A MEMBER OF THE ENVIRONMENTAL RESOURCES MANAGEMENT GROUP

HYDROGEOLOGIC INVESTIGATION

Target Rock Corporation
East Farmingdale, New York

May 1997

Prepared for:

Target Rock Corporation
1966 E. Broadhollow Road
E. Farmingdale, NY 11735

Prepared by:

ERM-NORTHEAST
175 Froehlich Farm Blvd.
Woodbury, NY 11797

ERM

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20 December, 1996

Mr. Bill O'Brian
New York State Department of
Environmental Conservation
SUNY, Building 40
Stony Brook, NY 11790

ERM

SUBJECT: Ground Water Results for Target Rock Facility
East Farmingdale, New York

Dear Bill:

Enclosed for your review are the third quarter's ground water sampling results for the referenced facility. The samples were collected on 12 November 1996 and analyzed for volatile organic compounds (VOCs). A summary table and a copy of the analytical data package are included.

The results are consistent with those of the first round, with no indication of upgradient contamination and no detected VOCs in the vicinity of the former dry well. Monitoring well MW-2 contained 1,2-Dichloroethene at a concentration of 15 micrograms per liter. No 1,1,1-Trichloroethane was detected in MW-2 during this sampling event. Chloroform was detected in MW-5, at an estimated concentration of 1 microgram per liter.

The next round of sampling at the site will occur during February 1997. If you have any questions, please contact us.

Sincerely,

Craig A. Werle, CPG
Principal

Kenneth P. Wenz, Jr., CPG
Senior Project Hydrogeologist

Enclosures

cc: M. Benante (w/o enclosures)
J. Maher (w/o enclosures)

RECEIVED
DEC 23 1996
DEC REGION 1

RECEIVED
JUN 15 1998
Bureau of Eastern
Remedial Action

ANALYTICAL RESULTS OF THIRD QUARTER GROUND WATER SAMPLES
TARGET ROCK FACILITY, EAST FARMINGDALE, NEW YORK

	MW-1		MW-2		MW-3		MW-4		MW-5	
Chloromethane	10	U	10	U	10	U	10	U	10	U
Vinyl chloride	10	U	10	U	10	U	10	U	10	U
Bromomethane	10	U	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	U	10	U	10	U	10	U
Carbon disulfide	10	U	10	U	10	U	10	U	10	U
Acetone	10	U	10	U	10	U	10	U	10	U
Methylene chloride	10	U	10	U	10	U	10	U	10	U
Total 1,2-Dichloroethene	10	U	15		10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	U	10	U	10	U	10	U
Chloroform	10	U	10	U	10	U	10	U	1	J
1,2-Dichloroethane	10	U	10	U	10	U	10	U	10	U
2-Butanone	10	U	10	U	10	U	10	U	10	U
1,1,1-Trichloroethane	10	U	10	U	10	U	10	U	10	U
Carbon Tetrachloride	10	U	10	U	10	U	10	U	10	U
Trichloroethene	10	U	10	U	10	U	10	U	10	U
Benzene	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	10	U	10	U	10	U	10	U	10	U
Bromoform	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-pentanone	10	U	10	U	10	U	10	U	10	U
Toluene	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	10	U	10	U	10	U	10	U	10	U
2-Hexanone	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	10	U	10	U	10	U	10	U	10	U
Ethylbenzene	10	U	10	U	10	U	10	U	10	U
Total Xylenes	10	U	10	U	10	U	10	U	10	U
Styrene	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	U	10	U
Total TICs		U	19	J		U		U		U

NOTES:

Concentrations are micrograms per liter.
Samples collected on 29 August 1996.
TICs: Tentatively Identified Compounds.
U: Undetected. Number represents detection limit.
J: Estimated concentration.

HYDROGEOLOGIC INVESTIGATION

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10570017.470

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

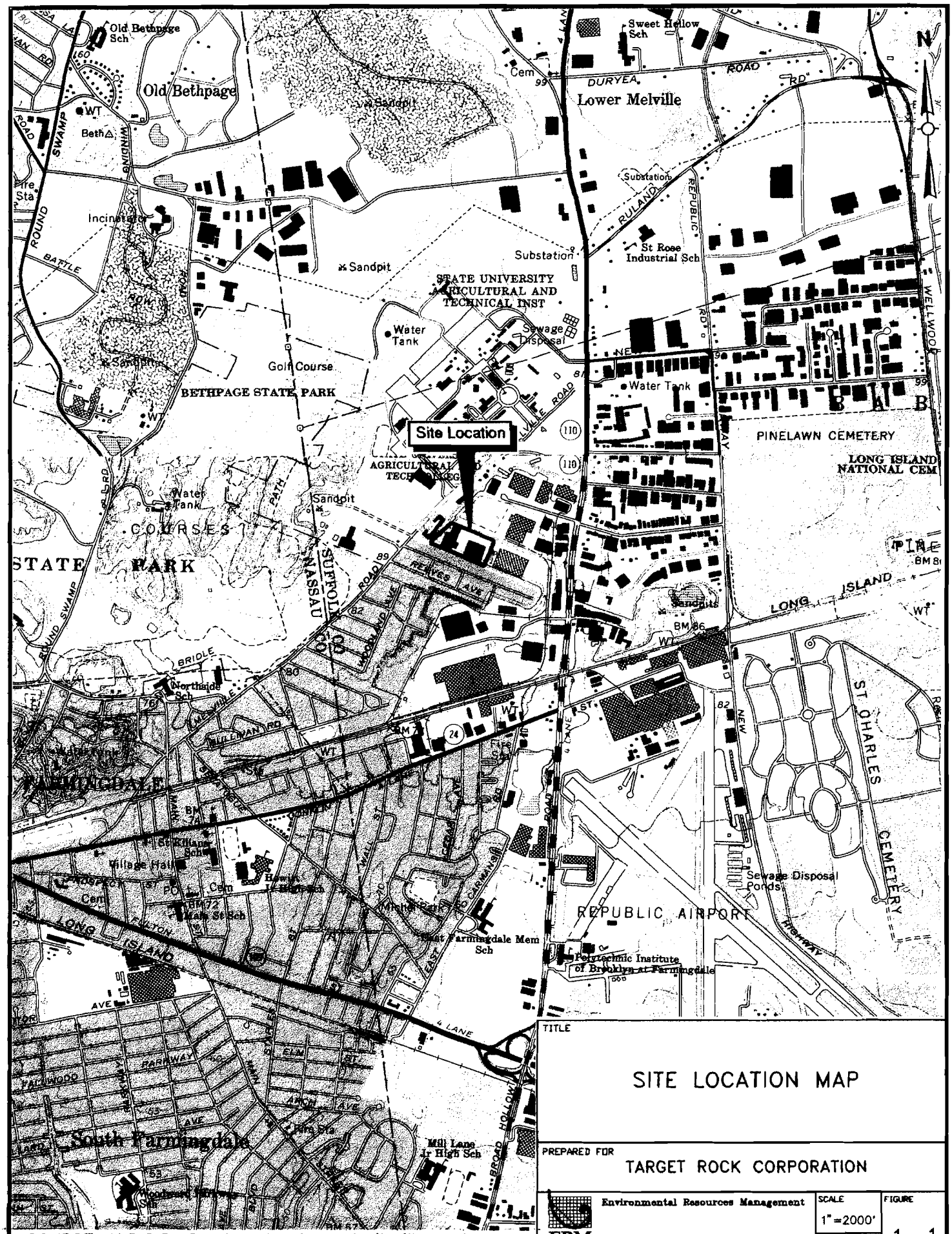
1.0 *INTRODUCTION*

This report presents the results of a ground water investigation conducted at the Target Rock Corporation facility in East Farmingdale, New York. The ground water investigation was performed in accordance with a Stipulation between the New York State Department of Environmental Conservation (NYSDEC), Target Rock Corporation, and Curtiss-Wright Corporation, dated January 1996. The investigation included the following tasks as specified in the Work Plan, approved by NYSDEC in a letter on 20 March 1996:

- installation of a second upgradient ground water monitoring well at the site.
- analysis of ground water samples from the four existing wells and the new well for target compound list (TCL) volatile organic compounds (VOCs).
- results of a well search.
- solute transport modeling output simulating the off-site migration of the potential ground water VOC plume.

1.1 *SITE BACKGROUND*

The Target Rock Corporation is located at 1966 East Broadhollow Road, in the Town of Babylon, Suffolk County, New York (Figure 1-1). The site is approximately 11 acres and is occupied by two manufacturing buildings (West Building and East Building). Target Rock Corporation began valve manufacturing at the site in 1982 and operations continue to present. From mid-1982 to September 1983 wastewater that was generated in the manufacturing operations was discharged to a drywell located toward the rear of the east building. Suffolk County Department of Health Services (SCDHS) sampled the wastewater discharge several times between April 1982 and September 1983 and reportedly detected 1,1,1-trichloroethane,



SOURCE: U.S.G.S. Quadrangle Maps, Amityville and Huntington, NY

TITLE

SITE LOCATION MAP

PREPARED FOR

TARGET ROCK CORPORATION

ERM Environmental Resources Management			SCALE 1"=2000'	FIGURE 1-1
DRAWN: S.P.	JOB NO.: 1057.01	FILE NAME: GEN-V	DATE 10/27/95	

tetrachloroethene, Freon 113 and several other constituents. Following these inspections Target Rock in late 1983 completed the following actions 1) discontinued discharge to the drywell, 2) removed the drywell and surrounding contaminated soils, 3) installed holding tanks to contain the wastewater, and 4) paid a $500 Penalty. It also constructed a secure drum storage facility at the site.

Target Rock was subsequently placed on the New York State Registry of Inactive Hazardous Waste Sites. This listing resulted in the completion of Phase I and Phase II investigations by NYSDEC contractors to assess the extent of contamination at the site. The conclusion of these investigations was that the site did not contain hazardous wastes. It was subsequently ... ? In 1995, Target Rock received a Notice of Hearing and Complaint from NYSDEC related to the wastewater discharge in the early 1980's. At a pre-hearing conference held on 18 October 1995 several tasks related to further ground water investigation at the site were discussed. A work plan describing the tasks to be completed was submitted to NYSDEC in November 1995. The Department approved the work plan in a letter by Bill O'Brien on 20 March.

1.2 *PROJECT OBJECTIVES*

The objectives of this investigation were as follows:

- determine whether the site was being impacted by any upgradient contamination.
- develop a ground water quality database by collection and analysis of four quarters of monitoring well samples, to adequately characterize current site conditions.
- identify potential receptors located hydraulically downgradient from the site.

- evaluate potential downgradient migration of contamination resulting from the wastewater discharge through the use of a solute transport model.

1.3 *REPORT ORGANIZATION*

This report is organized as follows:

Section 1 - Project background and objectives are presented

Section 2 - The installation of the new upgradient monitoring well is documented. In addition, a summary of site hydrogeologic conditions and the results of the four quarterly rounds of ground water monitoring results for all five site wells are presented.

Section 3 - The results of the well search are presented. A description of the ground water solute transport model is then presented. The simulated migration of the VOC plume is also described.

Section 4 - Conclusions, based on the hydrogeologic investigation, and recommendations about further activities at the site are presented.

