	
Check that appropriate sample is on the spike recovery form.	✓
Verify that the correct spike sample is being reported for that batch.	✓
Check that the spike recoveries are reported on the appropriate form (i.e. water, soil).	✓
Check that spike recoveries meet QC limits. Make sure values outside of limits are flagged and tallied.	✓
Verify spike recoveries to quantitation reports.	✓
Verify that a blank spike was analyzed for each batch of 20 samples.	✓
Verify that the blank spike meets QC requirements.	✓
If any values outside of QC limits exist on MS/MSD, was Blank Spike used?	✓

Non-conformances / Comments:

SAMPLES:

ITEM	Completed
Check that all manual integrations are initialed , dated and justified.	✓
Check that the correct sample matrix and units are on the result form.	✓
Check quant report for targeted compounds called and verify quantitation (be sure to take moisture and dilutions into account).	✓
Check to ensure that compounds which exceed the linear range have been, diluted, re-analyzed, and quanted from the dilution.	✓
Check that reporting limits are typical and if not (reason is not apparent) are footnoted.	✓
Verify reporting limits for extra compounds.	✓
Check chromatograms to ensure that all peaks are accounted for.	✓
Check if any of the data requires a footnote.	✓
Check that the samples were run / extracted within their holding time.	✓

Non – Conformance / Comments: _____

Peer Review Signature: _____ Date: 7/9/2

TECHNICAL SUPERVISOR REVIEW:

ITEM	Completed
Check for compliance with the Method and project specific requirements.	✓
Check the report for completeness.	✓
Check the information in the case narrative.	✓
Check the results for reasonableness.	✓

Technical Supervisor Review Signature: Carole Collins Date: 7/9/02

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: P3122 MATRIX: Water

METHOD: ~~8010~~ 8021 4/9/02

	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		✓	
8. Analysis Holding Time Met	~~✓~~ 7-9		✓

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:

Samples 2,3,4,5,6&7 are out of holding time. Confirmation included.

Additional Comments: Original runs for samples 2-7 were analyzed on July 6, 5, 2002 which were within hold time. ~~No~~ There was no difference on the results was found. [initials] 7/9/02

[signature] 7-9-02
Analyst Date

Carole Collins 7/9/02
QA REVIEW Date

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: P3122-01
FILENAME: E:\DATA1\U070814.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/8/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	1.7		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-3
LAB ID: P3122-02
FILENAME: E:\DATA1\U070815.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	15		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-4
LAB ID: P3122-03
FILENAME: E:\DATA1\U070816.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	1.4		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	1.4		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-6
LAB ID: P3122-04
FILENAME: E:\DATA1\U070817.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	4.1		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	8.6		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
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D = DILUTION
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Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7S
LAB ID: P3122-05
FILENAME: E:\DATA1\U070818.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	2.9		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	8.6		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7I
LAB ID: P3122-06
FILENAME: E:\DATA1\U070820.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	U		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	U		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

Chemtech

GC Volatiles
DETECTOR: HALL

Tabulated Analytical Report
Method 8021

CLIENT: RICH CONSULTANTS
PROJECT: UTILITY
SAMPLE ID: MW-7D
LAB ID: P3122-07
FILENAME: E:\DATA1\U070821.RAW
BATCH: LB21527

