

GROUNDWATER MONITORING
PROGRAM REPORT INCLUDING
INITIAL SAMPLING EVENT

333 SMITH STREET
FARMINGDALE, NEW YORK

NYSDEC INDEX NUMBER W1-0819-98-07

OCTOBER 30, 2002

Prepared For:

Reckson Associates Realty Corp.
225 Broad Hollow Road
Melville, New York 11747

Submitted By:

Holzmacher, McLendon & Murrell, P.C.
575 Broad Hollow Road
Melville, New York 11747

H2M PROJECT NO. RKSN 0202



**GROUNDWATER MONITORING PROGRAM REPORT
INCLUDING INITIAL SAMPLING EVENT
333 SMITH STREET, FARMINGDALE, NEW YORK**

EXECUTIVE SUMMARY

Holzmacher, McLendon & Murrell, P.C. (H2M) was retained by Reckson Associates Realty Corp. (Reckson) to conduct groundwater monitoring activities at 333 Smith Street in Farmingdale, New York in accordance with a November 28, 2001 Work Plan, as approved by the New York State Department of Environmental Conservation (NYSDEC). The monitoring program is being conducted as part of a Voluntary Investigation Agreement (VIA) entered into by Reckson and NYSDEC. The primary objective of the monitoring program is to track and observe the anticipated natural attenuation of tetrachloroethylene (PCE) and related chlorinated compounds in on-site groundwater.

Prior to implementation of this monitoring program, a source area removal program was conducted under a Voluntary Remediation Agreement (VRA) entered into by Reckson and NYSDEC. The program consisted of the excavation and offsite disposal of soil and sediments associated with numerous drywells located around the property and soil beneath the demolished west wing of the building, which NYSDEC designated as "Operable Unit 1." The program was carried out pursuant to a Remedial Action Workplan prepared by Environmental Resources Management (ERM), dated January 3, 2000 and subsequently approved by NYSDEC. ERM submitted a report on the completed removal program to NYSDEC, entitled "Final Engineering Report, Operable Unit 1", dated September 22, 2000, which was subsequently approved by NYSDEC. NYSDEC issued a Release and Covenant Not to Sue to Reckson, with respect to Operable Unit 1, on May 29, 2001. The purpose of this monitoring program is to monitor concentrations of PCE in groundwater, subsequent to the completion of the Operable Unit 1 source area removal program.

Soil borings were advanced in the suspected PCE contaminant source area (drywell "DW-20" of the VIA, which is just off the northwest corner of the building) and in an area downgradient along the southern property boundary (MW-16 and MW-17, respectively). These borings were

advanced to depths of 65 feet and 70 feet, also respectively. Soil samples were collected from each borehole to determine the magnitude of VOC impacts to subsurface soils, if any. Furthermore, temporary groundwater monitoring wells were set in each borehole so that a groundwater profile could be established to determine the depth corresponding to the greatest VOC concentrations for the purpose of setting well screening depths. Soil sample analytical results indicated no VOC impacts. Groundwater profiling results indicated maximum total VOC concentrations of 149 parts per billion (ppb) at a depth of 60 to 65 feet for MW-16 and 64 ppb at a depth of 44 to 49 feet for MW-17. Four additional monitoring wells (MW-6R, MW-8R, MW-9R, and MW-10R) were installed along the southern edge of the property in accordance with the Work Plan and subsequent NYSDEC approved revisions.

The Work Plan-approved location of MW-8R was downgradient of a former leaching field that had historically displayed elevated antimony concentration levels. Based upon a decision made by the NYSDEC, the location of MW-8R was repositioned to the east of the leaching field to better delineate the site's aqueous PCE plume, and the antimony analysis portion of the Work Plan was eliminated. All of the four monitoring wells installed at the southern edge of the property were screened at the groundwater interface in accordance with the Work Plan.

Following installation of the six monitoring wells, the initial groundwater monitoring activity was conducted on May 13 and 14, 2002. In addition to the six new wells, two existing monitoring wells were included: an existing monitoring well in the northern portion of the parking lot at the subject facility (MW-1), and a well located west of the subject property and east of an off-site stormwater recharge basin. Monitoring of this latter well was approved by the NYSDEC for use as a potential upgradient monitoring well. This well was labeled as GWP-2 in the report, Additional Investigations, prepared by GZA GeoEnvironmental Inc. and dated December 1995 for the Raytheon Company (Raytheon) facility located at 50 Republic Road in Melville, New York.

Analytical results for the initial groundwater monitoring event indicated PCE and trichloroethylene (TCE) concentrations in all sampled wells in contravention of groundwater

standards set forth in 6NYCRR Part 703 (greater than 5 ppb). Based on the magnitude of the VOC concentrations, it appears that the former drywell (DW-20) located north of the building on the subject property had been the principal on-site source of groundwater contamination. However, total VOC concentrations on the downgradient and upgradient ends of the site are approximately equal, indicating that residual VOC impacts to groundwater are being attenuated in transport, down to background levels, prior to leaving the site. Therefore, since the total solvent concentrations entering and leaving the site are approximately the same, the contamination leaving the site is likely attributable to an upgradient off-site source of contamination.

Considering the above, H2M recommends that Reckson continue the groundwater monitoring program in accordance with the approved Work Plan to establish the trend VOC concentrations over the year. In addition, H2M recommends that the concentrations detected in the upgradient monitoring wells (MW-1 and GWP-2) be considered background concentrations and, on behalf of Reckson, respectfully requests NYSDEC's concurrence with this.

GROUNDWATER MONITORING PROGRAM REPORT INCLUDING INITIAL SAMPLING EVENT 333 SMITH STREET, FARMINGDALE, NEW YORK

TABLE OF CONTENTS

EXECUTIVE SUMMARY	i
1.0 – INTRODUCTION	1
2.0 – BACKGROUND	2
3.0 – GROUNDWATER MONITORING WELL LOCATIONS	2
4.0 – HYDROGEOLOGIC SETTING	3
4.1 – Regional Setting	3
4.2 – Local Setting	4
5.0 – SOIL INVESTIGATION	5
5.1 – Drilling Activity	5
5.2 – Air Monitoring During Drilling Activity	5
5.3 – Borehole Advancement	6
5.4 – Soil Sample Analytical Results	7
6.0 – GROUNDWATER MONITORING ACTIVITY	7
6.1 – Temporary Well Installation and Groundwater Profiling	8
6.2 – Groundwater Profile Analytical Results	9
6.3 – Permanent Monitoring Well Installation	9
6.3.1 MW-9R	10
6.3.2 MW-10R	10
6.3.3 MW-8R	11
6.3.4 MW-17	11
6.3.5 MW-6R	11
6.3.6 MW-16	12
6.4 – Groundwater Monitoring	13
6.4.1 Materials and Methods	13
6.4.2 Monitoring Activity	13
6.4.3 Groundwater Monitoring Analytical Results	14
6.4.4 Impact of Source Area Removal on Site Groundwater Quality	15
7.0 – DRILLING AND MONITORING WASTE MANAGEMENT	16
8.0 – CONCLUSIONS AND RECOMMENDATIONS	17
8.1 – Conclusions	17
8.2 – Recommendations	18

**GROUNDWATER MONITORING PROGRAM REPORT
INCLUDING INITIAL SAMPLING EVENT
333 SMITH STREET, FARMINGDALE, NEW YORK**

TABLE OF CONTENTS (CONTINUED)

LIST OF FIGURES

FIGURE 1	SITE LOCATION MAP
FIGURE 2	SITE PLAN
FIGURE 3	GROUNDWATER ELEVATION CONTOUR MAP
FIGURE 4	PCE CONCENTRATION ISOPLETH MAP
FIGURE 5	TOTAL VOC CONCENTRATION ISOPLETH MAP

LIST OF TABLES

TABLE 1	SUMMARY OF SITE VAPOR RECONNAISSANCE RESULTS
TABLE 2	MONITORING WELL CONSTRUCTION DETAILS AND GROUNDWATER ELEVATION DATA
TABLE 3	SUMMARY OF SOIL SAMPLING ANALYTICAL RESULTS
TABLE 4	SUMMARY OF VERTICAL PROFILE GROUNDWATER ANALYTICAL RESULTS
TABLE 5	SUMMARY OF INITIAL GROUNDWATER MONITORING EVENT ANALYTICAL RESULTS
TABLE 6	SUMMARY OF WELL SAMPLING PARAMETER LOGS

LIST OF APPENDICIES

APPENDIX A	REFERENCES
APPENDIX B	DRILLERS LOGS
APPENDIX C	H2M SOIL BORING LOGS AND WELL CONSTRUCTION DIAGRAMS



**GROUNDWATER MONITORING PROGRAM REPORT
INCLUDING INITIAL SAMPLING EVENT
333 SMITH STREET, FARMINGDALE, NEW YORK**

LIST OF APPENDICES (CONTINUED)

APPENDIX D	SOIL SAMPLING AND GROUNDWATER PROFILING LABORATORY ANALYTICAL REPORT
APPENDIX E	CHAIN OF CUSTODY FORMS
APPENDIX F	INITIAL GROUNDWATER MONITORING EVENT LABORATORY ANALYTICAL REPORT (NYSDEC ASP CATEGORY B PACKAGE)
APPENDIX G	DATA USABILITY SUMMARY REVIEW
APPENDIX H	WASTE MANIFESTS

**GROUNDWATER MONITORING PROGRAM REPORT
INCLUDING INITIAL SAMPLING EVENT
333 SMITH STREET, FARMINGDALE, NEW YORK**

1.0 INTRODUCTION

Holzmacher, McLendon & Murrell, P.C. (H2M) was retained by Reckson Associates Realty Corp. (Reckson) to implement the groundwater monitoring program at 333 Smith Street in Farmingdale, New York. These activities are being conducted as part of a Voluntary Investigation Agreement (VIA) (Index No. W1-0819-98-07) between Reckson and the New York State Department of Environmental Conservation (NYSDEC) and in accordance with a November 28, 2001 groundwater monitoring Work Plan prepared by Environmental Resource Management (ERM), which was approved by NYSDEC. Figure 1, Site Location Map, shows the general location of the facility. The scope of work outlined in the approved Work Plan includes the following initiatives:

1. Investigation into the magnitude of residual antimony contamination in site soils and groundwater.
2. Investigation into the magnitude of PCE and its breakdown products in site soils at two of the pre-selected well boring locations.
3. Determination of the extent and magnitude of VOC impacts to site groundwater.
4. Evaluation of the effectiveness of source area removal in decreasing or stabilizing PCE impacts.

The above initiatives are to be carried out by soil borehole advancement and soil screening, monitoring well installation, and groundwater monitoring. During monitoring well installation groundwater profiling was also to be performed. The monitoring program includes quarterly groundwater monitoring events for one year, followed by semi-annual monitoring for an additional year. The monitoring program may be terminated on NYSDEC's approval prior to this time if it can be shown that there is sufficient natural attenuation of PCE and related compounds



to warrant discontinuance of the program. The purpose of this report is to document various site activities and the results of the initial groundwater monitoring event.

2.0 BACKGROUND

Prior to implementation of this project, source area remedial activities were conducted under a separate voluntary agreement (VRA Index No. W1-0819-99-08) between Reckson and NYSDEC to address previously identified areas of contamination on the subject property. Remedial activity included excavation and off-site disposal of impacted leaching pools and soils.

Subsequent to the remedial effort, and in accordance with the recommendations contained within the Investigation Report, a groundwater Monitoring Work Plan was prepared to evaluate the effectiveness of source area remediation by way of tracking an anticipated natural attenuation of contaminant concentrations. The Work Plan was approved in November of 2001 and was implemented in April of 2002 as summarized herein.

3.0 GROUNDWATER MONITORING WELL LOCATIONS

Prior to the start of drilling activities, a site visit was conducted on April 19, 2002 to verify the location of proposed groundwater monitoring wells. The site visit was attended by Mr. Robert Stewart of NYSDEC, Mr. Robert Seyfarth and Ms. Geralyn Fitzpatrick of Suffolk County Department of Health Services (SCDHS), Mr. Phillip Fallon of Reckson, Mr. Philip Schade and Mr. Manfred Bohms of H2M.

During the site visit, it was agreed that the position of the proposed monitoring well located immediately south of the former leaching field (MW-8R) would be moved approximately 100 feet east of the position indicated in the approved Work Plan to better delineate potential PCE impacts. Since the new location is not downgradient of the suspected source of antimony contamination, it was agreed that the antimony sampling required by the Work Plan would no

longer be necessary. NYSDEC concluded that it was no longer necessary to characterize antimony impacts on site.

Furthermore, it was agreed that the proposed position of MW-6R, located on the south lawn of the property, would be shifted approximately 30 feet northwest of the position indicated in the approved Work Plan due to trees and overhead utilities that restricted access.

The correct location for MW-16 was determined by trial-and-error. The position of MW-16 was intended to coincide with the location of former drywell DW-20, which had historically accepted wastewater discharge containing PCE. However, a revised drawing depicting the position of DW-20 was provided to Reckson by ERM and the noted location for DW-20 was in conflict with NYSDEC's notes. The drawing provided by ERM depicted the drywell as being four feet east and 36 feet north of the building's northwest corner. The NYSDEC's notes indicated that the drywell was located approximately 36 feet north and 40 feet east of the building's northwest corner. The location of MW-16, 36 feet north and 22 feet east of the building's northwest corner, was finally agreed upon on April 30, 2002 with the second boring attempt.

All changes to the approved work plan were previously described in a letter addressed to Mr. Robert Stewart of NYSDEC dated July 19, 2002.

4.0 HYDROGEOLOGIC SETTING

A brief description of the regional and local hydrogeologic setting is provided below.