2.0 *HYDROGEOLOGIC INVESTIGATION*

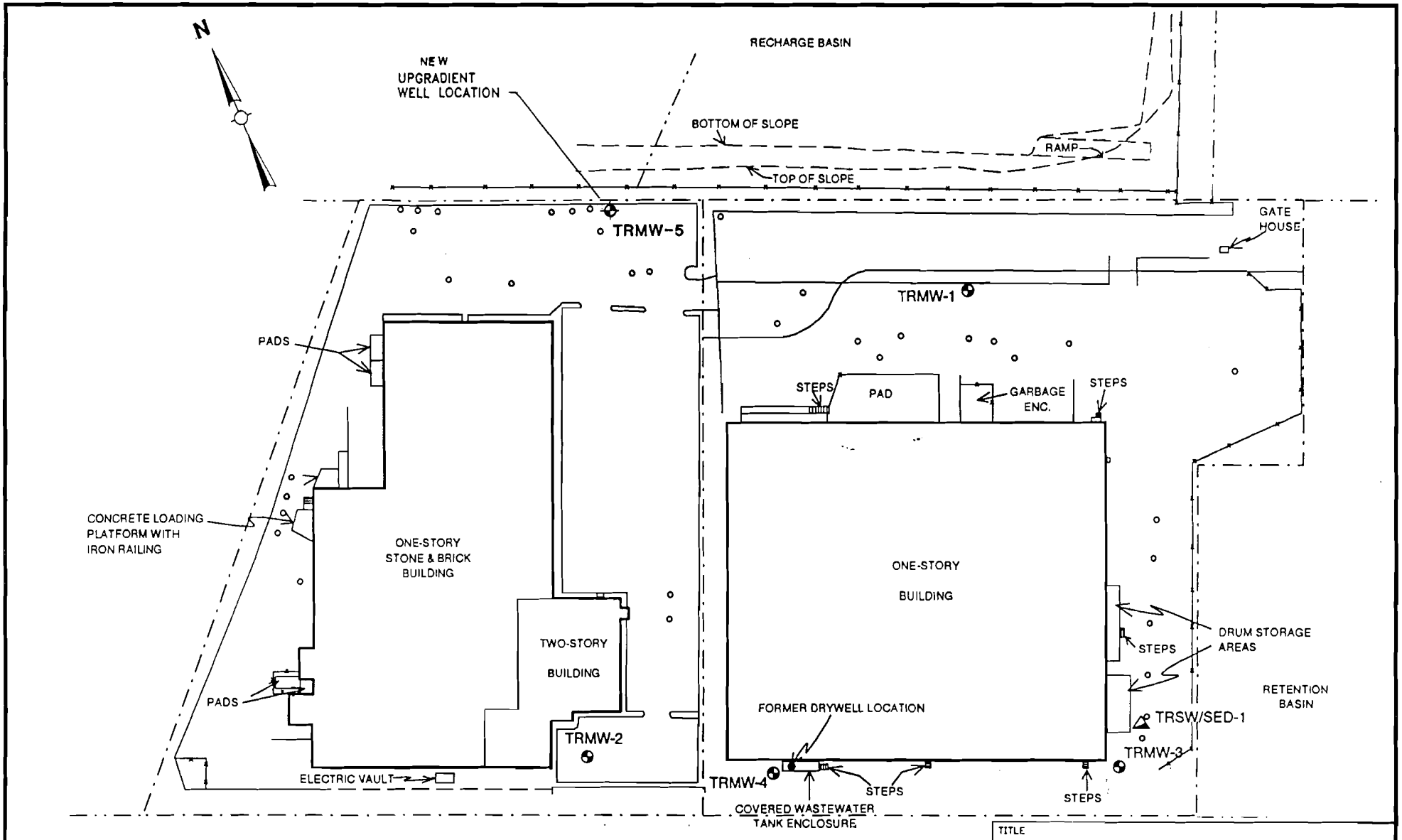
2.1 *MONITORING WELL INSTALLATION*

The new upgradient monitoring well (TRMW-5) was installed on 5 April 1996 with oversight provided by an ERM hydrogeologist. The monitoring well was installed at the northern property boundary, north of the western production building. The location of the well is shown in Figure 2-1.

Prior to the installation of TRMW-5, a geologic boring was installed, to develop a stratigraphic profile for the monitoring well location. This provided information which was used to determine the appropriate depth for the well's screen setting. The boring was installed utilizing a truck-mounted drill rig fitted with 3.25-inch (inside diameter) augers. Soil samples were collected utilizing a split spoon sampler driven with a 130-pound internal slide hammer. Soil samples were collected at five foot intervals to a depth of 42 feet below land surface.

Upon completion, the 3.25-inch augers were removed from the boring and the drill rig was refitted with 6.25-inch (inside diameter) augers for the installation of the monitoring well. The augers were advanced to a depth of 40 feet below land surface. Since the lower permeable unit was not encountered in the initial boring, it was determined that the TRMW-5 screen should be set at 40 feet below surface grade. This is consistent with the screen setting for the other upgradient well, TRMW-1.

The well was constructed of 20 feet of 4-inch diameter, 20 slot PVC screen and 20 feet of PVC riser to grade. The well was completed with a sand pack of #2 Morie sand extending to two feet above the screen (18 feet below grade), followed by two feet of a bentonite seal (16 feet below grade). The remainder of the annular space was filled with a bentonite-



LEGEND

- Catch basins
- Monitoring well location
- Surface water/sediment location

0 120 ft

SCALE
1 in. = 120 ft

SOURCE: LAWLER, MATUSKY & SKELLY ENGINEERS

TITLE

UPGRADIENT WELL LOCATION MAP

PREPARED FOR
TARGET ROCK CORPORATION

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Environmental Resources Management

SCALE	FIGURE
GRAPHIC	2-1

DRAWN	JOB NO.	FILE NAME	DATE
S.P.	1057.01	GEN-H	10/27/95

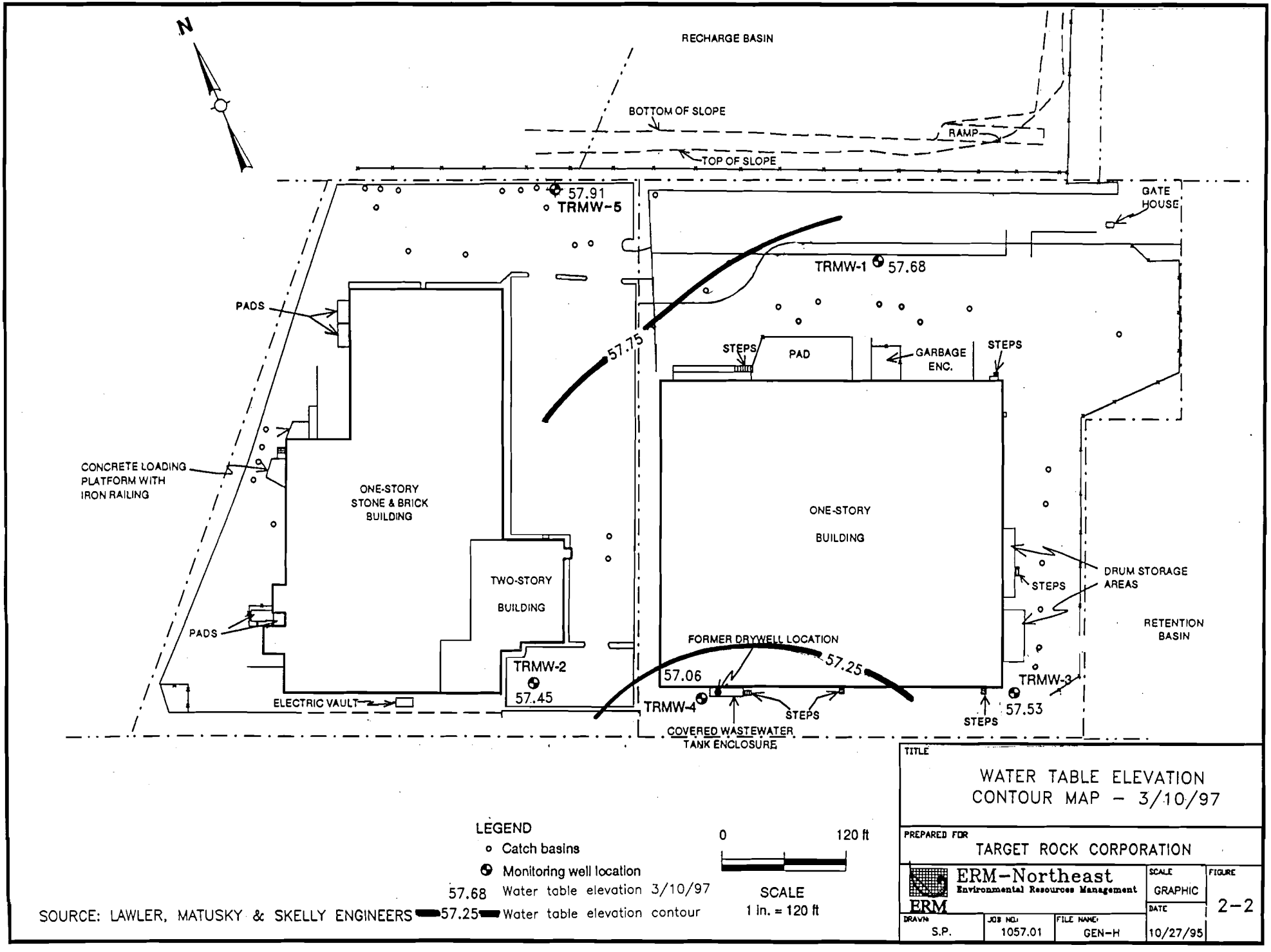
cement grout and the well was fitted with a steel, flush-mounted cover. Well construction details are presented on the well's log, contained in Appendix A.

Following installation of TRMW-5, it was developed utilizing a submersible pump at a rate of approximately 3 gallons per minute. The well was developed until it reached the NYSDEC standard of 50 NTUs. Approximately 160 gallons were removed before this standard was achieved.

2.2 *HYDROGEOLOGIC CONDITIONS*

The material encountered during the installation of TRMW-5 consisted primarily of brown to tan, fine to coarse sands with traces of gravel down to approximately 25 feet below grade. At approximately 26 feet below grade, a 0.2-foot layer of laminated gray to black, very fine sand and silt with traces of clay and mica was encountered. Samples collected from 30 feet below grade to the bottom of the boring (42 feet below grade) were found to consist of orange to yellowish brown, very fine to fine sands. The subsurface materials are consistent with the soils comprising the Upper Glacial Aquifer of Long Island. The laminated unit encountered at approximately 26 feet below grade appears to be an isolated stringer and is not believed to be related to the Magothy Aquifer materials, which were encountered during the installation of TRMW-1 at the site. A geologic log of the boring is presented in Appendix A.

Depth to water measurements collected during the four rounds of quarterly sampling have consistently shown that ground water flow at the site is to the south. This is consistent with the reported regional flow direction for the area. A representative ground water elevation contour map (data collected 10 March 1997) is shown on Figure 2-2.