MATRIX: AQUEOUS
DATE ANALYZED: 7/9/02
ANALYST: PHM
DILUTION: 1
PROJECT#: P3122

CAS #	COMPOUNDS	RESULTS (ug/L)	QUALIFIERS	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U		1.0
74-87-3	CHLOROMETHANE	U		1.0
75-01-4	VINYL CHLORIDE	U		1.0
74-83-9	BROMOMETHANE	U		1.0
75-00-3	CHLOROETHANE	U		1.0
75-69-4	TRICHLOROFLOUROMETHANE	U		1.0
75-35-4	1,1 DICHLOROETHENE	U		1.0
75-09-2	METHYLENE CHLORIDE	U		1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U		1.0
75-34-3	1,1 DICHLOROETHANE	U		1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	U		2.0
67-66-3	CHLOROFORM	U		1.0
74-97-5	BROMOCHLOROMETHANE	U		1.0
71-55-6	1,1,1 TRICHLOROETHANE	1.6		1.0
563-58-6	1,1 DICHLOROPROPENE	U		1.0
56-23-5	CARBON TETRACHLORIDE	U		1.0
107-06-2	1,2 DICHLOROETHANE	U		1.0
79-01-6	TRICHLOROETHENE	U		1.0
78-87-5	1,2 DICHLOROPROPANE	U		1.0
75-27-4	BROMODICHLOROMETHANE	U		1.0
74-95-3	DIBROMOMETHANE	U		1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U		1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U		1.0
79-00-5	1,1,2-TRICHLOROETHANE	U		1.0
142-28-9	1,3 DICHLOROPROPANE	U		1.0
127-18-4	TETRACHLOROETHENE	U		1.0
124-48-1	DIBROMOCHLOROMETHANE	U		1.0
106-93-4	1,2 DIBROMOETHANE	U		1.0
108-90-7	CHLOROBENZENE	U		1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U		1.0
75-25-2	BROMOFORM	U		1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U		1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U		1.0
108-86-1	BROMOBENZENE	U		1.0
95-49-8	2, CHLOROTOLUENE	U		1.0
106-34-4	4, CHLOROTOLUENE	U		1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U		1.0
87-68-3	HEXACHLOROBUTADIENE	U		1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U		1.0

MDL = METHOD DETECTION LIMIT
U =UNDETECTED BELOW MDL
D = DILUTION
E = EXCEEDED CALIBRATION RANGE, DILUTION TO FOLLOW

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	
VBA0708W2	U070813.RAW	7/8/02	22:28	97%		77%	
BSA0708W1	U070824.RAW	7/9/02	8:10	93%		97%	
P3122-07 MS	U070822.RAW	7/9/02	5:53	78%		91%	
P3122-07 MSD	U070823.RAW	7/9/02	6:42	100%		120%	
P3122-01	U070814.RAW	7/8/02	23:17	98%		68%	
P3122-02	U070815.RAW	7/9/02	0:08	79%		63%	
P3122-03	U070816.RAW	7/9/02	0:57	84%		60%	
P3122-04	U070817.RAW	7/9/02	1:47	69%		56%	
P3122-05	U070818.RAW	7/9/02	2:37	74%		60%	
P3122-06	U070820.RAW	7/9/02	4:15	87%		73%	
P3122-07	U070821.RAW	7/9/02	5:05	131%		89%	

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

* Denotes surrogate outside control limits

Method Blank

Filename: E:\DATA1\U070813.RAW
Batch:E:\DATA1\V070802.SEQ
Date: 7/8/02
Matrix:Water

CAS #	COMPOUNDS	RESULTS (ug/L)	MDL (ug/L)
75-71-8	DICHLORODIFLUOROMETHANE	U	1.0
74-87-3	CHLOROMETHANE	U	1.0
75-01-4	VINYL CHLORIDE	U	1.0
74-83-9	BROMOMETHANE	U	1.0
75-00-3	CHLOROETHANE	U	1.0
75-69-4	TRICHLOROFLOUROMETHANE	U	1.0
75-35-4	1,1 DICHLOROETHENE	U	1.0
75-09-2	METHYLENE CHLORIDE	U	1.0
156-60-5	TRANS-1,2-DICHLOROETHENE	U	1.0
75-34-3	1,1 DICHLOROETHANE	U	1.0
	2,2-DCPRPA+CIS-1,2DICHLOROETH	U	2.0
67-66-3	CHLOROFORM	U	1.0
74-97-5	BROMOCHLOROMETHANE	U	1.0
71-55-6	1,1,1 TRICHLOROETHANE	U	1.0
563-58-6	1,1 DICHLOROPROPENE	U	1.0
56-23-5	CARBON TETRACHLORIDE	U	1.0
107-06-2	1,2 DICHLOROETHANE	U	1.0
79-01-6	TRICHLOROETHENE	U	1.0
78-87-5	1,2 DICHLOROPROPANE	U	1.0
75-27-4	BROMODICHLOROMETHANE	U	1.0
74-95-3	DIBROMOMETHANE	U	1.0
10061-01-5	CIS 1,3 DICHLOROPROPENE	U	1.0
10061-02-6	TRANS 1,3 DICHLOROPROPENE	U	1.0
79-00-5	1,1,2-TRICHLOROETHANE	U	1.0
142-28-9	1,3 DICHLOROPROPANE	U	1.0
127-18-4	TETRACHLOROETHENE	U	1.0
124-48-1	DIBROMOCHLOROMETHANE	U	1.0
106-93-4	1,2 DIBROMOETHANE	U	1.0
108-90-7	CHLOROBENZENE	U	1.0
630-20-6	1,1,1,2 TETRACHLOROETHANE	U	1.0
75-25-2	BROMOFORM	U	1.0
79-34-5	1,1,2,2 TETRACHLOROETHANE	U	1.0
96-18-4	1,2,3 TRICHLOROPROPANE	U	1.0
108-86-1	BROMOBENZENE	U	1.0
95-49-8	2, CHLOROTOLUENE	U	1.0
106-34-4	4, CHLOROTOLUENE	U	1.0
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	U	1.0
87-68-3	HEXACHLOROBUTADIENE	U	1.0
87-61-6	1,2,3 TRICHLOROBENZENE	U	1.0