4.1 Regional Setting

The general site area is underlain by three aquifers, consisting of the Upper Glacial, Magothy, and Lloyd. The Upper Glacial Aquifer is the uppermost stratigraphic unit present in the region. In general, the unit is comprised of glacial till and outwash that was deposited during the Late Pleistocene and Holocene epochs. The Upper Glacial is comprised of stratified beds of fine to coarse-grained sand and gravel. In glacial till

areas, the aquifer is poorly permeable. Areas of outwash deposits are moderately to highly permeable. The Upper Glacial extends to a depth of approximately 150 feet below grade in the vicinity of the subject site. Groundwater within the Upper Glacial is generally present under unconfined conditions and variations in rainfall influence the depth to groundwater in the aquifer. All drilling and monitoring activities at the site were performed in the Upper Glacial Aquifer.

The Upper Glacial Aquifer is underlain by the Magothy aquifer. In general, the Magothy Aquifer is comprised of clayey fine to medium-grained sand, and is interbedded with layers and lenses of coarse-grained sand, sandy clay, and solid clay. Gravel is prevalent at the base of the aquifer. The Magothy extends from approximately 150 feet to 800 feet below grade in the vicinity of the subject site. Most layers of the Magothy Aquifer are poorly to moderately permeable, with some areas of high permeability.

The Magothy Aquifer is underlain by the Raritan Formation. The Raritan Formation is composed of two stratigraphic units: the Raritan Clay confining unit, which extends from approximately 800 feet to 875 feet below grade in the site vicinity, and the Lloyd Aquifer which extends from approximately 875 feet to 1,250 feet below grade in the site vicinity. The Lloyd Aquifer is a confined aquifer, with the generally impermeable Raritan Clay unit and the underlying bedrock acting as confining layers. In general, the Lloyd Aquifer is comprised of fine to coarse-grained sand and gravel, commonly with some clay, with lenses of silty clay and solid clay. The Lloyd Aquifer is poorly to moderately permeable.

4.2 Local Setting

The subject property is situated approximately 100 feet above mean sea level. Based on observations made during soil borehole advancement, on-site soils generally consist of tan medium-grained sand with varying amounts of fine-grained sand, coarse-grained sand, and gravel. Coarse-grained sand is more prevalent below the groundwater table. The groundwater table is located approximately 45 feet below grade and site groundwater flows in a south-southeasterly direction. This corresponds with regional groundwater

flow direction as indicated in the “Water Table Contours and Locations of Observation Wells in Suffolk County, N.Y. March, 1995” map developed by SCDHS. The general topography of the site is flat.

5.0 SOIL INVESTIGATION

A summary of soil investigation activity and results is provided below.

5.1 Drilling Activity

To facilitate the collection of soil and groundwater samples at the subject site, H2M contracted Land, Air, Water Environmental Services, Inc. (LAWES), of Center Moriches, New York to perform drilling, soil sample collection, and monitoring well installation activities. A Mobile Drill Company Inc. brand B-61 drill rig, operated by LAWES and equipped with 4¼-inch diameter hollow stem augers (HSA) and split spoon (SS) samplers was used to complete the drilling activity. Discrete soil samples were collected at 5-foot intervals from all soil boreholes using a decontaminated 2-foot long SS sampler. Soil sample lithology was documented and samples were screened for organic vapors using a photoionization detector (PID) calibrated to a 100 ppm isobutylene standard by an H2M environmental professional.

5.2 Air Monitoring During Drilling Activity

The New York State Department of Health (NYSDOH) agreed on April 25, 2002 that a complete general Community Air Monitoring Program (gCAMP) would not be required for the type of work to be performed and that air monitoring would be conducted by H2M personnel using a PID in the work area and performing regular monitoring sweeps around the work area. If organic vapor concentrations reached or exceeded 5 parts per million (ppm), work would be temporarily stopped and H2M’s Health and Safety Officer would be contacted.

Prior to the start of drilling activities each day, H2M personnel calibrated a Thermo Environmental (TE) Model 580B OVM PID to a 100 ppm isobutylene standard. The PID was left running continuously during drilling activities and the vapor concentration readings were noted on a regular basis. H2M personnel walked the perimeter of the work area on a half-hour basis to inspect air quality in the general vicinity. Half-hour reconnaissance readings were documented and are provided in Table 1 of this report. All organic vapor concentration readings were 0.0 ppm throughout drilling activities.

5.3 Borehole Advancement

In an effort to delineate PCE-impacted soils (if present) at the southern property boundary, a soil borehole (MW-17) was advanced on April 29, 2002. Discreet soil samples were collected beginning at 24 feet below grade. No visual or olfactory evidence of soil contamination was noted, and the PID registered an organic vapor concentration of 0.0 parts per million (ppm) for all samples. In accordance with the project work plan, a sample was to be analyzed from a depth of 27 feet below grade when no organic vapor concentrations were detected among the samples. The location of the boring on a landscaped berm made it prohibitive to collect a sample at 27 to 29 feet below grade due to the 5-foot lengths of the auger flights. The top auger flight would rise too far out of the ground at this depth, making it infeasible to collect a split spoon sample. A soil sample was therefore collected from 24 to 26 feet below grade and was retained and delivered to Long Island Analytical Laboratories, Inc. (LIAL), of Holbrook, New York, for analysis of volatile organic compounds (VOCs) on the Target Compound List (TCL) by United States Environmental Protection Agency (EPA) Method 8260. Borehole advancement ceased at 71 feet below grade. Groundwater was encountered approximately 44 feet below grade.

H2M and LAWES personnel returned to the site on April 30, 2002 to perform similar soil sampling at the proposed location of MW-16. During drilling activities it was noted that there was undisturbed native soil below the asphalt surface at the initially agreed upon boring location. NYSDEC directed H2M to move the position of MW-16 17 feet to the

east in an attempt to locate fill material indicative of the removal of former drywell DW-20. A split-spoon sample was collected at a depth of 10 to 12 feet to confirm the presence of fill material. The soil collected at this depth was brown fine-grained sand with some coarse-grained sand and gravel, and trace clay. This soil type varied significantly from the native soil and it was agreed that this was the location of former DW-20. Split-spoon samples were collected at 5-foot intervals beginning at 27 feet below grade. Soil sample lithology was documented. The samples were screened for organic vapors using a PID by an H2M environmental professional. No visual or olfactory evidence of soil contamination was noted. The soil sample collected from 27 to 29 feet below grade exhibited a PID reading of 2.6 ppm. The soil sample collected from 39 to 41 feet below grade exhibited a PID reading of 0.1 ppm. Soil cuttings screened when auger advancement had reached 13 and 25 feet below grade exhibited PID readings of 0.8 ppm and 3.1 ppm, respectively.

The soil sample collected from 27 to 29 feet below grade was retained and delivered to LIAL for analysis of VOCs on the TCL by EPA Method 8260. This sample was chosen for analysis because it exhibited the highest PID reading of the discrete samples. Borehole advancement ceased at 66 feet below grade due to refusal. Groundwater was encountered approximately 43.5 feet below grade. Driller's logs are included in Appendix B. H2M soil boring logs are included in Appendix C.

5.4 Soil Sample Analytical Results

Soil samples from MW-16 and MW-17 did not exhibit VOC constituent concentrations above practical quantitation limits (PQLs). A summary of soil sampling analytical results is presented in Table 3. Soil sampling laboratory analytical reports are presented in Appendix D. Chain of custody forms are presented in Appendix E.

6.0 GROUNDWATER MONITORING ACTIVITY

A summary of groundwater monitoring well installation and subsequent monitoring activity is provided below. All changes to the approved Work Plan with regard to monitoring well

installation and subsequent monitoring were previously described in a letter addressed to Mr. Stewart of NYSDEC dated July 19, 2002.

6.1 Temporary Well Installation and Groundwater Profiling

Temporary wells were set at MW-16 and MW-17 after borehole advancement had been completed. In accordance with the Work Plan, temporary monitoring wells were constructed of 2-inch diameter Schedule 40 PVC pipe with a 5-foot long section of 0.10-inch slotted screen and end cap. Temporary wells were developed by purging no less than three well volumes of water using a decontaminated in-line pump with dedicated tubing to ensure samples representative of the surrounding groundwater conditions.

At MW-17, discrete groundwater samples were collected at depths of 65 to 70 feet, 52 to 57 feet, and 44 to 49 feet below grade. Prior to sampling from each depth, the well was developed by purging a minimum of five well volumes of groundwater using in-line submersible pumps with dedicated polyvinyl tubing to insure the collection of groundwater samples representative of the surrounding aquifer. Groundwater samples were retained and delivered to LIAL for analysis of VOCs by EPA Method 624. An accelerated 48-hour turn-around time was requested so that groundwater profile results could be used to determine screen placement for a permanent groundwater monitoring well. Once sampling was completed, the borehole was backfilled to grade with clean sand.

At MW-16, discrete groundwater samples were collected at depths of 60 to 65 feet, 52 to 57 feet, and 42.5 to 47.5 feet below grade. Prior to sampling from each depth, the well was developed by purging a minimum of five well volumes of groundwater using in-line submersible pumps with dedicated polyvinyl tubing to insure the collection of groundwater samples representative of the surrounding aquifer. Groundwater samples were retained and delivered to LIAL for analysis of VOCs by EPA Method 624. An accelerated 48-hour turnaround time was requested so that groundwater profile results could be used to determine screen placement for a permanent groundwater monitoring

well. Once sampling was completed, the borehole was backfilled to grade with clean sand. H2M well construction diagrams are included in Appendix C.

6.2 Groundwater Profile Analytical Results

A summary of vertical profile groundwater analytical results is presented in Table 4. Groundwater profiling laboratory analytical reports are presented in Appendix D. Chain of custody documentation is presented in Appendix E.

The groundwater sample collected from MW-16 at a depth of 60 to 65 feet contained methyl tertiary-butyl ether (MTBE) [96 parts per billion (ppb)], benzene (0.8 ppb), PCE (42 ppb), 1,1,1-trichloroethane (1,1,1-TCA) (5 ppb), and TCE (10 ppb) concentrations above NYSDEC groundwater standards. The groundwater sample collected from MW-16 at a depth of 52 to 57 feet contained MTBE (91 ppb), PCE (29 ppb), and TCE (10 ppb) concentrations above NYSDEC groundwater standards. The groundwater sample collected from MW-16 at a depth of 42.5 to 47.5 feet contained PCE (29 ppb) and TCE (10 ppb) concentrations above NYSDEC groundwater standards. All other VOC constituents in all three samples collected from MW-16 were not detected above PQLs.

The groundwater sample collected from MW-17 at a depth of 65 to 70 feet contained a PCE concentration (13 ppb) above NYSDEC groundwater standards. The groundwater sample collected from MW-17 at a depth of 52 to 57 feet contained PCE (19 ppb) and TCE (6 ppb) concentrations above NYSDEC groundwater standards. The groundwater sample collected from MW-17 at a depth of 44 to 49 feet contained PCE (50 ppb) and TCE (14 ppb) concentrations above NYSDEC groundwater standards. All other VOC constituents in all three samples collected from MW-17 were not detected above PQLs.

6.3 Permanent Monitoring Well Installation

In an effort to delineate suspected PCE impacts to site groundwater, six groundwater monitoring wells were installed at the site at locations approved by the NYSDEC. Soil

boreholes were advanced for each of the wells using the methods referenced in Section 5 of this report.

6.3.1 MW-9R

On May 1, 2002, H2M and LAWES personnel mobilized to the site to install MW-9R and MW-10R. Split spoon samples were collected at 5-foot intervals during borehole advancement. Soil sample lithology was documented by an H2M environmental professional and the samples were screened for organic vapors with a PID. All soil samples collected from MW-9R exhibited PID readings of 0.0 ppm. MW-9R consists of a 2-inch diameter PVC end cap, a 10-foot section of 2-inch diameter PVC 0.010-inch slotted screen, and a riser of 2-inch diameter PVC to grade. The borehole was backfilled with 00 sized uniform sand pack material to three feet above the screen, a 2-foot bentonite seal, cement/bentonite grout to one foot below grade, and a Portland cement cap. The well was fitted with an 8-inch diameter flush-mount manway. The screen was set so that approximately 7 feet of screen was situated below the groundwater table. This varied from the 8 feet of screen below groundwater table specified in the approved Work Plan in an attempt to compensate for the potential rising groundwater table after the cessation of regional drought conditions present during drilling operations.

6.3.2 MW-10R

MW-10R was installed on May 1, 2002. Split spoon samples were collected at 5-foot intervals during borehole advancement. Soil sample lithology was documented by an H2M environmental professional and the samples were screened for organic vapors with a PID. Soil samples collected from MW-10R from depths of 8 to 10 feet, 18 to 20 feet, and 28 to 30 feet exhibited PID readings of 1.0 ppm, 0.2 ppm, and 0.3 ppm, respectively. All other soil samples collected from MW-10R exhibited PID readings of 0.0 ppm. The construction of MW-10R is similar to that of MW-9R, as detailed above.

6.3.3 MW-8R

MW-8R was installed on May 2, 2002. Split spoon samples were collected at 5-foot intervals during borehole advancement. Soil sample lithology was documented by an H2M environmental professional and the samples were screened for organic vapors using a PID. All soil samples collected from MW-8R exhibited PID readings of 0.0 ppm. The construction of MW-8R was similar to that of MW-9R and MW-10R. However, MW-8R was installed with 20 feet of screen instead of 10 feet of screen due to a field decision to compensate for a possible future rise in the groundwater table. Approximately 10 feet of screen was situated below the groundwater table. It was decided that the extra screened section above the current groundwater table would allow the well to be functional over a greater range of depth considering the potential for a significant rise in the groundwater elevation.