N
RECHARGE BASIN
BOTTOM OF SLOPE
RAMP
TOP OF SLOPE
57.91
TRMW-5
GATE HOUSE
TRMW-1
57.68
PADS
57.75
STEPS
PAD
GARBAGE ENC.
STEPS
CONCRETE LOADING PLATFORM WITH IRON RAILING
ONE-STORY STONE & BRICK BUILDING
ONE-STORY BUILDING
TWO-STORY BUILDING
DRUM STORAGE AREAS
STEPS
PADS
RETENTION BASIN
FORMER DRYWELL LOCATION
57.25
57.06
TRMW-2
57.45
TRMW-3
57.53
ELECTRIC VAULT
TRMW-4
STEPS
STEPS
COVERED WASTEWATER TANK ENCLOSURE
LEGEND
Catch basins
Monitoring well location
57.68 Water table elevation 3/10/97
57.25 Water table elevation contour
SOURCE: LAWLER, MATUSKY & SKELLY ENGINEERS
0
120 ft
SCALE
1 in. = 120 ft
TITLE
WATER TABLE ELEVATION CONTOUR MAP – 3/10/97
PREPARED FOR
TARGET ROCK CORPORATION
ERM-Northeast
Environmental Resources Management
ERM
SCALE
GRAPHIC
FIGURE
2-2
DRAWN
S.P.
JOB NO.
1057.01
FILE NAME
GEN-H
DATE
10/27/95

2.3 *COLLECTION AND ANALYSIS OF GROUND WATER SAMPLES*

In accordance with the approved work plan, the five wells at the Target Rock facility were sampled four times (17 April 1996, 29 August 1996, 12 November 1996, and 10 March 1997). Prior to sampling, the depth to water and depth to bottom were measured at each well (referenced to the top of the well casing), using an electronic water level indicator. Following the collection of water levels, three casing volumes were purged from each well, using a 2-inch submersible pump. The pump was decontaminated before each evacuation with a detergent wash and a tap water rinse. During the well evacuation several field parameters were measured and recorded. These include: total organic vapors, pH, temperature, turbidity, conductivity, and salinity. Before sampling, all turbidity readings were below the NYSDEC criterion of 50 NTUs.

Ground water samples were obtained with new, dedicated, bottom-loading bailers. Upon retrieval, all samples were placed in laboratory-prepared sample containers and stored in a cool environment.

During each sampling event, ten samples were collected. Two of these were from the upgradient monitoring wells, three were from the downgradient monitoring wells, and the remaining five were quality assurance and quality control (QA/QC) samples. QA/QC samples were one field blank, one trip blank, one field duplicate, one matrix spike (MS) and one matrix spike duplicate (MSD). All samples were logged and shipped to H2M Laboratories, Inc., Melville, NY under full chain-of custody procedures. The samples were analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs) in accordance with Method NYSDEC ASP 91.1.

2.4 *GROUND WATER QUALITY*

The analytical results for the four quarters are summarized in Table 2-1. The laboratory data package, summary table, and data validation report (where applicable) for each are included as Appendix B.

The two upgradient wells (MW-1 and MW-5) have consistently been unimpacted throughout the monitoring program. The only VOC detected in either of these wells was chloroform, which was detected in MW-5 during November 1996, at an estimated concentration of 1 ug/l.

The three downgradient wells have only shown negligible impacts. MW-2 has shown consistently decreasing concentrations, with total VOCs ranging from 36 ug/l (April 1996) to 9 ug/l (March 1997). The only VOC detected in MW-3 over the course of this monitoring program was the acetone found in March 1997. Similarly, MW-4 has contained VOCs on only one occasion; this was the TCA found during the fourth quarter.

The analytical results from ERM's quarterly monitoring program were uniformly lower than the one set of previous results, collected by a NYSDEC contractor in August 1992. Of particular interest is MW-4, located immediately adjacent to the former dry well. In 1992, this well contained 66 ug/l of 1,1,1-trichloroethane (TCA), as well as seven other volatile organic compounds. During the monitoring program, TCA was only detected once in this well, at 9 ug/l in March 1997. No other compounds were detected in this well during any of the four sampling events. These results indicate that the former dry well is not a source of contamination.

TABLE 2-1
ANALYTICAL RESULTS FOR QUARTERLY GROUND WATER SAMPLING PROGRAM
TARGET ROCK FACILITY, EAST FARMINGDALE, NEW YORK

	MW-1 4/17/96	MW-1 8/29/96	MW-1 11/12/96	MW-1 3/10/97	MW-2 4/17/96	MW-2 8/29/96	MW-2 11/12/96	MW-2 3/10/97	MW-3 4/17/96	MW-3 8/29/96
Chloromethane	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Vinyl chloride	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Carbon disulfide	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Acetone	10 UJ	10 U	10 U	5 U	10 UJ	10 U	10 U	5 U	10 UJ	10 U
Methylene chloride	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Total 1,2-Dichloroethene	10 U	10 U	10 U	5 U	28	21	15	6	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	5 U	1 J	10 U	10 U	5 U	10 U	10 U
Chloroform	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
2-Butanone	10 UJ	10 U	10 U	5 UJ	10 UJ	10 U	10 U	5 UJ	10 UJ	10 U
1,1,1-Trichloroethane	10 U	10 U	10 U	5 U	7	4 J	10 U	3 J	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Benzene	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Dibromochloromethane	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Bromoform	10 U	10 U	10 U	5 UJ	10 U	10 U	10 U	5 UJ	10 U	10 U
4-Methyl-2-pentanone	10 U	10 U	10 U	5 UJ	10 U	10 U	10 U	5 UJ	10 U	10 U
Toluene	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Tetrachloroethene	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Total Xylenes	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Styrene	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U
Total TICs	U	U	U	U	U	U	19 J	U	U	U

NOTES:

Concentrations are micrograms per liter.
TICs: Tentatively Identified Compounds.
U: Undetected. Number represents detection limit.
J: Estimated concentration.
Shaded cells represent detections.

TABLE 2-1
ANALYTICAL RESULTS FOR QUARTERLY GROUND WATER SAMPLING PROGRAM
TARGET ROCK FACILITY, EAST FARMINGDALE, NEW YORK

	MW-3 11/12/96	MW-3 3/10/97	MW-4 4/17/96	MW-4 8/29/96	MW-4 11/12/96	MW-4 3/10/97	MW-5 4/17/96	MW-5 8/29/96	MW-5 11/12/96	MW-5 3/10/97
Chloromethane	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Vinyl chloride	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Bromomethane	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Chloroethane	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
1,1-Dichloroethene	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Carbon disulfide	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Acetone	10 U	3 J	10 UJ	10 U	10 U	5 U	10 UJ	10 U	10 U	5 U
Methylene chloride	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Total 1,2-Dichloroethene	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
1,1-Dichloroethane	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Chloroform	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	1 J	5 U
1,2-Dichloroethane	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
2-Butanone	10 U	5 UJ	10 UJ	10 U	10 U	5 UJ	10 UJ	10 U	10 U	5 UJ
1,1,1-Trichloroethane	10 U	5 U	10 U	10 U	10 U	9	10 U	10 U	10 U	5 U
Carbon Tetrachloride	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Trichloroethene	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Benzene	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
1,2-Dichloropropane	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Bromodichloromethane	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
cis-1,3-Dichloropropene	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
trans-1,3-Dichloropropene	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
1,1,2-Trichloroethane	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Dibromochloromethane	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Bromoform	10 U	5 UJ	10 U	10 U	10 U	5 UJ	10 U	10 U	10 U	5 UJ
4-Methyl-2-pentanone	10 U	5 UJ	10 U	10 U	10 U	5 UJ	10 U	10 U	10 U	5 UJ
Toluene	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Tetrachloroethene	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
2-Hexanone	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Chlorobenzene	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Ethylbenzene	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Total Xylenes	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Styrene	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
1,1,2,2-Tetrachloroethane	10 U	5 U	10 U	10 U	10 U	5 U	10 U	10 U	10 U	5 U
Total TICs	U	U	U	U	U	U	U	U	U	U

NOTES:

Concentrations are micrograms per liter.
TICs: Tentatively Identified Compounds.
U: Undetected. Number represents detection limit.
J: Estimated concentration.
Shaded cells represent detections.

3.0 *GROUND WATER MODELING STUDY*

To evaluate the potential downgradient impacts from the disposal of wastewater in 1982-1983 into the former dry well, it was agreed that a two-dimensional solute transport modeling study would be conducted. The objective of this effort was to simulate the off-site migration of contaminants entrained in the wastewater and determine whether any downgradient receptors were impacted in the past or would be impacted in the future. The necessary first step in the modeling study is a well search to identify all potential downgradient receptors. The well search and the ground water modeling are described below.

3.1 *WELL SEARCH*

To identify all wells that are potentially relevant to the modeling simulation of the contaminant plume an area within a ½ mile radius of Target Rock site in the upgradient and side gradient directions and a 1 mile radius in the downgradient direction was originally included. Based on the results of the modeling, the well search area was extended approximately 2,500 feet further downgradient (see Figure 3-1). Wells that could potentially be impacted include those wells used for public or private potable supply, irrigation or industrial purposes. To identify all wells in the selected area the files at the NYSDEC Division of Water Resources in Stony Brook were reviewed. These files include maps with wells plotted that have greater than a 45 gpm capacity, well completion reports, well permits and the most recently reported pumpage rate for permitted wells. Additionally, USGS and Suffolk County Department of Health Services files were also reviewed. All public supply wells identified in the review of files are listed in Table 3-1 with privately owned wells listed in Table 3-2. Figure 3-2 graphically presents all identified wells.