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

QC MS/MSD 50PPB Spike

Sample spiked: P3122-07
Date: 7/9/02

Filename MS:U070822
Filename MSD:U070823
Sample ID:U070821

Batch:QCV190A
Matrix:WATER

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	50	0	23	46	*	43	87		62	*	50	150	<20%
74-87-3	CHLOROMETHANE	50	0	28	57		48	97		52	*	50	150	<20%
75-01-4	VINYL CHLORIDE	50	0	21	42	*	46	91		74	*	50	150	<20%
74-83-9	BROMOMETHANE	50	0	21	42	*	44	89		72	*	50	150	<20%
75-00-3	CHLOROETHANE	50	0	20	41	*	44	88		73	*	50	150	<20%
75-69-4	TRICHLOROFLOUROMETHANE	50	0	20	40	*	45	91		78	*	50	150	<20%
75-35-4	1,1 DICHLOROETHENE	50	0	20	40	*	42	84		71	*	50	150	<20%
75-09-2	METHYLENE CHLORIDE	50	0	33	66		46	92		34	*	50	150	<20%
156-60-5	TRANS-1,2-DICHLOROETHENE	50	0	25	49	*	44	87		56	*	50	150	<20%
75-34-3	1,1 DICHLOROETHANE	50	0	23	46	*	45	90		65	*	50	150	<20%
	2,2-DCPRPA+CIS-1,2DICHLOROETHENE	100	0	46	46	*	83	83		58	*	50	150	<20%
67-66-3	CHLOROFORM	50	0	23	46	*	42	85		59	*	50	150	<20%
74-97-5	BROMOCHLOROMETHANE	50	0	22	44	*	42	84		62	*	50	150	<20%
71-55-6	1,1,1 TRICHLOROETHANE	50	2	25	47	*	47	90		63	*	50	150	<20%
563-58-6	1,1 DICHLOROPROPENE	50	0	26	52		44	87		51	*	50	150	<20%
56-23-5	CARBON TETRACHLORIDE	50	0	24	48	*	44	88		59	*	50	150	<20%
107-06-2	1,2 DICHLOROETHANE	50	0	21	43	*	43	86		67	*	50	150	<20%
79-01-6	TRICHLOROETHENE	50	0	27	55		43	87		45	*	50	150	<20%
78-87-5	1,2 DICHLOROPROPANE	50	0	30	59		45	90		42	*	50	150	<20%
75-27-4	BROMODICHLOROMETHANE	50	0	29	58		44	88		42	*	50	150	<20%
74-95-3	DIBROMOMETHANE	50	0	26	52		43	86		49	*	50	150	<20%
10061-01-5	CIS 1,3 DICHLOROPROPENE	50	0	31	62		39	79		24	*	50	150	<20%
10061-02-6	TRANS 1,3 DICHLOROPROPENE	50	0	31	63		43	86		32	*	50	150	<20%
79-00-5	1,1,2-TRICHLOROETHANE	50	0	33	66		45	90		31	*	50	150	<20%
142-28-9	1,3 DICHLOROPROPANE	50	0	34	69		47	94		31	*	50	150	<20%
127-18-4	TETRACHLOROETHENE	50	0	29	58		42	84		37	*	50	150	<20%
124-48-1	DIBROMOCHLOROMETHANE	50	0	34	69		45	90		27	*	50	150	<20%
106-93-4	1,2 DIBROMOETHANE	50	0	38	76		53	105		32	*	50	150	<20%
108-90-7	CHLOROBENZENE	50	0	31	62		47	93		40	*	50	150	<20%
630-20-6	1,1,1,2 TETRACHLOROETHANE	50	0	39	79		50	100		24	*	50	150	<20%
75-25-2	BROMOFORM	50	0	34	68		43	86		23	*	50	150	<20%
79-34-5	1,1,2,2 TETRACHLOROETHANE	50	0	41	82		51	103		23	*	50	150	<20%
96-18-4	1,2,3 TRICHLOROPROPANE	50	0	40	80		53	107		29	*	50	150	<20%
108-86-1	BROMOBENZENE	50	0	35	69		50	100		37	*	50	150	<20%
95-49-8	2, CHLOROTOLUENE	50	0	33	66		45	90		31	*	50	150	<20%
106-34-4	4, CHLOROTOLUENE	50	0	31	61		51	102		50	*	50	150	<20%
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	50	0	43	85		49	99		15		50	150	<20%
87-68-3	HEXACHLOROBUTADIENE	50	0	33	65		42	83		25	*	50	150	<20%
87-61-6	1,2,3 TRICHLOROBENZENE	50	0	42	83		52	104		22	*	50	150	<20%