6.3.4 MW-17

MW-17 was installed on May 2, 2002. Split spoon samples were not collected due to prior soil sampling activities at this location. The screen depth of MW-17 was set to coincide with the depth at which the greatest PCE groundwater impact was detected in the temporary well. The greatest PCE concentration was found at a depth from 44 to 49 feet below grade. Subsequently, MW-17 was installed with 20 feet of screen from 34 to 54 feet below grade. The permanent location of MW-17 was moved approximately 10 feet north of the original borehole location into a driveway to prevent any damage to landscaping in the area. The revised location was approved by NYSDEC prior to installation.

6.3.5 MW-6R

MW-6R was installed on May 3, 2002. Split spoon samples were collected at 5-foot intervals during borehole advancement. Soil sample lithology was documented by an H2M environmental professional and the samples were screened for organic vapors using a PID. All soil samples collected from MW-6R exhibited PID readings of 0.0 ppm. MW-6R was installed with 15 feet of screen instead of 10 feet of screen due to a field

decision to compensate for a future rise in the groundwater table. NYSDEC requested that 15 feet of screen be installed instead of 20 feet. Approximately 8 feet of screen was situated below the groundwater table.

6.3.6 MW-16

MW-16 was installed on May 3, 2002. Split spoon samples were not collected during drilling activities due to prior soil screening activities at this location. The screen depth of MW-16 was set to coincide with the depth at which the greatest PCE groundwater concentration was found in the temporary well. The greatest PCE concentration was found at a depth from 60 to 65 feet below grade. It was agreed that 5 feet of screen should be installed in MW-16 to isolate the depth coinciding with the greatest PCE concentration. During drilling operations at the location of MW-16, auger refusal occurred at a depth of 60 feet, most likely due to the presence of cobbles at that depth. Consequently, MW-16 was installed with a 5-foot screen set from 55 to 60 feet below grade. During well installation, the augers were pulled up 4 feet to allow for installation of sand pack around the well casing. Approximately 100 pounds of sand was installed around the screen. When the driller attempted to retract the augers further, the top of an auger flight failed and approximately 40 feet of auger flights were left in the ground from a depth of approximately 16 to 56 feet below grade. The borehole then proceeded to partially collapse around the top of the auger flights. NYSDEC was unavailable for comment and a field decision was made to complete the well installation by grouting the annulus space to grade and installing a standard riser and manway. On May 7, 2002, NYSDEC agreed that MW-16 could be utilized as a groundwater monitoring well in this configuration provided that NYSDEC turbidity conditions are met during the scheduled groundwater monitoring events. A site plan depicting the various monitoring well locations is included as Figure 2.

6.4 Groundwater Monitoring

One week after all wells were developed by purging at least five well volumes of groundwater to ensure representative samples, H2M personnel returned to the site on May 13 and 14, 2002, to perform the initial groundwater monitoring event. Depth to water measurements and groundwater samples were collected from on-site wells to help delineate the extent of PCE at the subject site.

6.4.1 Materials and Methods

Prior to sampling the wells, groundwater elevation measurements were gauged using a water level meter in order to determine groundwater gradient and flow direction. Groundwater gauging data for the initial monitoring event at the site is summarized in Table 2, and associated groundwater elevation contours are represented in Figure 3.

To ensure representative groundwater samples, wells were purged of three well volumes of water using a decontaminated in-line submersible pump with dedicated polyethylene tubing. During purging, purge water was analyzed for several water quality parameters using a Horiba U-22 water quality meter. These parameters included dissolved oxygen (DO), temperature in degrees Celsius (Temp), pH, specific conductivity in micro-Siemens (μ S), and turbidity in nephelometric turbidity units (NTUs). Groundwater samples were placed in laboratory-supplied glassware and stored immediately in an ice-filled cooler. The samples were transported to LIAL for VOC analysis by EPA Method 624 with NYSDEC ASP Category B protocol, as required by the approved work plan for the project.

6.4.2 Monitoring Activity

H2M collected groundwater samples from the six new monitoring wells, as well as the existing MW-1, in accordance with the approved Work Plan. An additional monitoring well, originally designated MW-Standpipe, located east of the recharge basin to the west of the site, was included in the monitoring event. NYSDEC provided an Additional Investigations report prepared by GZA Environmental, Inc. of Vernon, Connecticut in

December 1995 for the Raytheon Company (Raytheon) facility located at 50 Republic Road in Melville, New York. The Raytheon facility is located to the west of the Reckson property. A figure in the report identified a monitoring well at the location of MW-Standpipe as GWP-2. For the purposes of this and subsequent monitoring reports, this well will be referred to as GWP-2.

During sampling activities, it became apparent that the Horiba unit was registering inaccurate pH, specific conductivity, and turbidity measurements. Attempts to recalibrate and troubleshoot the unit were unsuccessful in returning the unit to proper operational status. Mr. Stewart indicated that visual screening of purge water would be acceptable to determine if groundwater samples met NYSDEC turbidity standards. Accordingly, the wells were purged to a visibly clean condition prior to sample collection.

As part of the ASP Category B protocol requirements, a matrix spike (MS) and matrix spike duplicate (MSD) of MW-6R, a trip blank, a field blank, and a blind duplicate of MW-10R (labeled as MW-2) were included with the samples to be analyzed.

The NYSDEC ASP Category B package was submitted to an independent data validator, Data Validation Services (DVS) of North Creek, New York, to evaluate the suitability of the data.

6.4.3 Groundwater Monitoring Analytical Results

PCE was detected above NYSDEC water quality standards set forth in 6 NYCRR Part 703 in all eight sampled wells (including the two upgradient wells), at concentrations ranging from 20 ppb (MW-1) to 62 ppb (MW-16). Furthermore, TCE was detected above NYSDEC water quality standards in all eight wells, at concentrations ranging from 9 ppb (MW-1, MW-8R, MW-9R, MW-10R) to 23 ppb (MW-16). 1,1,1-TCA was detected above NYSDEC water quality standards in MW-16, at a concentration of 6 ppb. No other VOC constituents were detected above their respective PQLs. A summary of the groundwater analytical results is presented in Table 4. A summary of additional

groundwater parameter sampling data is presented in Table 5. PCE and total VOC concentrations are represented as concentration isopleth maps in Figures 4 and 5, respectively.

The initial groundwater monitoring event laboratory analytical report (NYSDEC ASP Category B package) is presented in Appendix E. The Data Usability Summary Review (DUSR) prepared by DVS is presented in Appendix F. The DUSR indicates that there were minor deficiencies in the data, but that the analytical results are valid. The DUSR further indicates that concentrations of trichlorofluoromethane and methylene chloride were present in the blanks and that any detected concentrations of these compounds should be considered cross contamination. One spiked analyte concentration not detected in the groundwater sample did not correlate with the duplicate spiked sample. Since the analyte is not relevant to the investigation, the report results are unaffected. The DUSR also noted that Tentatively Identified Compounds (TICs) identified as carbon dioxide in groundwater samples should be disregarded.

6.4.4 Impact of Source Area Removal on Site Groundwater Quality

The decrease in contaminant concentrations observed supports the absence of a continuing source of on-site groundwater contamination, after the source area remediation. Based on the results of previous investigations performed prior to source area removal, chlorinated hydrocarbon contaminant concentrations were detected on-site as high as 1,500 ppb¹. Based on the most recent round of groundwater monitoring performed after the performance of source area removal activities, the highest chlorinated hydrocarbon contaminant concentration detected on-site was 91 ppb. This is a decrease of approximately two orders of magnitude or 95%.

In addition, based on the most recent groundwater quality data from MW-17 and GWP-2, total VOC concentrations on the downgradient and upgradient ends of the site are

¹ IVI Environmental Inc. "Voluntary Investigation Work Plan" October 8, 1998, Revised March 2, 1999.

approximately equal at 68 and 67 ppb respectively. Upgradient is considered background for the purpose of this evaluation. Although slightly higher contaminant concentrations are present in MW-16 (i.e., 91 ppb) near the center of the property, the concentrations of these contaminants are being attenuated in transport, down to background, or upgradient, levels, prior to leaving the site. Therefore, since the total VOC concentration entering and leaving the site is approximately the same, the contamination leaving the site is likely attributable to an upgradient off-site source of contamination.

7.0 DRILLING AND MONITORING WASTE MANAGEMENT

During drilling activities, a total of 42 55-gallon drums of soil cuttings were generated. Also during well development and groundwater sampling activities, a total of six 55-gallon drums of purged groundwater were generated. All drums were staged at the eastern end of the parking lot at the subject property pending off-site disposal. The contents of the drums were sampled for purposes of waste characterization. The drums were removed from the site on June 3, 2002 and disposed of at Clean Earth of North Jersey, Inc., in South Kearny, New Jersey.

Soils were analyzed for VOCs by EPA Method 8260, polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8100, polychlorinated biphenyls (PCBs) by EPA Method 8080, and Resource Conservation and Recovery Act (RCRA) metals plus copper, nickel, and zinc by EPA Method 7000, using Toxicity Characteristic Leaching Procedure (TCLP) Method 1311. Soils were also analyzed for total petroleum hydrocarbons (TPH) by EPA Method 8015, percent moisture by EPA Method 1010, flash point by EPA Method 1010, pH by EPA Method 9040, and cyanide and sulfur reactivity. No VOC, PAH, and PCB constituents were detected above PQLs. The only metal detected above PQLs was zinc, at a concentration of 0.16 ppm. TPH was detected at a concentration of 273 ppm, flash point was above 140 degrees F, pH was 7.74, and reactivity was below PQL in the soil sample.

Collected wastewater was analyzed for TCL VOCs, semi-volatile organic compounds (SVOCs) by EPA Method 8270, RCRA metals by EPA Method 7000, PCBs by EPA Method 8080, and



TPH by EPA Method 418.1. Toluene and 2-butanone were detected at concentrations of 18 ppb and 46 ppb, respectively. None of the other VOC constituents, as well as all SVOC, metals, and PCB constituents were detected above PQLs in the groundwater sample. TPH was detected at a concentration of 85 ppm.

Following receipt of waste characterization analytical results, the drums were labeled for transport as non-hazardous waste. Eastern Environmental Solutions, Inc. of Eastport, New York, under contract to H2M, removed the drums from the site and disposed of them at Clean Earth of North Jersey, Inc. in South Kearny, New Jersey, in accordance with federal, state, and local regulations. Waste manifests are provided in Appendix G.

8.0 CONCLUSIONS AND RECOMMENDATIONS

As indicated previously, H2M was retained by Reckson to implement the groundwater monitoring program at 333 Smith Street, Farmingdale, New York specified in the approved Work Plan prepared by ERM as part of a Voluntary Investigation Agreement entered into by Reckson and NYSDEC. Based upon the activities conducted to date and the results of the initial groundwater monitoring event, we present the following conclusions and recommendations.

8.1 Conclusions

- Based upon soil analyses conducted at the apparent source area (represented by MW-16) and downgradient of this area (represented by MW-17), there appears to be no residual soil impact in these locations. This indicates that prior source area removal efforts were successful in remediating a continuing source of contamination to groundwater on site.
- Groundwater profiling activity indicated that the greatest PCE impact on groundwater in the apparent prior source area (represented by MW-16) is at a depth of approximately 60 to 65 feet below grade. Profiling also indicated that the greatest

PCE impact on groundwater downgradient of the prior source area is just below the groundwater table at a depth of approximately 44 to 49 feet below grade. MTBE, a VOC constituent typically associated with unleaded gasoline, was detected in the temporary well at MW-16 at concentrations greater than NYSDEC groundwater quality standards. Since MTBE is not associated with former operations at the site, it is believed that it may have been present due to an off-site release. MTBE was not detected in any subsequent groundwater analysis taken from the permanent wells sampled during this monitoring event. There is also the possibility that MTBE concentrations may have been detected due to cross-contamination of drilling and/or sampling equipment used during temporary monitoring well installation and sampling activities.

- Analytical results from the initial groundwater monitoring event indicate elevated levels of VOC's including PCE and TCE are present in the site groundwater. The area of greatest impact is in the apparent prior source area represented by MW-16. Well-defined aqueous PCE and total VOC concentration maps were extrapolated from the analytical data. The maps indicate that there is an element of the plume that extends significantly upgradient from the prior source area. Total VOC concentrations on the downgradient and upgradient ends of the site are approximately equal indicating that residual VOC impacts to groundwater are being attenuated in transport, down to background levels, prior to leaving the site. Therefore, since the total chlorinated solvent concentrations entering and leaving the site are approximately the same, the contamination leaving the site is likely attributable to an upgradient off-site source of contamination.