TITLE

WELL SEARCH AREA

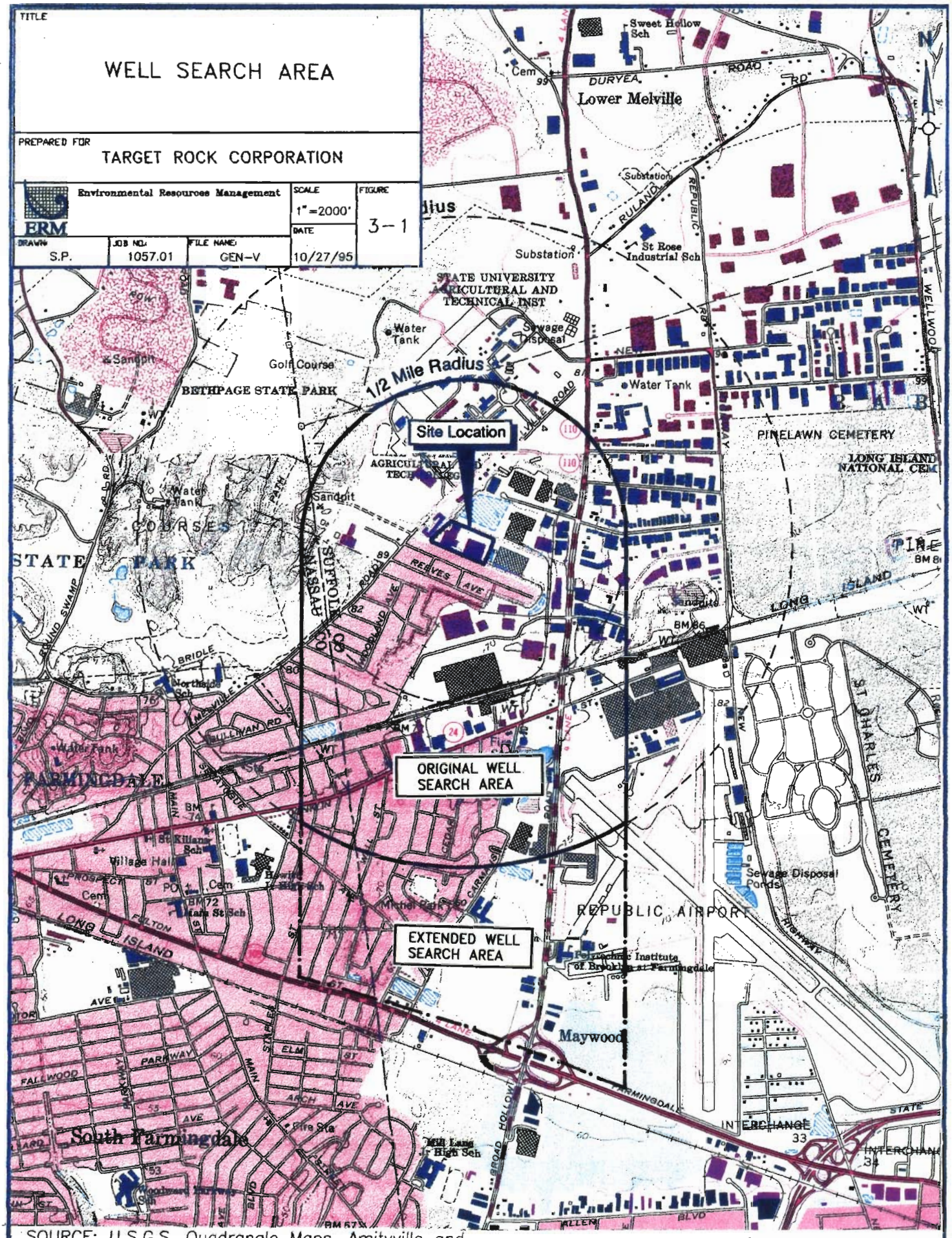
PREPARED FOR

TARGET ROCK CORPORATION

Environmental Resources Management

SCALE	FIGURE
1"=2000'	3-1

DRAWN	JOB NO.	FILE NAME	DATE
S.P.	1057.01	GEN-V	10/27/95



SOURCE: U.S.G.S. Quadrangle Maps, Amityville and Huntington, NY

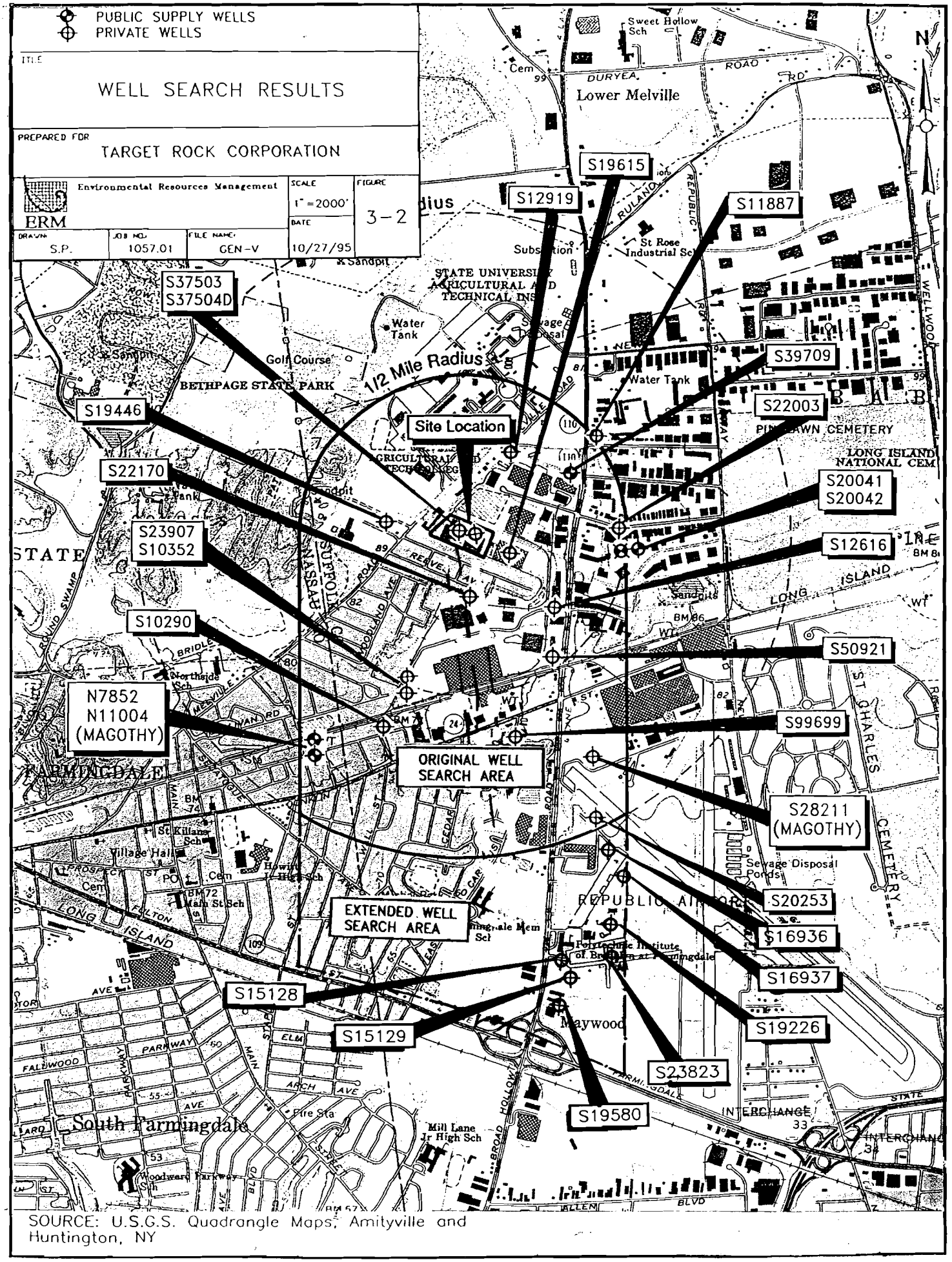

PUBLIC SUPPLY WELLS
PRIVATE WELLS
TITLE
WELL SEARCH RESULTS
PREPARED FOR
TARGET ROCK CORPORATION
Environmental Resources Management
ERM
SCALE
1" = 2000'
FIGURE
3-2
DATE
10/27/95
DRAWN
S.P.
JOB NO.
1057.01
FILE NAME
GEN-V
S37503
S37504D
S19446
S22170
S23907
S10352
S10290
N7852
N11004
(MAGOTHY)
S19615
S12919
S11887
S39709
S22003
S20041
S20042
S12616
S50921
S99699
S28211
(MAGOTHY)
S20253
S16936
S16937
S19226
S23823
S19580
S15128
S15129
Site Location
1/2 Mile Radius
ORIGINAL WELL SEARCH AREA
EXTENDED WELL SEARCH AREA
Lower Melville
South Farmingdale
FARMINGDALE
BETHPAGE STATE PARK
REPUBLIC AIRPORT
Golf Course
Water Tank
Sandpit
Sewage Disposal Ponds
Maywood
Mill Lane Jr High Sch
Fire Sta
Village Hall
Northside Sch
St Killians Sch
Sweet Hollow Sch
St Rose Industrial Sch
Cem
LONG ISLAND
SOURCE: U.S.G.S. Quadrangle Maps, Amityville and Huntington, NY

TABLE 3-1

PUBLIC SUPPLY WELLS - 1/2 MILE RADIUS AND DOWNGRADIENT AREA OF CONCERN

WELL NUMBER	OWNER	LOCATION	ORIENTATION RELATIVE TO SITE	DATE OF INSTALL	DEPTH (feet)	DTGW (feet)	CAPACITY (gpm)	AQUIFER	STATUS (1994)
S39709	East Farmingdale Water Dist.	Route 110 / Daniel St.	Up, side gradient	4/72	712	36	1400	Magothy	In use
S20041	East Farmingdale Water Dist.	Route 110 / Gazza Blvd.	Side gradient	6/62	268	25	1400	Glacial	Inactive
S20042	East Farmingdale Water Dist.	Route 110 / Gazza Blvd.	Side gradient	6/62	585	25	1400	Magothy	In use
N7852	Village of Farmingdale	Eastern Pkwy / Oakview Ave	Down, side gradient	4/66	457	26	1200	Magothy	In use
N11004	Village of Farmingdale	Ketcham Lane / Ridge Rd	Down, side gradient	2/90	347	52	1380	Magothy	In use

Notes:
Source on information NYSDEC well completion reports and State well pumpage records.

TABLE 3-2

PRIVATE WELLS - 1/2 MILE RADIUS AND DOWNGRADIENT AREA OF CONCERN

WELL NUMBER	OWNER	LOCATION	ORIENTATION RELATIVE TO SITE	DATE OF INSTALL	DEPTH (feet)	DTGW (feet)	CAPACITY (gpm)	AQUIFER	USE	STATUS (1994)
S11887	Anthony Santa Maria	Broad Hollow Rd / Smith St	Up gradient	5/54	46	16	100	Glacial	Farm Irrigation	NA
S12919	LI Agricultural & Tech Inst.	Melville Rd / Route 110	Up gradient	4/55	79	31	600	Glacial	For College	NA
S19615	S. Kleins Dept. Stores	Route 110 / Alexander Ave	Side gradient	4/61	79	NA	300	Glacial	Warehouse	Inactive
S19446	Stimpfle Florists Co.	Melville Rd / Alexander Ave	Side gradient	12/60	74	25	40	Glacial	Building Supply	NA
S22003	NA	Broad Hollow Rd	Up, side gradient	NA	NA	NA	NA	NA	NA	NA
S12616	East Coast Lumber Corp.	Broad Hollow Rd / LIRR	Down, side gradient	9/54	54	11	150	Glacial	Cooling	NA
S22170	Price Industrial Park	Route 110 / LIRR	Down gradient	12/63	47	10	1200	Glacial	Washing Gravel	NA
S37503	Target Rock Corp	Route 110 / LIRR	At Site	5/71	23	10	40	Glacial	Plant Process Cooling	NA
S37504D	Target Rock Corp	Route 110 / LIRR	At Site	6/70	22	11	none	NA	Diffusion well	NA
S50921	Marin Ford.	Route 110 / Conklin St.	Down, side gradient	1/74	47	16	45	Glacial	Car Washing-Commercial	NA
S23907	Plastic Calendering Corp	361 Eastern Pkwy	Down gradient	3/66	55	14	300	Glacial	Cooling	NA
S10352	Plastic Calendering Corp	Eastern Pkwy / Denton Pl.	Down gradient	3/53	58	21	300	Glacial	General	Inactive
S10290	Leiteh Mfg. Co.	Eastern Pkwy / Prospect Ct.	Down gradient	1/48	49	22	61	Glacial	Mfg. & Domestic	NA
S28211	Republic Aviation	Route 110 / Conklin	Down, side gradient	11/66	577	36	1400	Magothy	Industrial & Sanitary	Inactive
S20253	Republic Aviation	Broad Hollow Rd	Down, side gradient	11/60	77	30	350	Glacial	Unknown	Inactive
S99699	East Farmingdale Fire Dept.	930 Conklin St.	Down, side gradient	1/91	47	20	75	Glacial	Ground water Remediation	NA
S16936	Republic Aviation	Broad Hollow Rd	Down, side gradient	12/58	211	21	200	Glacial	Cooling Sanitary	NA
S16937	Republic Aviation	Broad Hollow Rd	Down, side gradient	12/58	200	21	200	Glacial	Cooling Sanitary	NA
S19229	Republic Aviation	Broad Hollow Rd	Down, side gradient	9/60	52	20	50	Glacial	General	NA
S19580	Farm. Motor Lodge	Route 110	Down, side gradient	5/61	295	15	100	Glacial	Domestic	NA
S23823	Polytechnic Institute	Route 110	Down, side gradient	2/65	407	35	190	NA	Cooling	NA
S15128	NA	Route 110	Down, side gradient	NA	NA	NA	NA	NA	NA	NA
S15129	NA	Route 110	Down, side gradient	NA	NA	NA	NA	NA	NA	NA

#1, assigned to old Motels well

Notes:
NA - not available
Source of information NYSDEC well completion reports and State well pumpage records.