QC Spike - 50 ppb std

Batch:QCV190A

Filename:E:\DATA1\U070824.RAW
Date: 7/9/02

CAS #	Analyte	Spike Added PPB	Sample Conc	% Rec	Lower Limits	Upper Limits	Flag
75-71-8	DICHLORODIFLUOROMETHANE	50	48	95	50	150	
74-87-3	CHLOROMETHANE	50	47	94	50	150	
75-01-4	VINYL CHLORIDE	50	44	89	50	150	
74-83-9	BROMOMETHANE	50	45	91	50	150	
75-00-3	CHLOROETHANE	50	50	99	50	150	
75-69-4	TRICHLOROFLOUROMETHANE	50	49	97	50	150	
75-35-4	1,1 DICHLOROETHENE	50	55	109	50	150	
75-09-2	METHYLENE CHLORIDE	50	55	110	50	150	
156-60-5	TRANS-1,2-DICHLOROETHENE	50	59	119	50	150	
75-34-3	1,1 DICHLOROETHANE	50	59	118	50	150	
	2,2-DCPRPA+CIS-1,2DICHLOROE	100	117	117	50	150	
67-66-3	CHLOROFORM	50	56	111	50	150	
74-97-5	BROMOCHLOROMETHANE	50	56	112	50	150	
71-55-6	1,1,1 TRICHLOROETHANE	50	57	113	50	150	
563-58-6	1,1 DICHLOROPROPENE	50	57	114	50	150	
56-23-5	CARBON TETRACHLORIDE	50	56	112	50	150	
107-06-2	1,2 DICHLOROETHANE	50	57	113	50	150	
79-01-6	TRICHLOROETHENE	50	57	114	50	150	
78-87-5	1,2 DICHLOROPROPANE	50	54	108	50	150	
75-27-4	BROMODICHLOROMETHANE	50	56	111	50	150	
74-95-3	DIBROMOMETHANE	50	56	111	50	150	
10061-01-5	CIS 1,3 DICHLOROPROPENE	50	55	111	50	150	
10061-02-6	TRANS 1,3 DICHLOROPROPENE	50	56	112	50	150	
79-00-5	1,1,2-TRICHLOROETHANE	50	51	101	50	150	
142-28-9	1,3 DICHLOROPROPANE	50	51	103	50	150	
127-18-4	TETRACHLOROETHENE	50	50	100	50	150	
124-48-1	DIBROMOCHLOROMETHANE	50	50	101	50	150	
106-93-4	1,2 DIBROMOETHANE	50	52	104	50	150	
108-90-7	CHLOROBENZENE	50	45	90	50	150	
630-20-6	1,1,1,2 TETRACHLOROETHANE	50	48	96	50	150	
75-25-2	BROMOFORM	50	52	105	50	150	
79-34-5	1,1,2,2 TETRACHLOROETHANE	50	48	96	50	150	
96-18-4	1,2,3 TRICHLOROPROPANE	50	48	96	50	150	
108-86-1	BROMOBENZENE	50	46	93	50	150	
95-49-8	2, CHLOROTOLUENE	50	49	98	50	150	
106-34-4	4, CHLOROTOLUENE	50	45	91	50	150	
96-12-8	1,2-DIBROMO-3-CHLOROPROPA	50	47	94	50	150	
87-68-3	HEXACHLOROBUTADIENE	50	46	92	50	150	
87-61-6	1,2,3 TRICHLOROBENZENE	50	46	92	50	150	