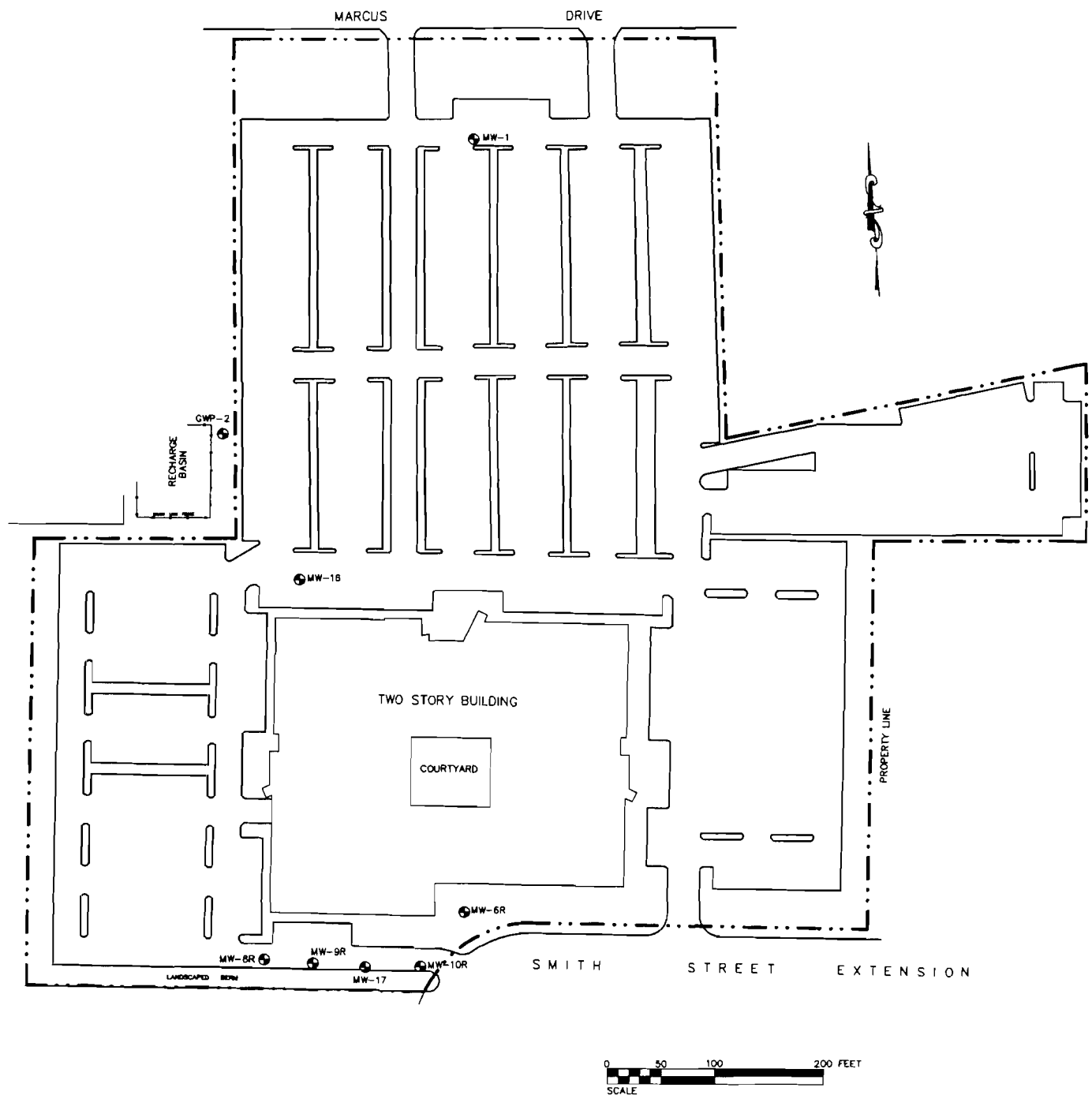
8.2 Recommendations

Based on the results of the initial monitoring event, H2M recommends further monitoring in accordance with the approved Work Plan be conducted at the site. In addition, H2M recommends that the concentrations detected in the upgradient monitoring wells (MW-1



and GWP-2) be considered background concentrations and, on behalf of Reckson, respectfully requests NYSDEC's concurrence with this recommendation.

FIGURES



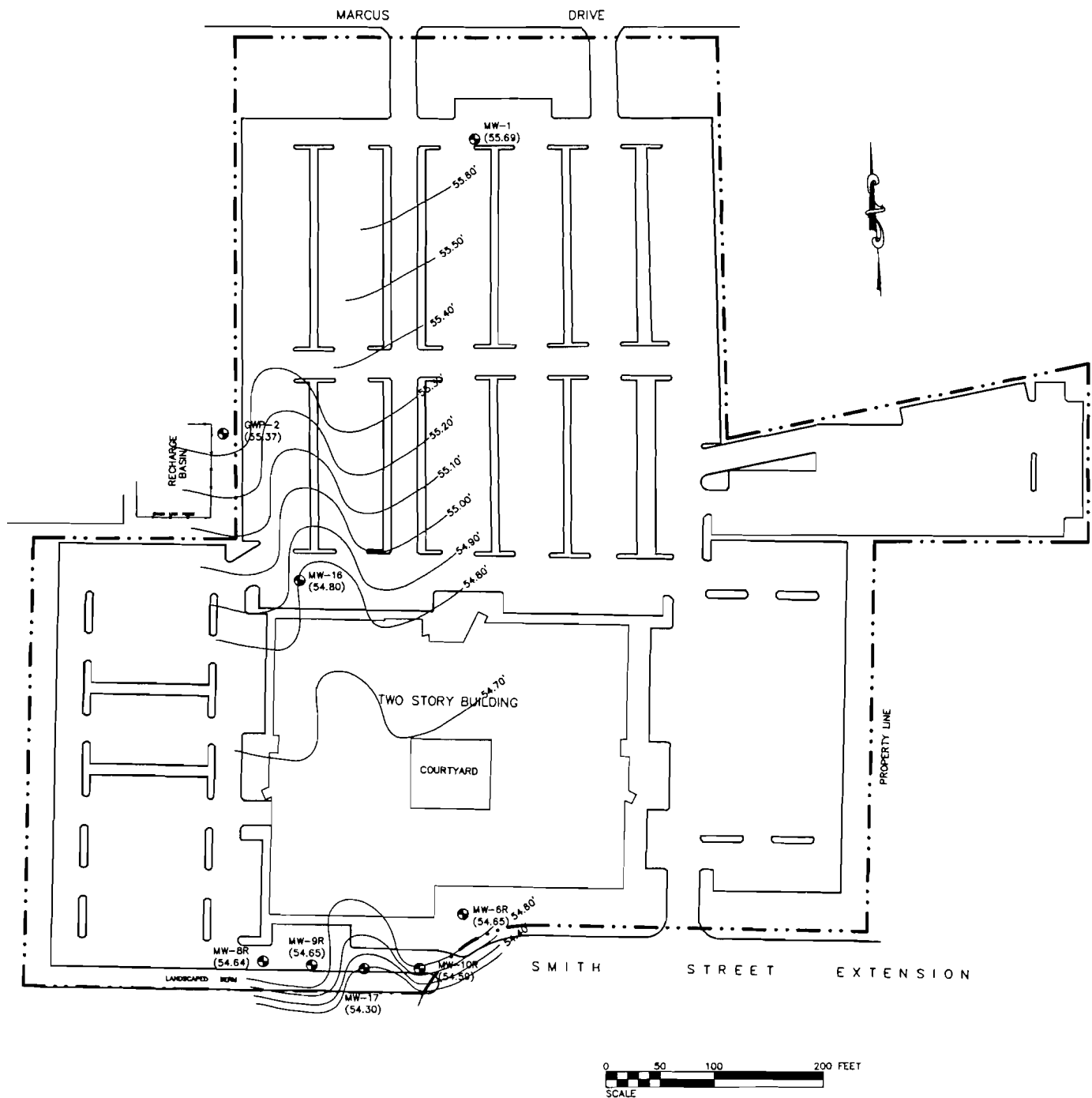
LEGEND

● MW-1 MONITORING WELL LOCATION

FIGURE 2: SITE PLAN

333 SMITH STREET
FARMINGDALE, NEW YORK

BASE MAP SOURCE: SCHNEPF & MURRELL, P.C.



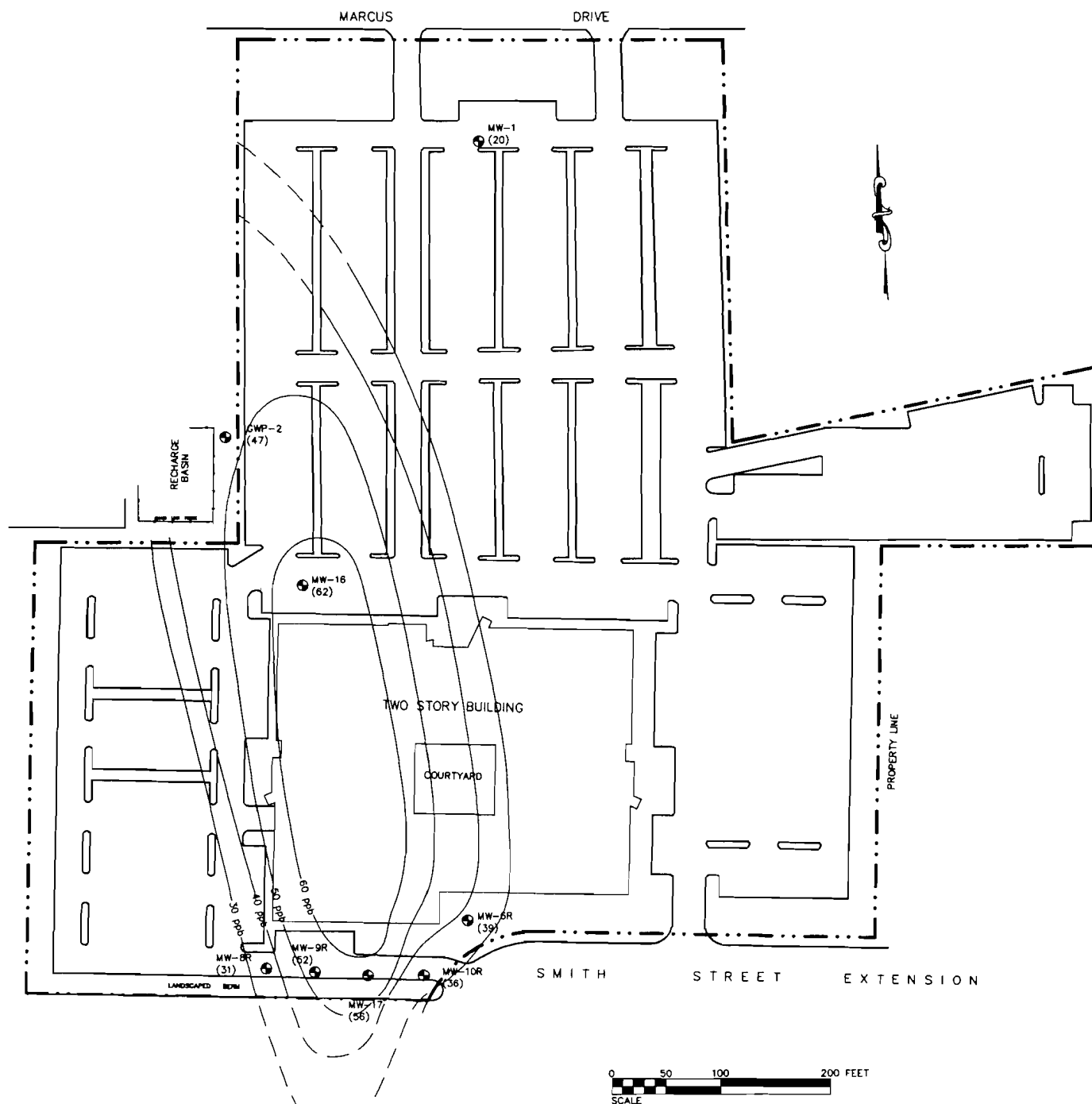
LEGEND

● MW-1	MONITORING WELL LOCATION
(55.69)	GROUNDWATER ELEVATION (IN FEET)

FIGURE 3:
GROUNDWATER
ELEVATION CONTOUR
MAP

333 SMITH STREET
FARMINGDALE, NEW YORK

BASE MAP SOURCE: SCHNEPF & MURRELL, P.C.