3.2 GROUND WATER MODELING

3.2.1 Flow Model Description

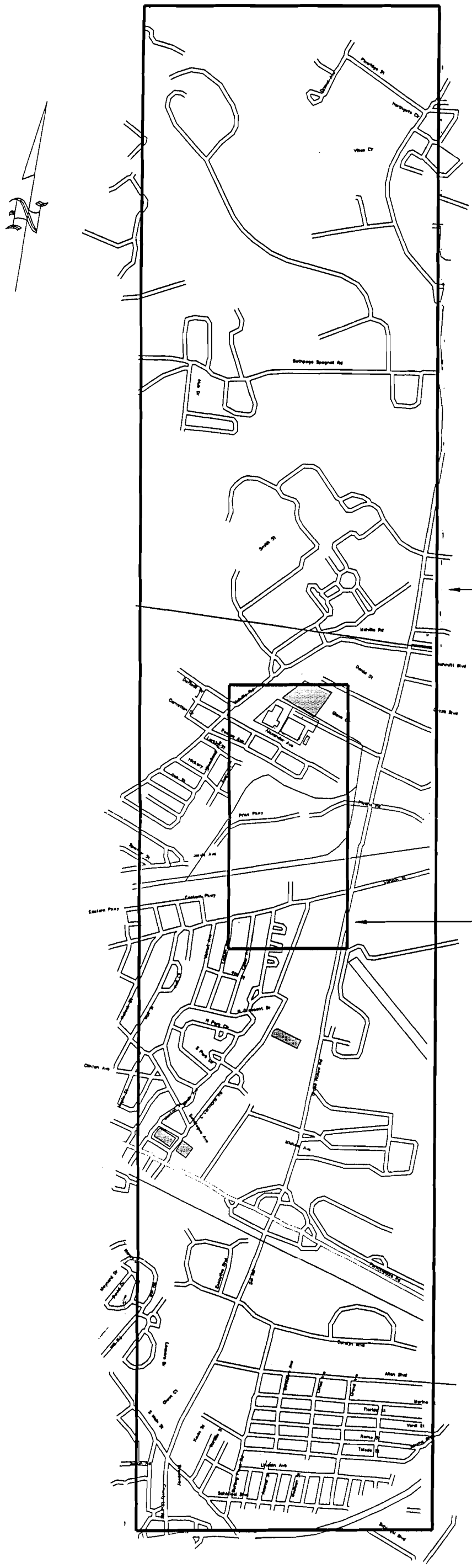
The model used to simulate ground water flow conditions at the Target Rock site was the U. S. Geological Survey's Modular three-dimensional flow model, MODFLOW. MODFLOW is a 3-dimensional, finite difference, saturated flow model developed by the United States Geological Survey (McDonald & Harbaugh, 1988). MODFLOW is widely used and can perform both steady state and transient analyses and has a wide variety of boundary conditions and input options.

System Conceptualization

A two-dimensional finite difference grid was developed to cover a rectangular region approximately 5,000 feet east to west and 26, 000 feet north to south (see Figure 3-3). The grid is constructed of 100 columns and 237 rows. Grid spacing in the vicinity of the Target Rock site is 25 feet by 25 feet. A variably spaced grid is utilized in the region between the 25 by 25 foot spaced area and the model boundaries (Figure 3-3).

The model utilizes constant head boundaries at the north and south boundaries. No flow boundaries are utilized along the east and west model boundaries. The heads for the constant head boundaries were derived from a published USGS water table map of Long Island (Doriski, 1983) and through model calibration.

A homogeneous hydraulic conductivity value of 230 feet per day (McClymonds and Franke, 1972) was used throughout the model grid.



1000 0 500 1000 2000

scale in feet

TITLE

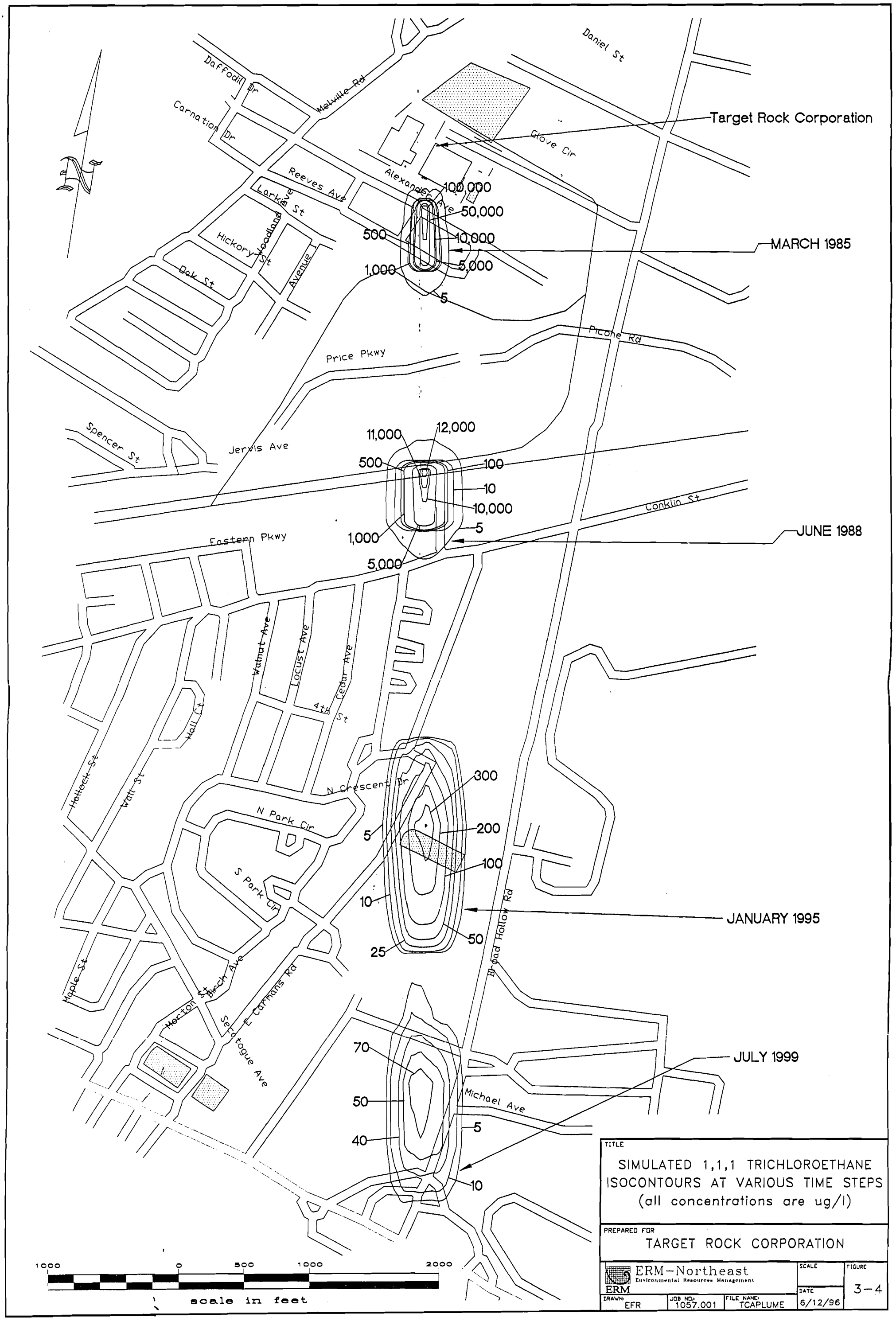
LOCATION AND EXTENT OF FINITE DIFFERENCE MODEL GRID

PREPARED FOR

TARGET ROCK CORPORATION

ERM-Northeast
Environmental Resources Management

DRAWN:	JOB NO.:	FILE NAME:	SCALE	DATE	FIGURE
EFR	1057.001	GRIDBASE	GRAPHIC	7/10/96	3-3



TITLE

SIMULATED 1,1,1 TRICHLOROETHANE ISOCONTOURS AT VARIOUS TIME STEPS (all concentrations are ug/l)

PREPARED FOR

TARGET ROCK CORPORATION

ERM-Northeast
Environmental Resources Management

DRAWN	JOB NO.	FILE NAME	SCALE	DATE	FIGURE
EFR	1057.001	TCAPLUME		6/12/96	3-4

Calibration

The initial model calibration attempted to match model output with published regional water level elevation contours (Doriski, 1983) and flow gradients. Once a satisfactory match was made the model output was compared to site specific head values, flow direction and gradients. After achieving a satisfactory match a predictive run was setup. This predictive run is described below.

Predictive Run

A transient model run was completed to establish the ground water flow conditions for the solute transport phase of the modeling effort. This run was broken up into three stress periods. Stress Period One simulated ground water flow conditions prior to the dry well being used for the discharge of process water. Stress Period Two simulated flow conditions during the period when the dry well was in use. An injection well was used to simulate the input of water at the location of the former dry well. Stress Period Three simulated flow conditions after the discharge to the dry well ceased. Each of the stress periods was broken up into discrete time steps to maintain numerical stability and to obtain output at key points in time.

3.2.2 *Solute Transport Model Description*

MT3D is a modular three-dimensional transport model for the simulation of advection, dispersion, and chemical reactions of dissolved constituents in groundwater systems (Zheng, 1990). MT3D uses a modular structure very similar to the structure utilized by MODFLOW. MT3D is used in conjunction with MODFLOW in a two-phase flow and transport simulation. Heads and cell to cell flux terms are computed by MODFLOW during the flow simulation phase and are written to a

specially formatted file. This file is then read by MT3D and utilized as the flow field for the transport phase of the simulation.