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.222904.00 07/10/02

C.A. Rich Consultants, Incorporated
17 Dupont Street
Plainview, NY 11803
ATTN: Eric Weinstock PO#:

SOURCE OF SAMPLE: Utility/2nd Qtr. 1001 O&M
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:06/24/02 RECEIVED:06/24/02
TIME COL'D:1400
MATRIX:Air SAMPLE:

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Chloromethane	ug/m3	< 130		07/08/02	125	EPA8260
Bromomethane	ug/m3	< 130		07/08/02	125	EPA8260
Dichlordifluomethane	ug/m3	< 130		07/08/02	125	EPA8260
Vinyl Chloride	ug/m3	< 130		07/08/02	125	EPA8260
Chloroethane	ug/m3	< 130		07/08/02	125	EPA8260
Methylene Chloride	ug/m3	< 130		07/08/02	125	EPA8260
Trichlorofluomethane	ug/m3	< 130		07/08/02	125	EPA8260
1,1 Dichloroethene	ug/m3	< 130		07/08/02	125	EPA8260
1,1 Dichloroethane	ug/m3	< 130		07/08/02	125	EPA8260
1,2 Dichloroethene	ug/m3	380		07/08/02	250	EPA8260
Chloroform	ug/m3	< 130		07/08/02	125	EPA8260
1,2 Dichloroethane	ug/m3	< 130		07/08/02	125	EPA8260
111 Trichloroethane	ug/m3	480		07/08/02	125	EPA8260
Carbon Tetrachloride	ug/m3	< 130		07/08/02	125	EPA8260
Bromodichloromethane	ug/m3	< 130		07/08/02	125	EPA8260
1,2 Dichloropropane	ug/m3	< 130		07/08/02	125	EPA8260
t-1,3Dichloropropene	ug/m3	< 130		07/08/02	125	EPA8260
Trichloroethylene	ug/m3	320		07/08/02	125	EPA8260
Chlorodibromomethane	ug/m3	< 130		07/08/02	125	EPA8260
112 Trichloroethane	ug/m3	< 130		07/08/02	125	EPA8260
c-1,3Dichloropropene	ug/m3	< 130		07/08/02	125	EPA8260
2chloroethvinylether	ug/m3	< 130		07/08/02	125	EPA8260
Bromoform	ug/m3	< 130		07/08/02	125	EPA8260
1122Tetrachloroethane	ug/m3	< 130		07/08/02	125	EPA8260
Tetrachloroethene	ug/m3	3400		07/08/02	125	EPA8260

cc:

LRL=Laboratory Reporting Limit

REMARKS:

DIRECTOR

rn = 22356 NYSDOH ID # 10320

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.222904.00 07/10/02

C.A. Rich Consultants, Incorporated
17 Dupont Street
Plainview, NY 11803
ATTN: Eric Weinstock PO#:

SOURCE OF SAMPLE: Utility/2nd Qtr. 1001 O&M
SOURCE OF SAMPLE:
COLLECTED BY: Client DATE COL'D:06/24/02 RECEIVED:06/24/02
TIME COL'D:1400
MATRIX:Air SAMPLE:

ANALYTICAL PARAMETERS	UNITS	RESULT	FLAG	DATE OF ANALYSIS	LRL	ANALYTICAL METHOD
Chlorobenzene	ug/m3	< 130		07/08/02	125	EPA8260
1,3 Dichlorobenzene (v)	ug/m3	< 130		07/08/02	125	EPA8260
1,2 Dichlorobenzene (v)	ug/m3	< 130		07/08/02	125	EPA8260
1,4 Dichlorobenzene (v)	ug/m3	< 130		07/08/02	125	EPA8260

cc:

LRL=Laboratory Reporting Limit

REMARKS: Volume sampled: 1.6 Liters.
NIOSH Sorbent tube collection.

DIRECTOR

rn = 22357 NYSDOH ID # 10320