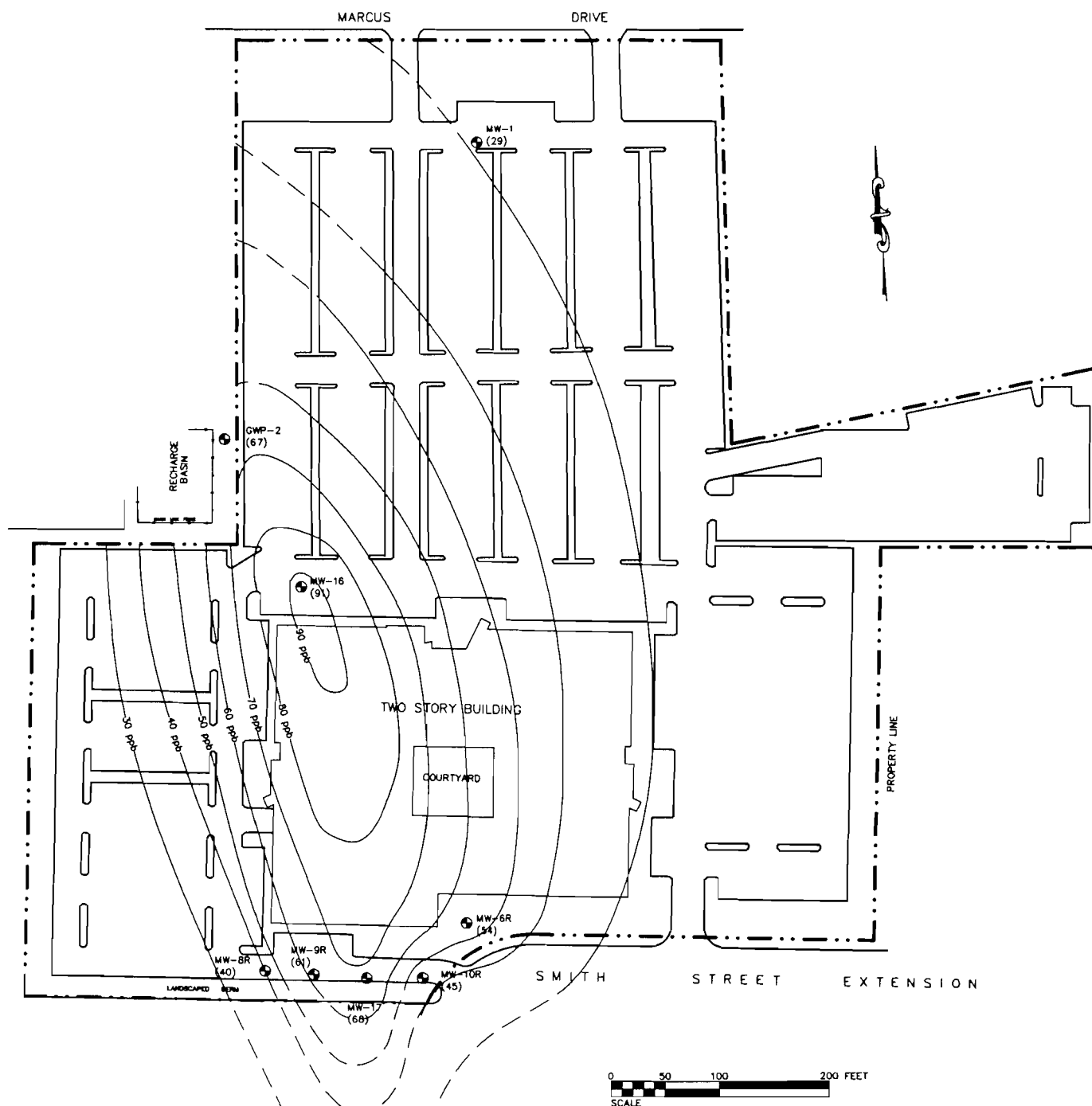
LEGEND

●	MW-1	MONITORING WELL LOCATION
(20)		PCE CONCENTRATION (IN PPB)

FIGURE 4:
PCE CONCENTRATION
ISOPLETH MAP

333 SMITH STREET
FARMINGDALE, NEW YORK

BASE MAP SOURCE: SCHNEPF & MURRELL, P.C.



LEGEND

● MW-1	MONITORING WELL LOCATION
(29)	VOC CONCENTRATION (IN PPB)

FIGURE 5:
VOC CONCENTRATION
ISOPLETH MAP

333 SMITH STREET
FARMINGDALE, NEW YORK

BASE MAP SOURCE: SCHNEPF & MURRELL, P.C.

TABLES

TABLE 1

SUMMARY OF SITE VAPOR RECONNAISSANCE RESULTS
Collected April 29 - May 3, 2002

333 SMITH STREET
FARMINGDALE, NEW YORK

TIME	4-29-02	4-30-02	5-1-02	5-2-02	5-3-02
8:00	N/A	N/A	N/A	0.0 ppm	0.0 ppm
8:30	0.0 ppm	N/A	0.0 ppm	0.0 ppm	0.0 ppm
9:00	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
9:30	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
10:00	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
10:30	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
11:00	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
11:30	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
12:00	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
12:30	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
13:00	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
13:30	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
14:00	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm
14:30	0.0 ppm	0.0 ppm	0.0 ppm	0.0 ppm	N/A
15:00	0.0 ppm	0.0 ppm	0.0 ppm	N/A	N/A
15:30	0.0 ppm	0.0 ppm	0.0 ppm	N/A	N/A
16:00	N/A	0.0 ppm	0.0 ppm	N/A	N/A
16:30	N/A	0.0 ppm	N/A	N/A	N/A
17:00	N/A	N/A	N/A	N/A	N/A

NOTES:

Readings were taken using a TE Brand Model 580B OVM photoionization detector with 10.6eV lamp

ppm = parts per million

N/A = no readings taken at this time

TABLE 2**MONITORING WELL CONSTRUCTION DETAILS AND
GROUNDWATER ELEVATION DATA****333 SMITH STREET
FARMINGDALE, NEW YORK**

Well No.	Well Diameter (in.)	Depth of Well From TOC (Ft.)	Screen Length (Ft.)	DTW From TOC (Ft.)*	Ground Surface Elevation (Ft.)	TOC Elevation (Ft.)	Groundwater Elevation (Ft.)
GWP-2	4	55.0	unknown	46.42	98.18	101.79	55.37
MW-1	2	49.0	unknown	42.67	99.15	98.36	55.69
MW-6R	2	52.0	15	44.42	99.54	99.07	54.65
MW-8R	2	54.0	20	43.58	98.51	98.22	54.64
MW-9R	2	51.0	10	43.75	98.81	98.40	54.65
MW-10R	2	50.0	10	42.67	97.84	97.26	54.59
MW-16	2	60.0	5	44.00	99.05	98.80	54.80
MW-17	2	54.0	20	44.33	99.00	98.63	54.30

* Depth to Water measurements collected on 5-13-02.

Elevations surveyed relative to an on-site benchmark arbitrarily set at 100 feet by H2M personnel on 6-5-02.

DTW = Depth to Water

TOC = Top of PVC Casing

TABLE 3
SUMMARY OF SOIL SAMPLING ANALYTICAL RESULTS

333 SMITH STREET
FARMINGDALE, NEW YORK
Collected on April 29 - 30, 2002

Analytical Parameters (ppb)	NYSDEC TAGM Recommended Soil Cleanup Objectives	MW-16 (27.0-29.0 feet bgs) (April 30, 2002)	MW-17 (24.0-26.0 feet bgs) (April 29, 2002)
VOCs (ppb) - EPA Method 8260			
1,1,1,2-Tetrachloroethane	--	<5	<5
1,1,1-Trichloroethane	800	<5	<5
1,1,2,2-Tetrachloroethane	600	<5	<5
1,1,2-Trichloroethane	--	<5	<5
1,1-Dichloroethane	200	<5	<5
1,1-Dichloroethene	400	<5	<5
1,1-Dichloropropene	--	<5	<5
1,2,3-Trichlorobenzene	--	<5	<5
1,2,3-Trichloropropane	400	<5	<5
1,2,4-Trichlorobenzene	3,400	<5	<5
1,2,4-Trimethylbenzene	--	<5	<5
1,2-Dibromo-3-Chloropropane	--	<5	<5
1,2-Dibromoethane	--	<5	<5
1,2-Dichlorobenzene	7,900	<5	<5
1,2-Dichloroethane	100	<5	<5
1,2-Dichloropropane	--	<5	<5
1,3,5-Trimethylbenzene	--	<5	<5
1,3-Dichlorobenzene	1,600	<5	<5
1,3-Dichloropropane	300	<5	<5
1,4-Dichlorobenzene	8,500	<5	<5
2,2-Dichloropropane	--	<5	<5
2-Butanone (MEK)	300	<10	<10
2-Chlorotoluene	--	<5	<5
2-Hexanone	--	<5	<5
4-Chlorotoluene	--	<5	<5
Acetone	200	<50	<50
Benzene	60	<5	<5
Bromobenzene	--	<5	<5
Bromochloromethane	--	<5	<5
Bromodichloromethane	--	<5	<5
Bromoform	--	<5	<5
Bromomethane	--	<5	<5
Carbon Disulfide	2,700	<5	<5
Carbon Tetrachloride	600	<5	<5
Chlorobenzene	1,700	<5	<5
Chlorodibromomethane	--	<5	<5
Chloroethane	1,900	<5	<5
Chloroform	300	<5	<5
Chloromethane	--	<5	<5
cis-1,2-Dichloroethene	250	<5	<5
Dibromomethane	--	<5	<5
Dichlorodifluoromethane	--	<5	<5
Ethylbenzene	5,500	<5	<5
Hexachlorobutadiene	--	<5	<5
Isopropylbenzene	--	<5	<5
Methylene Chloride	100	<5	<5
MTBE	--	<5	<5
Naphthalene	--	<5	<5
n-Butylbenzene	--	<5	<5
n-Propylbenzene	--	<5	<5
Total Xylenes	1,200	<15	<15
p-Isopropyltoluene	--	<5	<5
sec-Butylbenzene	--	<5	<5
Styrene	--	<5	<5
tert-Butylbenzene	--	<5	<5
Tetrachloroethene	1,400	<5	<5
Toluene	1,500	<5	<5
trans-1,2-Dichloroethene	300	<5	<5
Trichloroethene	700	<5	<5
Trichlorofluoromethane	--	<5	<5
Vinyl Acetate	--	<5	<5
Vinyl Chloride	200	<5	<5

NOTES:

Bold values represent values that exceed the NYSDEC Recommended Soil Cleanup Objectives.

Samples submitted for analysis to Long Island Analytical Laboratories, of Holbrook, NY.

All concentrations are listed on a dry weight basis

--	Parameter not established
MTBE	Methyl tertiary-butyl ether
VOCs	Volatile organic compounds by EPA Method 8260
ppb	Parts per billion (µg/kg)
bgs	Below ground surface

TABLE 4

SUMMARY OF VERTICAL PROFILE GROUNDWATER ANALYTICAL RESULTS

333 SMITH STREET
FARMINGDALE, NEW YORK
Collected on April 29 - 30, 2002

Analytical Parameters (ppb)	NYSDEC Water Quality Standards	MW-16 (60.0' - 65.0' bgs)	MW-16 (52.0' - 57.0' bgs)	MW-16 (42.5' - 47.5' bgs)	MW-17 (65.0' - 70.0' bgs)	MW-17 (52.0' - 57.0' bgs)	MW-17 (44.0' - 49.0' bgs)
VOCs (ppb) - EPA method 624							
MTBE	5.0	96	91	<5	<5	<5	<5
Benzene	0.7	0.8	<0.7	<0.7	<0.7	<0.7	<0.7
Bromodichloromethane	5.0	<5	<5	<5	<5	<5	<5
Bromoform	5.0	<5	<5	<5	<5	<5	<5
Bromomethane	5.0	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	5.0	<5	<5	<5	<5	<5	<5
Chlorobenzene	5.0	<5	<5	<5	<5	<5	<5
Chloroethane	5.0	<5	<5	<5	<5	<5	<5
2-Chloroethylvinyl Ether	5.0	<5	<5	<5	<5	<5	<5
Chloromethane	5.0	<5	<5	<5	<5	<5	<5
Dibromochloromethane	5.0	<5	<5	<5	<5	<5	<5
1,2-Dichlorobenzene	4.7	<5	<5	<5	<5	<5	<5
1,3-Dichlorobenzene	5.0	<5	<5	<5	<5	<5	<5
1,4-Dichlorobenzene	4.7	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	5.0	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	5.0	<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	5.0	<5	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene	5.0	<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	5.0	<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5.0	<5	<5	<5	<5	<5	<5
trans-1,3-Dichloropropene	5.0	<5	<5	<5	<5	<5	<5
Ethyl Benzene	5.0	<5	<5	<5	<5	<5	<5
Methylene Chloride	5.0	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	5.0	<5	<5	<5	<5	<5	<5
Tetrachloroethene	5.0	42	29	29	13	19	50
Toluene	5.0	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	5.0	5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	5.0	<5	<5	<5	<5	<5	<5
Trichloroethene	5.0	10	10	10	<5	6	14
Trichlorofluoromethane	5.0	<5	<5	<5	<5	<5	<5
Vinyl Chloride	2.0	<5	<5	<5	<5	<5	<5
p & m - Xylenes	5.0	<10	<10	<10	<10	<10	<10
o - Xylene	5.0	<5	<5	<5	<5	<5	<5

NOTES

Bold values represent values that exceed the NYSDEC Guidance Values

Samples submitted for analysis to Long Island Analytical Laboratories, of Holbrook, NY

— Parameter not established
 MTBE Methyl tertiary-butyl ether.
 VOCs Volatile organic compounds by EPA Method 624
 ppb Parts per billion (µg/L).
 bgs Below ground surface.

TABLE 5

SUMMARY OF INITIAL GROUNDWATER MONITORING EVENT ANALYTICAL RESULTS

333 SMITH STREET
FARMINGDALE, NEW YORK
Collected on May 13-14, 2002

Analytical Parameters (ppb)	NYSDEC Water Quality Standards	MW-6R (5-13-02)	MW-10R (5-13-02)	MW-17 (5-14-02)	MW-9R (5-14-02)	MW-8R (5-14-02)	MW-16 (5-14-02)	GWP-2 (5-14-02)	MW-1 (5-14-02)
VOCs (ppb) - EPA method 624									
MTBE	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Benzene	0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
Bromodichloromethane	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Bromoform	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Bromomethane	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Chlorobenzene	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Chloroethane	5.0	<5	<5	<5	<5	<5	<5	<5	<5
2-Chloroethylvinyl Ether	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Chloromethane	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Dibromochloromethane	5.0	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichlorobenzene	4.7	<5	<5	<5	<5	<5	<5	<5	<5
1,3-Dichlorobenzene	5.0	<5	<5	<5	<5	<5	<5	<5	<5
1,4-Dichlorobenzene	4.7	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	5.0	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	5.0	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloroethene	5.0	<5	<5	<5	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene	5.0	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	5.0	<5	<5	<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropene	5.0	<5	<5	<5	<5	<5	<5	<5	<5
trans-1,3-Dichloropropene	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Ethyl Benzene	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Methylene Chloride	5.0	<5	<5	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Tetrachloroethene	5.0	39	36	56	52	31	62	47	20
Toluene	5.0	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	5.0	<5	<5	<5	<5	<5	6	<5	<5
1,1,2-Trichloroethane	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene	5.0	15	9	12	9	9	23	20	9
Trichlorofluoromethane	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Vinyl Chloride	2.0	<5	<5	<5	<5	<5	<5	<5	<5
p & m - Xylenes	5.0	<10	<10	<10	<10	<10	<10	<10	<10
o - Xylene	5.0	<5	<5	<5	<5	<5	<5	<5	<5
Total VOCs	--	54	45	68	61	40	91	67	29

NOTES:

Bold values represent values that exceed the NYSDEC Guidance Values.