Similar to MODFLOW, MT3D is divided into a series of components called "packages." Each package performs a specific task. Some of the packages are always required for a simulation and some are optional. The packages used in this model are the basic transport package, the adduction package, the dispersion package, the sink & source mixing package and the chemical reaction package. Each of these packages is described below.

Basic Transport Package

The basic transport package handles basic tasks that are required by the entire transport model. Among these tasks are definition of the problem, specification of the boundary and initial conditions, determination of the step size, preparation of mass balance information, and printout of the simulation results.

Advection Package

This package solves the concentration change due to advection with one of the three mixed Eulerian-Langrangian schemes included in the package: MOC, MMOC, or HMOC. The modified method of characteristics (MMOC) was used to solve the advection portion of the advection dispersion equation in the Target Rock model.

Dispersion Package

The dispersion package determines the concentration change due to dispersion with the explicit finite difference method. Both longitudinal and transverse dispersivities were incorporated into the model.

Sink & Source Mixing Package

This package determines the concentration change due to fluid sink/source mixing using the explicit finite difference method. Sink/source terms may include wells, drains, rivers, recharge, and evapotranspiration. For this model an injection well was used to simulate the discharge to the dry well.

Chemical Reaction Package

This package calculates the concentration change due to chemical reactions. These chemical reactions include linear or nonlinear sorption isotherms and first-order irreversible rate reactions (radioactive decay or biodegradation). Both sorption and biodegradation were used in this model.

System Conceptualization

The solute transport system conceptualization consisted of determining how to best represent the source and which attenuation mechanisms were applicable to the movement of solute at this site.

As previously stated the source is represented by an injection well at the location of the former dry well. The injection rate at this well is equal to the approximate average discharge to the dry well during its 12 months of operation. The average discharge was determined using disposal records from the period immediately following the removal of the dry well. The process water was being discharged to an on-site tank during this period and good disposal records were available. These records indicated that, on average, approximately 6,517 gallons per month were removed from the site. The approximate concentration of 1,1,1-trichloroethane in the discharge water was determined to be 6,650 ppm. This concentration

value is based on a laboratory analysis completed for disposal purposes by Waste Conversion Inc..

The attenuation mechanisms used in this model were:

- Dispersion
  - longitudinal dispersivity = 60
  - transverse dispersivity = 1
- Retardation
  - Kd = 5.37 X 10-6 ft3/kg
  - Rf = 1.00116
- Biodegradation
  - half-life in soil 273 days (Howard, 199?)
  - half-life in ground water 546 days (Howard, 199?)

Calibration

The water quality database for this site was extremely limited making calibration to site conditions difficult if not impossible. There are no off-site wells associated with this project, therefore calibration to off-site data was also not feasible. The calibration is therefore based on the assumption that the source characterization is valid and that the conservative values for the attenuation mechanisms used in the model are also valid.

Predictive Run

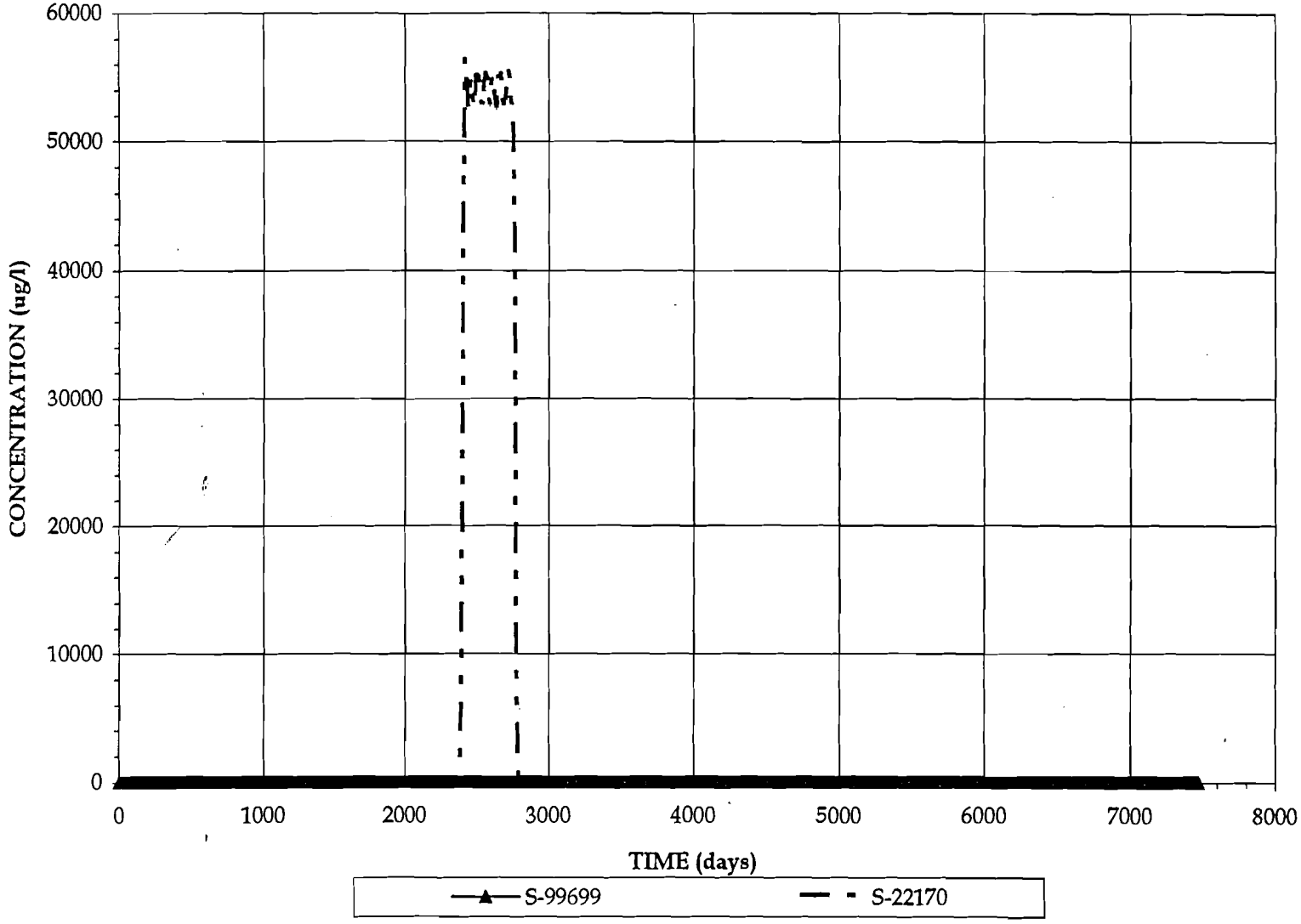
One predictive run was completed which simulated steady state pre-discharge conditions, plume growth during solute discharge to the aquifer and plume movement and attenuation over time.

The results of the predictive run described above are shown on Figure 3-4. This figure depicts the simulated 1,1,1 TCA plume at the end of several time steps. This figure shows that the highest concentration (100,000 ug/l) occurred during March 1985 very close to the former dry well. By

January 1995 various attenuation mechanisms had reduced this concentration to 300 ug/l and by July 1999 the model predicts this concentration to be only 70 ug/l. It should be noted that because all of the assumptions used in the development of the solute transport model are conservative the predicted concentrations are by definition overestimates of the plume concentration. The predicted concentration of 70 ug/l in 1999 would, in reality, be lower.

A comparison of Figure 3-2 to Figure 3-4 shows that no public supply wells are located anywhere near the predicted migration pathway of the plume. The only wells that appear to be near to the flow path are 22170 and 99699. Both of these glacial wells were established as observation points in the model and simulated data was collected for each location. Figure 3-5 is a plot of these predicted concentration versus time for each well location. Well 99699 is shown to not be impacted. Well 22170, which is located only 750 ft. downgradient is shown to be briefly impacted for about one year in the mid 1980's. Because of the well's proximity to the site, plume concentrations had not been significantly reduced through natural attenuation so the predicted concentrations are at elevated levels. The model shows a rapid return to background concentrations reflecting the migration of a discreet slug of contamination resulting from the limited period of disposal. Well 22170 was a high capacity glacial well that was reportedly used for industrial gravel washing purposes. If it was actually operating during the mid 1980's it is probable that the plume was actually recovered and withdrawn from the aquifer. There is no gravel washing operation in existence at that location today.

FIGURE 3-5 : SIMULATED 1,1,1 TRICHLOROETHANE CONCENTRATION IN WELLS S-22170 AND S-99699



No Magothy wells were identified in the path of the plume. There are no issues therefore related to the two dimensional simulation of the plume.

The closest public supply wells, N7852 and N11004, to the Target Rock site are located side gradient to predicted plume migration path and are screened deep within the Magothy (457 ft. and 347 ft. respectively). The actual location of these wells is outside the model grid, however, observation points along the model boundary in the vicinity of these wells did not show any impact to water quality in the Upper Glacial aquifer.

In summary, the solute transport modeling results demonstrated the following points:

- Following the 12 months of wastewater disposal at Target Rock a plume was generated.
- Near the facility in the mid to late 1980's plume concentration may have been elevated.
- Natural attenuation processes significantly reduce plume concentration with time and distance.
- Simulated concentrations are currently 200 ug/l to 300 ug/l, however, this is a conservative estimate and actual in-ground concentrations would be much lower.
- Based on a comprehensive well search, no potable wells were identified in the plume's migration path, either in the past or in the future.
- The plume simulation clearly shows no receptors have been, or will be, impacted by contaminant migration.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 CONCLUSIONS

The following conclusions can be drawn from the hydrogeologic investigation and solute transport modeling conducted during this project.

- Ground water at the Target Rock site is generally at background concentrations based on negligible VOC concentrations in four of five wells. Minor concentrations of three VOCs detected in MW-2 have consistently decreased over the monitoring program.
- The absence of VOCs in MW-4, immediately downgradient from the former dry well, indicates that there is no on-site source of contaminants.
- The solute transport model simulated the generation of a slug-like plume of 1,1,1-trichloroethane and its downgradient migration following the disposal of process wastewater in an on-site dry well in 1982/83.
- The model results show that plume concentrations decline through natural attenuation with time and distance. The remnants of the plume are currently predicted to be about one mile downgradient of the site at a concentration between 200 ug/l to 300 ug/l.
- A comprehensive well search showed no potable supply wells in the Upper Glacial or Magothy aquifers are located in the plume's migration path.
- The solute transport modeling indicates no receptors have been or will be impacted by the plume.

4.2 RECOMMENDATIONS

The ground water quality data base developed during the four quarters of monitoring indicates that there is no on-going VOC source at the Target Rock facility. The detected levels also demonstrate that no additional remediation is required at the site. Based on the consistency of the monitoring data and the negligible concentrations that were detected, it is

recommended that the ground water monitoring program be discontinued.

APPENDIX A

Well Log for TRMW-5

ERM-Northeast

175 Froehlich Farm Blvd., Woodbury, New York 11797

LOG OF BORING: TRMW-5

Project Name & Location	Project Number	Date & Time Started	Date & Time Completed	
TARGET ROCK, EAST FARMINGDALE, N.Y.		4/5/96 0815	4/5/96 1204	
Drilling Company	Driller	Sampler(s)	Sampler Hammer	Drop
AQUIFER DRILLING AND TESTING	TONY	ERIC ARNESEN	130 LBS	30 IN
Drilling Equipment	Method	Elevation & Datum	Completion Depth	Rock depth
CME 75	HOLLOW STEM AUGER	NA	42 FT	NA
ERM-Northeast Geologist/Engineer				
ERIC ARNESEN				

DEPTH (ft below grade)	SAMPLES No.	Recovery (ft)	Blow per 6 in.	Time	HNU/ OVA (ppm)	SOIL DESCRIPTION	REMARKS
0							
1	1	0.5	13,20, 6,7	929	NA	Brown fine to medium SAND, trace GRAVEL, trace SILT, Dry.	
2							
3							
4							
5	2	0.5	16,14, 11,12	936	NA	Same as above with some broken rock, Dry.	
6							
7							
8							
9							
10	3	0.5	22,22, 21,20	1001	NA	Same as above.	
11							
12							
13							
14							
15	4	1	18,16, 14,12	1008	NA	Tan medium to coarse SAND, some GRAVEL, Damp.	
16							
17							
18							
19							
20	5	0.8	12,11, 11,10	1020	NA	Same as above, Saturated.	
21							
22							
23							
24							
25							

ERM-Northeast
175 Frochlich Farm Blvd., Woodbury, New York 11797

LOG OF BORING: TRMW-5

Project Name & Location	Project Number	ERM-Northeast Geologist/Engineer:
TARGET ROCK, EAST FARMINGDALE, N.Y.		ERIC ARNESEN

DEPTH (ft below grade)	SAMPLES No.	Recovery (ft)	Blow per 6 in.	Time	HNU/ OVA (ppm)	SOIL DESCRIPTION	REMARKS
	6	1.5	32,30, 22,20	1035	NA	Top 0.8' Same as above Mid 0.3' Orange brown fine to very fine SAND. Bottom 0.2' Gray black very fine SAND and SILT, trace CLAY. Laminations throughout. Mica present throughout, Saturated.	
26							
27							
28							
29							
30							
	7	1	30,40, 20,20	1058	NA	Top 0.8' Orange brown fine SAND, trace GRAVEL. Bottom 0.2' Orange very fine SAND to SILT, trace CLAY. Light brown CLAYevident, Saturated.	
31							
32							
33							
34							
35							
	8	1	10,20, 30,15	1120	NA	Yellowish brown fine SAND, Saturated.	
36							
37							
38							
39							
40							
	9	1	10,15, 12,9	1204	NA	Same as above.	
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							

APPENDIX B

Data Summary Tables, Laboratory Data Packages, and Data Validation Reviews for Quarterly Sampling Events

ANALYTICAL RESULTS OF FIRST QUARTER GROUND WATER SAMPLES
TARGET ROCK FACILITY, EAST FARMINGDALE, NEW YORK

	MW-1		MW-2		MW-3		MW-4		MW-5	
Chloromethane	10	U	10	U	10	U	10	U	10	U
Vinyl chloride	10	U	10	U	10	U	10	U	10	U
Bromomethane	10	U	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	U	10	U	10	U	10	U
Carbon disulfide	10	U	10	U	10	U	10	U	10	U
Acetone	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
Methylene chloride	10	U	10	U	10	U	10	U	10	U
Total 1,2-Dichloroethene	10	U	28		10	U	10	U	10	U
1,1-Dichloroethane	10	U	1	J	10	U	10	U	10	U
Chloroform	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane	10	U	10	U	10	U	10	U	10	U
2-Butanone	10	UJ	10	UJ	10	UJ	10	UJ	10	UJ
1,1,1-Trichloroethane	10	U	7	J	10	U	10	U	10	U
Carbon Tetrachloride	10	U	10	U	10	U	10	U	10	U
Trichloroethene	10	U	10	U	10	U	10	U	10	U
Benzene	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	10	U	10	U	10	U	10	U	10	U
Bromoform	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-pentanone	10	U	10	U	10	U	10	U	10	U
Toluene	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	10	U	10	U	10	U	10	U	10	U
2-Hexanone	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	10	U	10	U	10	U	10	U	10	U
Ethylbenzene	10	U	10	U	10	U	10	U	10	U
Total Xylenes	10	U	10	U	10	U	10	U	10	U
Styrene	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	U	10	U

NOTES:

Concentrations are micrograms per liter.
Samples collected on 17 April 1996.
U: Undetected. Number represents detection limit.
J: Estimated concentration.

DATA VALIDATION REVIEW
GROUND WATER SAMPLE ANALYSES
TARGET ROCK CORPORATION
TOWN OF BABYLON, NEW YORK
ERM-NORTHEAST PROJECT NUMBER 1057.001
H2M LABS, INC., SDG NO. ERM006

Deliverables:

The above referenced Sample Data Summary Package and Sample Data Package contains all required deliverables as stipulated under the 1991 New York State Analytical Services Protocols (ASP) Superfund Category for Target Compound List (TCL) Volatile Organic Compounds (VOC), analyzed by ASP Method 91.1. The data have been validated according to the protocols and QC requirements of the ASP, the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994), the USEPA Region II CLP Data Review SOP, and the reviewer's professional judgment.

This validation report pertains to the following samples:

Samples	*QC Samples*
MW-1	Field BLK
MW-2	Trip BLK
MW-3	MW-3 MS/MSD
MW-4	Duplicate (Field dup. of MW-3)
MW-5	

ORGANICS

The following items/criteria were reviewed:

- Quantitation/detection limits
- Holding times
- GC/MS tuning and performance
- Initial and continuing calibration data
- Procedural blank data
- Field and trip blank data
- Field duplicate analysis
- Internal standard areas, retention times, summary and data
- Surrogate recoveries, summary and data
- MS/MSD/MSB recoveries, summary and data
- Data system printouts

- Chromatograms and mass spectra
- Qualitative and quantitative compound identification
- Case narrative and deliverables compliance

The items listed above were in compliance with USEPA CLP and NYSDEC ASP protocols with exceptions discussed in the text below. The data have been validated according to the procedures outlined above and qualified accordingly.

VOLATILES

- The following table lists compounds that exhibited percent relative standard deviation (%RSD) for response factors in the initial (I) calibration, above the 30% QC criteria; percent difference (%D) between the initial calibration and continuing (C) calibration response factors greater than the 25% criteria; and compounds whose response factors (RF) was less than the 0.05 criteria. Associated sample results for these compounds are considered estimated, with positive values flagged "J" and non-detects flagged "UJ" for % RSD or %D deficiencies or rejected "R" for RF deficiencies.

Calibration	Compound	Deficiency	Associated Samples
C-4/18/96	Acetone	%D=39.5	All samples
	2-Butanone	%D=30.7	

Package Summary:

All data are valid and usable with qualifications as noted in this review.

Signed: _____
Joseph Camanzo, Environmental Chemist

Dated: 5/23/96

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-1

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610066

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08610.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-4	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U J
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
124-48-1	Dibromochloromethane	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

JC 5/23/96

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-1

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610066

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08610.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1.	unknown hydrocarbon	6.54	8	J

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-2

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610067

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08611.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-4	1,1-Dichloroethane	1	J
540-59-0	1,2-Dichloroethene (total)	[redacted]	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U J
71-55-6	1,1,1-Trichloroethane	7	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
124-48-1	Dibromochloromethane	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

5/23/96

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-2

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610067

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08611.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000354-23-4	Ethane, 1,2-dichloro-1,1,2-trifluor	5.51	22	JN

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-3

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610068

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08612.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U J
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-4	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U J
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
124-48-1	Dibromochloromethane	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

JC 5/23/96

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-3

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610068

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08612.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-4

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: Case No.: SAS No.: SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610069

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08613.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-4	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
124-48-1	Dibromochloromethane	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-4

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610069

Sample_wt/vol: 5.0 (g/ml) ML Lab File ID: A08613.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610070

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08614.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-4	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
124-48-1	Dibromochloromethane	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-5

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610070

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08614.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

DUPLICATE

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: Case No.: SAS No.: SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610071

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08615.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-4	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
124-48-1	Dibromochloromethane	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

DUPLICATE

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610071

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08615.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

FIELD BLANK

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610072

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08616.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-4	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
124-48-1	Dibromochloromethane	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FIELD BLANK

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610072

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08616.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIP BLANK

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610073

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08617.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-4	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
124-48-1	Dibromochloromethane	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIP BLANK

Lab Name: H2M LABS, INC. Contract: ERM

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 006

Matrix: (soil/water) WATER Lab Sample ID: 9610073

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A08617.D

Level: (low/med) LOW Date Received: 04/17/96

% Moisture: not dec. _____ Date Analyzed: 04/18/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

ANALYTICAL RESULTS OF SECOND QUARTER GROUND WATER SAMPLES
TARGET ROCK FACILITY, EAST FARMINGDALE, NEW YORK

	MW-1		MW-2		MW-3		MW-4		MW-5	
Chloromethane	10	U	10	U	10	U	10	U	10	U
Vinyl chloride	10	U	10	U	10	U	10	U	10	U
Bromomethane	10	U	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	U	10	U	10	U	10	U
Carbon disulfide	10	U	10	U	10	U	10	U	10	U
Acetone	10	U	10	U	10	U	10	U	10	U
Methylene chloride	10	U	10	U	10	U	10	U	10	U
Total 1,2-Dichloroethene	10	U	21		10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	U	10	U	10	U	10	U
Chloroform	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane	10	U	10	U	10	U	10	U	10	U
2-Butanone	10	U	10	U	10	U	10	U	10	U
1,1,1-Trichloroethane	10	U	4	J	10	U	10	U	10	U
Carbon Tetrachloride	10	U	10	U	10	U	10	U	10	U
Trichloroethene	10	U	10	U	10	U	10	U	10	U
Benzene	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	10	U	10	U	10	U	10	U	10	U
Bromoform	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-pentanone	10	U	10	U	10	U	10	U	10	U
Toluene	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	10	U	10	U	10	U	10	U	10	U
2-Hexanone	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	10	U	10	U	10	U	10	U	10	U
Ethylbenzene	10	U	10	U	10	U	10	U	10	U
Total Xylenes	10	U	10	U	10	U	10	U	10	U
Styrene	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	U	10	U

NOTES:

Concentrations are micrograms per liter.
Samples collected on 29 August 1996.
U: Undetected. Number represents detection limit.
J: Estimated concentration.