Samples submitted for analysis to Long Island Analytical Laboratories, of Holbrook, NY

MTBE Methyl tertiary-butyl ether.
VOCs Volatile organic compounds by EPA Method 624
ppb Parts per billion (µg/L)

TABLE 6
SUMMARY OF WELL SAMPLING PARAMETER LOGS
Collected May 13 - 14, 2002
333 SMITH STREET
FARMINGDALE, NEW YORK

Well	DO	Temperature	pH*	Specific Conductivity*	Turbidity*
GWP-2	8.81	20.22	4.44	0.000	-10.0
	9.14	19.65	4.47	0.000	-9.2
	9.51	18.99	4.37	0.000	-10.0
	9.82	17.96	4.29	0.000	-10.0
	10.12	16.83	4.22	0.000	-6.2
	10.09	16.63	4.20	0.000	-7.7
	10.12	16.46	4.17	0.000	-4.1
	10.13	16.25	4.22	0.000	-5.7
MW-1	9.12	20.40	4.29	0.000	-5.8
	9.27	20.24	4.32	0.000	-7.5
	9.46	19.73	4.32	0.000	-10.0
	9.54	19.52	4.32	0.000	-10.0
MW-6R	8.99	17.02	4.63	0.000	249
	9.06	16.75	4.64	0.000	257
	9.17	16.19	4.65	0.000	241
	9.19	16.02	4.66	0.000	241
	9.18	15.95	4.66	0.000	241
MW-8R	11.25	14.67	3.71	0.000	66.1
	11.16	14.98	3.72	0.000	66.2
	11.18	15.12	3.70	0.000	63.0
	11.26	15.23	3.70	0.000	54.4
	11.26	15.26	3.71	0.000	48.6
	11.24	15.33	3.71	0.000	45.0
MW-9R	11.18	13.47	3.88	0.000	25.7
	11.11	13.68	3.89	0.000	24.4
	11.03	13.89	3.91	0.000	23.4
	10.95	14.13	3.93	0.000	22.5
	10.86	14.21	3.92	0.000	22.3
	10.78	14.35	3.92	0.000	22.3
	10.91	14.46	3.92	0.000	21.2
MW-10R	10.10	15.16	3.99	0.000	22.7
	10.08	15.21	4.01	0.000	23.0
	10.08	15.25	4.01	0.000	22.8
	10.08	15.31	4.00	0.000	20.8
MW-16	10.98	14.38	3.88	0.000	0.2
	11.11	14.78	3.86	0.000	-10.0
	11.08	14.88	3.88	0.000	-10.0
	11.06	14.98	3.89	0.000	-10.0
	11.05	15.06	3.89	0.000	-10.0
MW-17	11.51	9.74	4.03	0.000	12.5
	11.20	11.53	4.04	0.000	24.2
	10.77	12.78	4.06	0.000	27.7

NOTES

All parameters were field analyzed using a Horiba U-22 water quality meter

* Specific conductivity, turbidity, and pH functions on the Horiba unit were not working properly during the sampling event
 Recalibration and troubleshooting attempts were unsuccessful

DO Dissolved oxygen measured in grams per liter (g/L).
 Temperature Temperature measured in degrees Celsius
 Specific Conductivity Specific Conductivity measured in micro-Siemens (µS)
 Turbidity Turbidity measured in Nephelometric Turbidity Units

APPENDIX A

REFERENCES

Environmental Resources Management (September 2001). *Voluntary Investigation Report, 333 Smith Street, Farmingdale, New York* – Excerpts.

Environmental Resources Management (November 28, 2001). *Ground Water Monitoring Work Plan – Second Revision, 333 Smith Street, Farmingdale, NY.*

GZA GeoEnvironmental, Inc. (December 1995). *Additional Investigations, Raytheon Company, 50 Republic Road, Melville, New York.*

IVI Environmental, Inc. (October 8, 1998, Revised March 2, 1999). *Voluntary Investigation Workplan, 333 Smith Street, Farmingdale, New York.*

Smolensky, D.A.; Buxton, H.T.; Shernoff, P.K. *Hydrogeologic Framework of Long Island, New York.* United States Geological Survey, 1989.

APPENDIX B

DRILLERS LOGS

**LAND, AIR, WATER
ENVIRONMENTAL SERVICES, INC.**



32 CHICHESTER AVE. PO BOX 372 CENTER MORICHES, NY 11934

(631) 874-2112 FAX (631) 874-4547

DRILLER'S LOGS

333 Smith Street
Farmingdale, NY

April-May 2002

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

Temp Well #1

page: 1 of 2

DATE: April 29, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group

Melville, New York

DEPTH DRILLED: 70 feet

DEPTH TO WATER: 44 feet

CASING INSTALLED: 65 feet PVC

SCREEN INSTALLED: 5 feet PVC

CASING DIAMETER: 2 inches

SLOT SIZE: 0.020 inches

DRILLING METHOD: Hollow Stem Auger 4 1/4"

WELL GROUTED: No

DRILLER: C. Pedersen

HELPER: J. Palmer

DEPTH FROM	TO	Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	5 ft	Hand/Auger Cuttings		Light brown/tan sand, coarse to medium, 50% gravel
5 ft	24 ft	Auger Cuttings		Tan sand, coarse to medium, 70% gravel
24 ft	26 ft	8 inches	7-10-14-16	Light tan/white sand, medium, trace gravel, (SP)
26 ft	29 ft	Auger Cuttings		Light tan sand, coarse to medium, 50% gravel
29 ft	31 ft	12 inches	8-12-17-20	Light tan/white sand, coarse to medium, 50% gravel, (GP)
31 ft	34 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel
34 ft	36 ft	12 inches	8-13-18-19	Light tan/white sand, coarse to medium, 10% gravel, (SP)
36 ft	39 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.
DRILLER'S LOGS

Temp well #1 cont.

page: 2 of 2

DATE: April 29, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group

Melville, New York

DEPTH		Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
FROM	TO			
39 ft	41 ft	12 inches	5-5-9-13	Light tan/white sand, coarse to medium/trace fine, 5% gravel, (SP)
41 ft	44 ft	Auger Cuttings		Light tan sand, coarse to medium, 10% gravel
44 ft	46 ft	11 inches	4-6-7-9	Tan sand, coarse to medium, 20% gravel, wet, (SP)
46 ft	49 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel, wet
49 ft	51 ft	14 inches	5-8-11-13	Light tan sand, coarse to medium, 40% gravel, wet, (SP)
51 ft	54 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel, wet
54 ft	56 ft	0 inches	4-7-8-9	No recovery
56 ft	59 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel, wet
59 ft	61 ft	10 inches	6-10-13-17	Tan sand, coarse to medium, 20% gravel, wet, (SP)
61 ft	64 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel, wet
64 ft	66 ft	8 inches	7-9-10-8	Tan sand, coarse to medium, 20% gravel, wet, (SP)
66 ft	69 ft	Auger Cuttings		Light tan sand, coarse to medium, 20% gravel, wet
69 ft	71 ft	10 inches	6-8-13-15	Tan sand, coarse to medium, 20% gravel, wet, (SP)

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

Temp Well #2

page: 1 of 1

DATE: April 30, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group
Melville, New York

DEPTH DRILLED: 66 feet

DEPTH TO WATER: 42.5 feet

CASING INSTALLED: 62 feet PVC

SCREEN INSTALLED: 5 feet PVC

CASING DIAMETER: 2 inches

SLOT SIZE: 0.020 inches

DRILLING METHOD: Hollow Stem Auger 4 1/4"

WELL GROUTED: No

DRILLER: C. Pedersen

HELPER: J. Palmer

DEPTH FROM TO		Recovery	BLOWS / 8 INCHES	SAMPLE DESCRIPTION
0 ft	5 ft	Hand		Brown/tan sand, 10% gravel
5 ft	9 ft	Auger Cuttings		Brown/tan sand, coarse to medium to fine, 40% gravel
9 ft	11 ft	12 inches	6-8-13-15	Orange/light tan sand, coarse to medium, 5% gravel, (SP), move hole instructed by NYSDEC

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

Temp Well #2

page: 1 of 2

DATE: April 30, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group
Melville, New York

DEPTH DRILLED: 66 feet

DEPTH TO WATER: 42.5 feet

CASING INSTALLED: 62 feet PVC

SCREEN INSTALLED: 5 feet PVC

CASING DIAMETER: 2 inches

SLOT SIZE: 0.020 inches

DRILLING METHOD: Hollow Stem Auger 4 1/4"

WELL GROUTED: No

DRILLER: C. Pedersen

HELPER: J. Palmer

DEPTH FROM TO		Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	9 ft	Hand/Auger Cuttings		Brown/tan sand, coarse to medium, 10% gravel
9 ft	11 ft	9 inches	7-8-6-7	Brown sand, coarse to medium, 20% gravel, (SP)
11 ft	27 ft	Auger Cuttings		Brown sand, coarse to medium, 25% gravel
27 ft	29 ft	9 inches	7-8-14-19	Light tan sand, coarse to medium, 10% gravel, (SP)
29 ft	32 ft	Auger Cuttings		Brown/tan sand, coarse to medium, 20% gravel
32 ft	34 ft	12 inches	8-14-16-19	Light tan sand, coarse to medium, 10% gravel, (SP)
34 ft	39 ft	Auger Cuttings		Light brown/tan sand, coarse to medium, 20% gravel

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.
DRILLER'S LOGS

Temp well #2 cont.

page: 2 of 2

DATE: April 30, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group

Melville, New York

DEPTH FROM TO		Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
39 ft	41 ft	10 inches	9-12-13-16	Light brown/tan sand, coarse to medium, 10% gravel, wet, (SP)
41 ft	44 ft	Auger Cuttings		Light brown/tan sand, coarse to medium to fine, 20% gravel
44 ft	46 ft	3 inches	6-7-7-9	Light tan sand, coarse to medium, 5% gravel, wet, (SP)
46 ft	49 ft	Auger Cuttings		Light tan/brown sand, coarse to medium, 10% gravel, wet
49 ft	51 ft	14 inches	5-7-7-11	Light tan sand, coarse to medium, 25% gravel, wet, (SP)
51 ft	54 ft	Auger Cuttings		Light tan sand coarse to medium, 20% gravel, wet
54 ft	56 ft	16 inches	5-7-8-10	Light tan sand, coarse to medium, 50% gravel, wet, (GP)
56 ft	59 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel, wet
59 ft	61 ft	8 inches	6-10-11-14	Tan sand, coarse to medium, 10% gravel, wet, (SP)
61 ft	64 ft	Auger Cuttings		Tan sand, coarse to medium, wet
64 ft	66 ft	12 inches	4-4-5-5	Tan sand, coarse to medium, 35% gravel, wet, (SP)

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW-#9R

page: 1 of 2

DATE: May 1, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group
Melville, New York

DEPTH DRILLED: 52 feet

DEPTH TO WATER: 44 feet

CASING INSTALLED: 41 feet PVC

SCREEN INSTALLED: 10 feet PVC

CASING DIAMETER: 2 inches

SLOT SIZE: 0.020 inches

DRILLING METHOD: Hollow Stem Auger 4 1/4"

WELL GROUTED: No

DRILLER: C. Pedersen

HELPER: J. Palmer

DEPTH FROM	TO	Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	4 ft	Hand/Auger Cuttings		Light brown/tan sand, coarse to medium to fine, 50% gravel
4 ft	6 ft	13 inches	9-17-23-28	Tan sand, coarse to medium, 10% gravel, (SP)
6 ft	9 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel
9 ft	11 ft	12 inches	8-12-14-17	Tan sand, coarse to medium, 15% gravel, (SP)
11 ft	14 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
14 ft	16 ft	12 inches	5-8-11-14	Light tan sand, coarse to medium, 10% gravel, (SP)
16 ft	19 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW#-9R cont.

page: 2 of 2

DATE: May 1, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group

Melville, New York

DEPTH FROM TO		Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
19 ft	21 ft	16 inches	6-8-11-12	Light tan sand, coarse to medium, 10% gravel, (SP)
21 ft	24 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel
24 ft	26 ft	0 inches	7-9-10-13	No recovery
26 ft	29 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel
29 ft	31 ft	8 inches	8-12-16-19	Tan sand, coarse to medium, 20% gravel, (SP)
31 ft	34 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel
34 ft	36 ft	10 inches	8-11-14-15	Tan sand, coarse to medium, 5% gravel, (SP)
36 ft	39 ft	Auger Cuttings		Tan sand, coarse to medium
39 ft	41 ft	10 inches	6-7-10-11	Light tan sand, coarse to medium to fine, 10% gravel, (SP)
41 ft	44 ft	Auger Cuttings		Tan sand, coarse to medium
44 ft	46 ft	19 inches	3-4-4-7	Tan sand, coarse to medium, 30% gravel, wet, (SP)
46 ft	52 ft	Auger Cuttings		Tan sand, coarse to medium, 30% gravel, wet

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW-#10R

page: 1 of 2

DATE: May 1, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group
Melville, New York

DEPTH DRILLED: 52 feet

DEPTH TO WATER: 43 feet

CASING INSTALLED: 40 feet PVC

SCREEN INSTALLED: 10 feet PVC

CASING DIAMETER: 2 inches

SLOT SIZE: 0.020 inches

DRILLING METHOD: Hollow Stem Auger 4 1/4"

WELL GROUTED: No

DRILLER: C. Pedersen

HELPER: J. Palmer

DEPTH FROM	TO	Recovery	BLOWS / ft INCHES	SAMPLE DESCRIPTION
0 ft	4 ft	Hand/Auger Cuttings		Brown/tan sand, coarse to medium
3 ft	5 ft	11 inches	6-7-12-14	Tan sand, coarse to medium, trace gravel, (SP)
5 ft	8 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
8 ft	10 ft	13 inches	6-9-11-16	Light tan sand, coarse to medium, 25% gravel, (SP)
10 ft	13 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
13 ft	15 ft	0 inches	8-14-20-34	No recovery
15 ft	18 ft	Auger Cuttings		Brown/tan sand, coarse to medium, 45% gravel

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.
DRILLER'S LOGS

MW#-10R cont.

page: 2 of 2

DATE: May 1, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group
Melville, New York

DEPTH FROM TO		Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
18 ft	20 ft	14 inches	6-7-8-12	Light tan sand, coarse to medium, 20% gravel, (SP)
20 ft	23 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel
23 ft	25 ft	2 inches	8-14-24-27	Tan sand, coarse to medium, 5% gravel, (SP), push rock
25 ft	28 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
28 ft	30 ft	7 inches	8-17-28-31	Tan sand, coarse to medium, 10% gravel, (SP)
30 ft	33 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
33 ft	35 ft	3 inches	10-26-22-17	Tan sand, coarse to medium, 10% gravel, (SP)
35 ft	38 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
38 ft	40 ft	8 inches	9-11-12-15	Tan sand, coarse to medium, 10% gravel, (SP)
40 ft	43 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel
43 ft	45 ft	20 inches	6-9-10-12	Tan sand, coarse to medium, 50% gravel, wet, (GP)
45 ft	52 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel, wet

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.
DRILLER'S LOGS

MW-#17

page: 1 of 1

DATE: May 2, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group
Melville, New York

DEPTH DRILLED: 52 feet

DEPTH TO WATER: 43 feet

CASING INSTALLED: 40 feet PVC

SCREEN INSTALLED: 10 feet PVC

CASING DIAMETER: 2 inches

SLOT SIZE: 0.020 inches

DRILLING METHOD: Hollow Stem Auger 4 1/4"

WELL GROUTED: No

DRILLER: C. Pedersen

HELPER: J. Palmer

DEPTH FROM TO		Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	4 ft	Hand		Brown sand, coarse to medium, 25% gravel
4 ft	23 ft	Auger Cuttings		Light brown/tan sand, coarse to medium, 30% gravel
23 ft	39 ft	Auger Cuttings		Tan sand, coarse to medium, 5% gravel
39 ft	45 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel
45 ft	55 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel, wet

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW-#8R

page: 1 of 2

DATE: May 2, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group
Melville, New York

DEPTH DRILLED: 55 feet

DEPTH TO WATER: 44 feet

CASING INSTALLED: 34 feet PVC

SCREEN INSTALLED: 20 feet PVC

CASING DIAMETER: 2 inches

SLOT SIZE: 0.020 inches

DRILLING METHOD: Hollow Stem Auger 4 1/4"

WELL GROUTED: No

DRILLER: C. Pedersen

HELPER: J. Palmer

DEPTH FROM TO		Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	4 ft	Hand/Auger Cuttings		Brown/tan sand, coarse to medium, 40% gravel
4 ft	6 ft	16 inches	8-11-14-17	Tan/brown sand, coarse to medium, 20% gravel
6 ft	9 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
9 ft	11 ft	13 inches	6-9-10-12	Tan sand, coarse to medium to fine, 5% gravel, (SP)
11 ft	14 ft	Auger Cuttings		Tan sand, coarse to medium
14 ft	16 ft	5 inches	5-7-7-9	Light tan sand, coarse to medium to fine, 10% gravel, (SP)
16 ft	19 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW#-8R cont.

page: 2 of 2

DATE: May 2, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group

Melville, New York

DEPTH FROM TO		Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
19 ft	21 ft	14 inches	4-6-5-6	Light tan sand, coarse to medium, 10% gravel, (SP)
21 ft	24 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
24 ft	26 ft	0 inches	6-9-13-16	No recovery
26 ft	29 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel
29 ft	31 ft	12 inches	7-10-14-16	Tan sand, coarse to medium, 15% gravel, (SP)
31 ft	34 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel
34 ft	36 ft	11 inches	7-8-11-17	Tan sand, coarse to medium, 20% gravel, (SP)
36 ft	39 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel
39 ft	41 ft	16 inches	6-8-9-13	Tan sand, coarse to medium, 10% gravel, (SP)
41 ft	44 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
44 ft	46 ft	16 inches	4-4-6-7	Tan sand, coarse to medium, 20% gravel, wet, (SP)
46 ft	55 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.
DRILLER'S LOGS

MW-#16

page: 1 of 1

DATE: May 3, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group

Melville, New York

DEPTH DRILLED: 67 feet

DEPTH TO WATER: 43' 6"

CASING INSTALLED: 60 feet PVC

SCREEN INSTALLED: 5 feet PVC

CASING DIAMETER: 2 inches

SLOT SIZE: 0.020 inches

DRILLING METHOD: Hollow Stem Auger 4 1/4"

WELL GROUTED: No

DRILLER: C. Pedersen

HELPER: G. Stevens

DEPTH FROM TO		Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	5 ft	Hand/Auger Cuttings		Tan sand, coarse to medium, 20% gravel
5 ft	25 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel
25 ft	45 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
45 ft	55 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel, wet
55 ft	67 ft	Auger Cuttings		Tan sand, coarse to medium, 45% gravel, wet

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW-#6R

page: 1 of 2

DATE: May 3, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group
Melville, New York

DEPTH DRILLED: 54 feet

DEPTH TO WATER: 45 feet

CASING INSTALLED: 37 feet PVC

SCREEN INSTALLED: 15 feet PVC

CASING DIAMETER: 2 inches

SLOT SIZE: 0.020 inches

DRILLING METHOD: Hollow Stem Auger 4 1/4"

WELL GROUTED: No

DRILLER: C. Pedersen

HELPER: G. Stevens

DEPTH FROM	TO	Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
0 ft	4 ft	Hand/Auger Cuttings		Light brown/tan sand, coarse to medium, 10% gravel
4 ft	6 ft	15 inches	11-23-28-21	Tan sand, coarse to medium, 10% gravel, (SP)
6 ft	9 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel
9 ft	11 ft	13 inches	13-17-18-16	Tan sand, coarse to medium, 15% gravel, (SP)
11 ft	14 ft	Auger Cuttings		
14 ft	16 ft	12 inches	6-7-9-14	Tan sand, coarse to medium, 20% gravel, (SP)
16 ft	19 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel

LAND, AIR, WATER ENVIRONMENTAL SERVICES, INC.

DRILLER'S LOGS

MW#-6R cont.

page: 2 of 2

DATE: May 3, 2002

SITE: 333 Smith Street
Farmingdale, NY

CONSULTANT: H2M Group

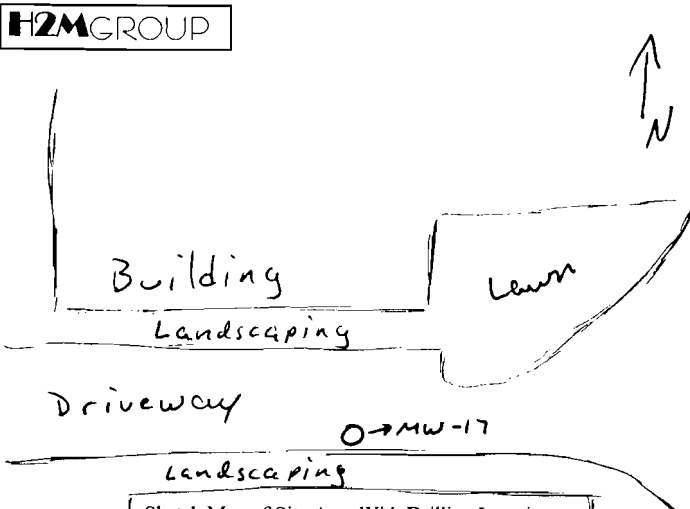
Melville, New York

DEPTH FROM TO		Recovery	BLOWS / 6 INCHES	SAMPLE DESCRIPTION
19 ft	21 ft	12 inches	6-8-13-18	Tan sand, coarse to medium to fine, trace gravel, (SP)
21 ft	24 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
24 ft	26 ft	14 inches	5-7-10-12	Tan sand, coarse to medium, 10% gravel, (SP)
26 ft	29 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel
29 ft	31 ft	14 inches	9-14-17-22	Tan sand, coarse to medium, 10% gravel, (SP)
31 ft	34 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
34 ft	36 ft	16 inches	8-12-13-15	Tan/orange sand, coarse to medium, 40% gravel, (SP)
36 ft	39 ft	Auger Cuttings		Tan sand, coarse to medium, 20% gravel
39 ft	41 ft	12 inches	7-13-16-19	Tan sand, coarse to medium, 20% gravel
41 ft	44 ft	Auger Cuttings		Tan sand, coarse to medium, 10% gravel
44 ft	46 ft	12 inches	5-7-7-8	Tan sand, coarse to medium, 40% gravel, (SP)
46 ft	54 ft	Auger Cuttings		Tan sand, coarse to medium, 25% gravel

APPENDIX C

H2M SOIL BORING LOGS AND WELL CONSTRUCTION DIAGRAMS

SOIL BORING LOG

<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 10px;">H2MGROUP</div> <div style="flex-grow: 1;">  <p style="font-size: small; text-align: center;">Sketch Map of Site Area With Drilling Locations</p> </div> </div>										<div style="display: flex; justify-content: space-between;"> Boring # MW# 17 Sheet 1 of 6 </div>			
<div style="display: flex; justify-content: space-between;"> Project: Well Installation Job# RKS0202 T1 Site: 333 Smith Street </div>													
<div style="display: flex; justify-content: space-between;"> Logged by: RWW Proj. Eng: MWB Edited by: </div>													
<div style="display: flex; justify-content: space-between;"> Drilling Contractor: LAWES </div>													
<div style="display: flex; justify-content: space-between;"> Drill Rig Type/Method: Hollow Stem Auger </div>													
<div style="display: flex; justify-content: space-between;"> Drillers Name: Carl Peterson / John Palmer </div>													
<div style="display: flex; justify-content: space-between;"> Borehole Diam/Drill Bit Type Total Depth 71 Feet </div>													
<div style="display: flex; justify-content: space-between;"> 4.25" Hollow Stem Auger w/ Split Spoon Ref. Elev. </div>													
<div style="display: flex; justify-content: space-between;"> Hammer Wt: 140 lbs Drop: </div>													
<div style="display: flex; justify-content: space-between;"> Start Time: 8:30 am Date: 4/29/02 </div>													
<div style="display: flex; justify-content: space-between;"> Completion Time: 15:00 Date: 4/29/02 </div>													
<div style="display: flex; justify-content: space-between;"> Backfill Time: Date: </div>													
<div style="display: flex; justify-content: space-between;"> 1st Water </div>													
<div style="display: flex; justify-content: space-between;"> Boring Depth (ft.) 55' </div>													
<div style="display: flex; justify-content: space-between;"> Casing Depth (ft.) 54' </div>													
<div style="display: flex; justify-content: space-between;"> Water Depth (ft.) 43' </div>													
<div style="display: flex; justify-content: space-between;"> Time 14:30 </div>													
<div style="display: flex; justify-content: space-between;"> Date 5/2/02 </div>													
<div style="display: flex; justify-content: space-between;"> Tan MGS, trace pebbles, dry, no odor </div>													
<div style="display: flex; justify-content: space-between;"> Tan MGS, little coarse & gravel, dry, no odor </div>													
<div style="display: flex; justify-content: space-between;"> Tan MGS, trace coarse, little gravel, dry, no </div>													
<div style="display: flex; justify-content: space-between;"> Tan MGS, trace fine/coarse/gravel, dry, no </div>													
<div style="display: flex; justify-content: space-between;"> Tan CGS, some MGS, little gravel, sat., no </div>													
<div style="display: flex; justify-content: space-between;"> Tan MGS, trace coarse/gravel, some FGS sat., no odor </div>													
<div style="display: flex; justify-content: space-between;"> No Recovery </div>													
<div style="display: flex; justify-content: space-between;"> 59-59.5 Tan Silt, FGS, trace CGS, sat., no odor </div>													
<div style="display: flex; justify-content: space-between;"> 59.5-61 Tan MGS, some CGS, trace FGS, sat., no odor </div>													
<div style="display: flex; justify-content: space-between;"> 1/3 FGS, 1/3 MGS, 1/3 CGS, sat., no odor </div>													
<div style="display: flex; justify-content: space-between;"> 69-70 Tan MGS w/ trace FGS/CGS </div>													
<div style="display: flex; justify-content: space-between;"> 70-71 Tan MGS & CGS trace FGS/gravel sat. no odor </div>													
<div style="display: flex; justify-content: space-between;"> FGS = Fine Grained Sand </div>													
<div style="display: flex; justify-content: space-between;"> MGS = Medium Grained Sand </div>													
<div style="display: flex; justify-content: space-between;"> CGS = Coarse Grained Sand </div>													

SOIL BORING LOG

[illegible]

SOIL BORING LOG

[illegible]