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

FB-1

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624751

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10454.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FB-1

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624751

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10454.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIPBLANK

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624752

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10455.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIPBLANK

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624752

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10455.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRMW-1

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624745

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10448.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRMW-2

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624746

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10449.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	21	
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	4	J
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRMW-2

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624746

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10449.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 1

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000354-23-4	Ethane, 1,2-dichloro-1,1,2-trifluor	5.13	12	JN

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRMW-3

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624747

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10447.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRMW-3

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624747

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10447.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRMW-4

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624748

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10451.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRMW-4

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624748

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10451.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRMW-5

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624749

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10452.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRMW-5

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624749

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10452.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRMW-6

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624750

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10453.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRMW-6

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERM SAS No.: SDG No.: ERM007

Matrix: (soil/water) WATER Lab Sample ID: 9624750

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A10453.D

Level: (low/med) LOW Date Received: 08/29/96

% Moisture: not dec. Date Analyzed: 08/30/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

ANALYTICAL RESULTS OF THIRD QUARTER GROUND WATER SAMPLES
TARGET ROCK FACILITY, EAST FARMINGDALE, NEW YORK

	MW-1		MW-2		MW-3		MW-4		MW-5	
Chloromethane	10	U	10	U	10	U	10	U	10	U
Vinyl chloride	10	U	10	U	10	U	10	U	10	U
Bromomethane	10	U	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	U	10	U	10	U	10	U
Carbon disulfide	10	U	10	U	10	U	10	U	10	U
Acetone	10	U	10	U	10	U	10	U	10	U
Methylene chloride	10	U	10	U	10	U	10	U	10	U
Total 1,2-Dichloroethene	10	U	15		10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	U	10	U	10	U	10	U
Chloroform	10	U	10	U	10	U	10	U	1	J
1,2-Dichloroethane	10	U	10	U	10	U	10	U	10	U
2-Butanone	10	U	10	U	10	U	10	U	10	U
1,1,1-Trichloroethane	10	U	10	U	10	U	10	U	10	U
Carbon Tetrachloride	10	U	10	U	10	U	10	U	10	U
Trichloroethene	10	U	10	U	10	U	10	U	10	U
Benzene	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	10	U	10	U	10	U	10	U	10	U
Bromoform	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-pentanone	10	U	10	U	10	U	10	U	10	U
Toluene	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	10	U	10	U	10	U	10	U	10	U
2-Hexanone	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	10	U	10	U	10	U	10	U	10	U
Ethylbenzene	10	U	10	U	10	U	10	U	10	U
Total Xylenes	10	U	10	U	10	U	10	U	10	U
Styrene	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	U	10	U
Total TICs		U	19	J		U		U		U

NOTES:

Concentrations are micrograms per liter.
Samples collected on 29 August 1996.
TICs: Tentatively Identified Compounds.
U: Undetected. Number represents detection limit.
J: Estimated concentration.

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-2

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632622

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11576.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	15	
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-2

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632622

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11576.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 2

CAS NO.	COMPOUND	RT	EST. CONC.	Q
1. 000354-23-4	Ethane, 1,2-dichloro-1,1,2-trifluor	4.98	13	JN
2. 000076-13-1	Ethane, 1,1,2-trichloro-1,2,2-triflu	5.41	6	JN

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-3

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632623

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11574.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-3

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632623

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11574.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632621

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11575.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-1

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632621

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11575.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

S 0019

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-4

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632624

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11578.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-4

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632624

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11578.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632625

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11580.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	1	J
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-5

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632625

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11580.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-6

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632626

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11581.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

MW-6

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632626

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11581.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

0025

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRIPBLANK

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632628

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11583.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRIPBLANK

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632628

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11583.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

0027

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

FB1112

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632627

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11582.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
75-15-0	Carbon Disulfide	10	U
67-64-1	Acetone	10	U
75-09-2	Methylene Chloride	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-4	1,1-Dichloroethane	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
79-01-6	Trichloroethene	10	U
71-43-2	Benzene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
124-48-1	Dibromochloromethane	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
108-88-3	Toluene	10	U
127-18-4	Tetrachloroethene	10	U
591-78-6	2-Hexanone	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

FB1112

Lab Name: H2M LABS, INC Contract:

Lab Code: H2M Case No.: ERMNJ SAS No.: SDG No.: ERMNJ00

Matrix: (soil/water) WATER Lab Sample ID: 9632627

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A11582.D

Level: (low/med) LOW Date Received: 11/12/96

% Moisture: not dec. Date Analyzed: 11/15/96

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

TABLE 1
ANALYTICAL RESULTS OF FOURTH QUARTER GROUND WATER SAMPLES
TARGET ROCK FACILITY, EAST FARMINGDALE, NEW YORK

	MW-1		MW-2		MW-3		MW-4		MW-5	
Chloromethane	5	U	5	U	5	U	5	U	5	U
Vinyl chloride	5	U	5	U	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Carbon disulfide	5	U	5	U	5	U	5	U	5	U
Acetone	5	U	5	U	3	J	5	U	5	U
Methylene chloride	5	U	5	U	5	U	5	U	5	U
Total 1,2-Dichloroethene	5	U	6		5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U	5	U
Chloroform	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U	5	U
2-Butanone	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
1,1,1-Trichloroethane	5	U	3	J	5	U	9		5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U
Bromoform	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
4-Methyl-2-pentanone	5	UJ	5	UJ	5	UJ	5	UJ	5	UJ
Toluene	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U
Total Xylenes	5	U	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	U	5	U
Total TICs		U		U		U		U		U

NOTES:

Concentrations are micrograms per liter.
Samples collected on 10 March 1997.
TICs: Tentatively Identified Compounds.
U: Undetected. Number represents detection limit.
J: Estimated concentration.

DATA VALIDATION REVIEW
GROUND WATER SAMPLE ANALYSES
TARGET ROCK CORPORATION
TOWN OF BABYLON, NEW YORK
ERM-NORTHEAST PROJECT NUMBER 1057.001
H2M LABS, INC., SDG NO. ERM-NJ009

Deliverables:

The above referenced Sample Data Summary Package and Sample Data Package contains all required deliverables as stipulated under the 1991 New York State Analytical Services Protocols (ASP) Superfund Category for Target Compound List (TCL) Volatile Organic Compounds (VOC), analyzed by ASP Method 91.1. The data have been validated according to the protocols and QC requirements of the ASP, the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (February 1994), the USEPA Region II CLP Data Review SOP, and the reviewer's professional judgment.

This validation report pertains to the following samples:

Samples	*QC Samples*
TRMW-1	Field BLK
TRMW-2	Trip BLK
TRMW-3	TRMW-3 MS/MSD
TRMW-4	TRMW-6 (Field dup. of TRMW-3)
TRMW-5	

ORGANICS

The following items/criteria were reviewed:

- Quantitation/detection limits
- Holding times
- GC/MS tuning and performance
- Initial and continuing calibration data
- Procedural blank data
- Field and trip blank data
- Field duplicate analysis
- Internal standard areas, retention times, summary and data
- Surrogate recoveries, summary and data
- MS/MSD/MSB recoveries, summary and data
- Data system printouts

- Chromatograms and mass spectra
- Qualitative and quantitative compound identification
- Case narrative and deliverables compliance

The items listed above were in compliance with USEPA CLP and NYSDEC ASP protocols with exceptions discussed in the text below. The data have been validated according to the procedures outlined above and qualified accordingly.

VOLATILES

- The following table lists compounds that exhibited percent relative standard deviation (%RSD) for response factors in the initial (I) calibration, above the 30% QC criteria; percent difference (%D) between the initial calibration and continuing (C) calibration response factors greater than the 25% criteria; and compounds whose response factors (RF) was less than the 0.05 criteria. Associated sample results for these compounds are considered estimated, with positive values flagged "J" and non-detects flagged "UJ" for % RSD or %D deficiencies or rejected "R" for RF deficiencies.

Calibration	Compound	Deficiency	Associated Samples
C-3/13/97	2-Butanone	%D=32.1	All samples
	4-Methyl-2-pentanone	%D=34.5	
	2-Hexanone	%D=26.7	

Package Summary:

All data are valid and usable with qualifications as noted in this review.

Signed: _____

Joseph Camanzo, Environmental Chemist

Dated: _____

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRMW-1

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706342

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12854.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
74-83-9	Bromomethane	5	U
75-01-4	Vinyl Chloride	5	U
75-00-3	Chloroethane	5	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-4	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	5	U J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
124-48-1	Dibromochloromethane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	U J
591-78-6	2-Hexanone	5	U J
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

JC 4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRMW-1

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706342

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12854.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRMW-2

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706343

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12855.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
74-83-9	Bromomethane	5	U
75-01-4	Vinyl Chloride	5	U
75-00-3	Chloroethane	5	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-4	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	6	
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	5	U J
71-55-6	1,1,1-Trichloroethane	3	J
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
124-48-1	Dibromochloromethane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	U J
591-78-6	2-Hexanone	5	U J
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

JL 4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRMW-2

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706343

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12855.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRMW-3

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706344

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12853.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
74-83-9	Bromomethane	5	U
75-01-4	Vinyl Chloride	5	U
75-00-3	Chloroethane	5	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	3	J
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-4	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	5	U J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
124-48-1	Dibromochloromethane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	U J
591-78-6	2-Hexanone	5	U J
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRMW-3

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706344

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12853.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRMW-4

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706345

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12856.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
74-83-9	Bromomethane	5	U
75-01-4	Vinyl Chloride	5	U
75-00-3	Chloroethane	5	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-4	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	5	U J
71-55-6	1,1,1-Trichloroethane	9	
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
124-48-1	Dibromochloromethane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	U J
591-78-6	2-Hexanone	5	U J
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRMW-4

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706345

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12856.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TRMW-5

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706346

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12857.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
74-83-9	Bromomethane	5	U
75-01-4	Vinyl Chloride	5	U
75-00-3	Chloroethane	5	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-4	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	5	U J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
124-48-1	Dibromochloromethane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	U J
591-78-6	2-Hexanone	5	U J
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRMW-5

Lab Name: H2M LABS INC. Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706346

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12857.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. _____ Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

TRMW-6

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706347

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12858.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
74-83-9	Bromomethane	5	U
75-01-4	Vinyl Chloride	5	U
75-00-3	Chloroethane	5	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-4	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	5	UJ
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
124-48-1	Dibromochloromethane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	UJ
591-78-6	2-Hexanone	5	UJ
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

JR 4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

TRMW-6

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706347

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12858.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Field Blank

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706348

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12859.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
74-83-9	Bromomethane	5	U
75-01-4	Vinyl Chloride	5	U
75-00-3	Chloroethane	5	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-4	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	5	U J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
124-48-1	Dibromochloromethane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	U J
591-78-6	2-Hexanone	5	U J
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Field Blank

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706348

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12859.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q

1A

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Trip Blank

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706349

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12860.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	5	U
74-83-9	Bromomethane	5	U
75-01-4	Vinyl Chloride	5	U
75-00-3	Chloroethane	5	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	5	U
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-4	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	5	U J
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
71-43-2	Benzene	5	U
124-48-1	Dibromochloromethane	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
79-00-5	1,1,2-Trichloroethane	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	5	U J
591-78-6	2-Hexanone	5	U J
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

JK 4/30/97

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

Trip Blank

Lab Name: H2M LABS INC. Contract:

Lab Code: Case No.: SAS No.: SDG No.: 009

Matrix: (soil/water) WATER Lab Sample ID: 9706349

Sample wt/vol: 5.0 (g/ml) ML Lab File ID: A12860.D

Level: (low/med) LOW Date Received: 03/10/97

% Moisture: not dec. Date Analyzed: 03/13/97

GC Column: RTX502. ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

Number TICs found: 0

CAS NO.	COMPOUND	RT	EST. CONC.	Q