SOIL BORING LOG

<div><div><div>H2M GROUP</div><div><div>72</div><div>Building</div><div>Landscaping</div><div>Driveway</div><div>Landscaping</div><div>Sketch Map of Site Area With Drilling Locations</div></div></div></div>										<div>Boring # MW# 9R Sheet 4 of 6</div> <div>Project: Well Installation</div> <div>Job# RKSJ 0202 T1 Site: 333 Smith Street</div> <div>Logged by: RWW Proj. Eng: MWB Edited by:</div> <div>Drilling Contractor: LAWES</div> <div>Drill Rig Type/Method: Hollow Stem Auger</div> <div>Drillers Name: Carl Peterson / John Palmer</div> <div>Borehole Diam/Drill Bit Type 4.25" Hollow Stem Auger w/ Split Spoon</div> <div>Total Depth 51 Feet</div> <div>Ref. Elev.</div> <div>Hammer Wt: 140 lbs Drop:</div> <div>Start Time: 12:35 am Date: 5/1/02</div> <div>Completion Time: 16:30 Date: 5/1/02</div> <div>Backfill Time: Date:</div>									
<div>PID/OVA</div> <div>Sampler Type & Depth</div> <div>Blow Counts / 6 in.</div> <div>Advance (in.)</div> <div>Recovered (in.)</div> <div>Casing Type & Size</div> <div>Annulus Filler</div> <div>Sample Rec. Analyses</div> <div>Feet</div> <div>Depth</div>										<div>1st Water</div> <div>Boring Depth (ft.) 51'</div> <div>Casing Depth (ft.) 51'</div> <div>Water Depth (ft.) 44'</div> <div>Time 14:30</div> <div>Date 5/1/02</div>									
0.										Tan FGS, some MGS/gravel, trace CGS, dry, no odor									
0.0										Tan FGS, some MGS, trace gravel, dry, no odor									
0.										Tan FGS, trace MGS/CGS, dry, no odor									
0.0										Tan MGS, trace FGS, little CGS, dry, no odor									
										No Recovery									
0.0										Tan MGS, some CGS, trace FGS/gravel, dry, no odor									
0.										Tan FGS, trace MGS/CGS, some gravel, dry, no odor									
0.0										Tan FGS, some MGS, trace CGS, dry, no odor									
0.0										Tan CGS, trace MGS, some gravel, sat., no odor									
										FGS = Fine Grained Sand									
										MGS = Medium Grained Sand									
										CGS = Coarse Grained Sand									

SOIL BORING LOG

[illegible]

SOIL BORING LOG

<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 10px;">H2M GROUP</div> <div style="flex-grow: 1;"> <div style="text-align: right; margin-bottom: 10px;"> </div> <div style="border: 1px solid black; padding: 10px; margin-bottom: 10px;"> <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <p>Building</p> <p>Landscaping</p> <p>Driveway</p> </div> <div style="text-align: center;"> <p>0 → 6R</p> </div> </div> </div> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>Sketch Map of Site Area With Drilling Locations</p> </div> </div> </div>										<div style="display: flex; justify-content: space-between;"> Boring # MW# 6R Sheet 6 of 6 </div>			
<div style="display: flex; justify-content: space-between;"> Project: Well Installation </div>													
<div style="display: flex; justify-content: space-between;"> Job# RKS0202 T1 Site: 333 Smith Street </div>													
<div style="display: flex; justify-content: space-between;"> Logged by: RWW Proj. Eng: MWB Edited by: </div>													
<div style="display: flex; justify-content: space-between;"> Drilling Contractor: LAWES </div>													
<div style="display: flex; justify-content: space-between;"> Drill Rig Type/Method: Hollow Stem Auger </div>													
<div style="display: flex; justify-content: space-between;"> Drillers Name: Carl Peterson / Greg </div>													
<div style="display: flex; justify-content: space-between;"> Borehole Diam/Drill Bit Type Total Depth 54 Feet </div>													
<div style="display: flex; justify-content: space-between;"> 4.25" Hollow Stem Auger w/ Split Spoon Ref. Elev. </div>													
<div style="display: flex; justify-content: space-between;"> Hammer Wt: 140 lbs Drop: </div>													
<div style="display: flex; justify-content: space-between;"> Start Time: 8:00 am Date: 5/3/02 </div>													
<div style="display: flex; justify-content: space-between;"> Completion Time: 12:00 Date: 5/3/02 </div>													
<div style="display: flex; justify-content: space-between;"> Backfill Time: Date: </div>													
<div style="display: flex; justify-content: space-between;"> 1st Water </div>													
<div style="display: flex; justify-content: space-between;"> Boring Depth (ft.) 54' </div>													
<div style="display: flex; justify-content: space-between;"> Casing Depth (ft.) 52' </div>													
<div style="display: flex; justify-content: space-between;"> Water Depth (ft.) 43' </div>													
<div style="display: flex; justify-content: space-between;"> Time 10:15 </div>													
<div style="display: flex; justify-content: space-between;"> Date 5/3/02 </div>													
<div style="display: flex; justify-content: space-between;"> Tan MGS, some FGS, little gravel, dry, no odor </div>													
<div style="display: flex; justify-content: space-between;"> Tan MGS, some FGS/CGS, trace gravel, dry, no odor </div>													
<div style="display: flex; justify-content: space-between;"> Tan FGS, trace CGS/gravel, dry, minor sweet odor </div>													
<div style="display: flex; justify-content: space-between;"> 19-19.5 Brown MGS, some CGS, trace gravel, dry, no odor </div>													
<div style="display: flex; justify-content: space-between;"> 19.5-21 Tan FGS, trace MGS, dry, no odor </div>													
<div style="display: flex; justify-content: space-between;"> Tan FGS, trace MGS/CGS, dry, no odor </div>													
<div style="display: flex; justify-content: space-between;"> Tan gravel, some FGS, trace MGS, dry, no odor </div>													
<div style="display: flex; justify-content: space-between;"> 34-35 Brown CGS, trace MGS/gravel, dry, no odor </div>													
<div style="display: flex; justify-content: space-between;"> 35-36 Tan MGS, trace CGS/gravel, dry, no odor </div>													
<div style="display: flex; justify-content: space-between;"> Tan MGS, some CGS, dry, no odor </div>													
<div style="display: flex; justify-content: space-between;"> Tan CGS, some MGS, trace gravel, sat., no odor </div>													
<div style="display: flex; justify-content: space-between;"> FGS = Fine Grained Sand </div>													
<div style="display: flex; justify-content: space-between;"> MGS = Medium Grained Sand </div>													
<div style="display: flex; justify-content: space-between;"> CGS = Coarse Grained Sand </div>													

GRADE

FLUSH-MOUNTED STEEL
MANWAY COVER

TOP OF CASING @ 0.41'

WELL CAP

TOP OF BENTONITE GROUT @ 1'

CONCRETE CAP

CEMENT/BENTONITE GROUT

TOP OF BENTONITE SEAL @ 35'

2" THREADED SCHEDULE 40
PVC RISER PIPE

BENTONITE SEAL

BOTTOM OF BENTONITE SEAL @ 37'

TOP OF SCREEN @ 41'

2" THREADED SCHEDULE 40
PVC 0.010 INCH SLOTTED SCREEN

#00 SAND PACK

GROUND WATER @ 43.75'¹

BOTTOM OF SCREEN @ 51'

BOTTOM CAP

END OF BORING @ 52'

WELL CONSTRUCTION DIAGRAM
MW-9R

333 SMITH STREET
FARMINGDALE, NEW YORK

NOT TO SCALE
Elevations referenced
to feet below grade.

DATE INSTALLED
5/1/02

1 - DEPTH TO GROUND WATER ON 5-13-02

H2MGROUP

ENGINEERS
MELVILLE, N.Y.

ARCHITECTS

PLANNERS

SCIENTISTS

SURVEYORS
TOTOWA, N.J.

GRADE

FLUSH-MOUNTED STEEL
MANWAY COVER

TOP OF CASING @ 0.58'

TOP OF BENTONITE GROUT @ 1'

TOP OF BENTONITE SEAL @ 34'

BOTTOM OF BENTONITE SEAL @ 36'

TOP OF SCREEN @ 40'

GROUND WATER @ 42.67'¹

BOTTOM OF SCREEN @ 50'

END OF BORING @ 51'

WELL CAP

CONCRETE CAP

CEMENT/BENTONITE GROUT

2" THREADED SCHEDULE 40
PVC RISER PIPE

BENTONITE SEAL

2" THREADED SCHEDULE 40
PVC 0.010 INCH SLOTTED SCREEN

#00 SAND PACK

BOTTOM CAP

WELL CONSTRUCTION DIAGRAM
MW-10R

333 SMITH STREET
FARMINGDALE, NEW YORK

NOT TO SCALE
Elevations referenced
to feet below grade.

DATE INSTALLED
5/1/02

1 - DEPTH TO GROUND WATER ON 5-13-02

H2MGROUP

ENGINEERS
MELVILLE, N.Y.

ARCHITECTS

PLANNERS

SCIENTISTS

SURVEYORS
TOTOWA, N.J.

GRADE

FLUSH-MOUNTED STEEL
MANWAY COVER

TOP OF CASING @ 0.29'

WELL CAP

TOP OF BENTONITE GROUT @ 1'

CONCRETE CAP

CEMENT/BENTONITE GROUT

TOP OF BENTONITE SEAL @ 29'

2" THREADED SCHEDULE 40
PVC RISER PIPE

BENTONITE SEAL

BOTTOM OF BENTONITE SEAL @ 31'

TOP OF SCREEN @ 34'

2" THREADED SCHEDULE 40
PVC 0.010 INCH SLOTTED SCREEN

#00 SAND PACK

GROUND WATER @ 43.58'¹

BOTTOM OF SCREEN @ 54'

BOTTOM CAP

END OF BORING @ 55'

WELL CONSTRUCTION DIAGRAM
MW-8R

333 SMITH STREET
FARMINGDALE, NEW YORK

NOT TO SCALE
Elevations referenced
to feet below grade.

DATE INSTALLED
5/2/02

1 - DEPTH TO GROUND WATER ON 5-13-02

H2MGROUP

ENGINEERS
MELVILLE, N.Y.

ARCHITECTS

PLANNERS

SCIENTISTS

SURVEYORS
TOTOWA, N.J.

GRADE

FLUSH-MOUNTED STEEL
MANWAY COVER

TOP OF CASING @ 0.37'

TOP OF BENTONITE GROUT @ 1'

TOP OF BENTONITE SEAL @ 29'

BOTTOM OF BENTONITE SEAL @ 31'

TOP OF SCREEN @ 34'

GROUND WATER @ 44.33' ¹ ▼

BOTTOM OF SCREEN @ 54'

END OF BORING @ 55'

WELL CAP

CONCRETE CAP

CEMENT/BENTONITE GROUT

2" THREADED SCHEDULE 40
PVC RISER PIPE

BENTONITE SEAL

2" THREADED SCHEDULE 40
PVC 0.010 INCH SLOTTED SCREEN

#00 SAND PACK

BOTTOM CAP

WELL CONSTRUCTION DIAGRAM
MW-17

333 SMITH STREET
FARMINGDALE, NEW YORK

NOT TO SCALE
Elevations referenced
to feet below grade.

DATE INSTALLED
5/2/02

1 - DEPTH TO GROUND WATER ON 5-13-02

H2MGROUP

ENGINEERS
MELVILLE, N.Y.

ARCHITECTS

PLANNERS

SCIENTISTS

SURVEYORS
TOTOWA, N.J.

GRADE

FLUSH-MOUNTED STEEL
MANWAY COVER

TOP OF CASING @ 0.47'

WELL CAP

TOP OF BENTONITE GROUT @ 1'

CONCRETE CAP

CEMENT/BENTONITE GROUT

TOP OF BENTONITE SEAL @ 31'

2" THREADED SCHEDULE 40
PVC RISER PIPE

BENTONITE SEAL

BOTTOM OF BENTONITE SEAL @ 33'

TOP OF SCREEN @ 37'

GROUND WATER @ 44.42' ¹ ▽

2" THREADED SCHEDULE 40
PVC 0.010 INCH SLOTTED SCREEN

#00 SAND PACK

BOTTOM OF SCREEN @ 52'

BOTTOM CAP

END OF BORING @ 54'

WELL CONSTRUCTION DIAGRAM
MW-6R

333 SMITH STREET
FARMINGDALE, NEW YORK

NOT TO SCALE
Elevations referenced
to feet below grade.

DATE INSTALLED
5/3/02

1 - DEPTH TO GROUND WATER ON 5-13-02

H2MGROUP

ENGINEERS
MELVILLE, N.Y.

ARCHITECTS

PLANNERS

SCIENTISTS

SURVEYORS
TOTOWA, N.J.

GRADE

FLUSH-MOUNTED STEEL
MANWAY COVER

TOP OF CASING @ 0.25'

TOP OF BENTONITE GROUT @ 1'

TOP OF BENTONITE SEAL @ 19'

BOTTOM OF BENTONITE SEAL @ 21'

GROUND WATER @ 44.00' ¹ ▽

TOP OF SAND PACK @ 55'

TOP OF SCREEN @ 55'

BOTTOM OF SCREEN @ 60'

END OF BORING @ 60'

WELL CAP

CONCRETE CAP

CEMENT/BENTONITE GROUT

2" THREADED SCHEDULE 40
PVC RISER PIPE

BENTONITE SEAL

NATIVE SOIL

2" THREADED SCHEDULE 40
PVC 0.010 INCH SLOTTED SCREEN

#00 SAND PACK

BOTTOM CAP

WELL CONSTRUCTION DIAGRAM
MW-16

333 SMITH STREET
FARMINGDALE, NEW YORK

NOT TO SCALE
Elevations referenced
to feet below grade.

DATE INSTALLED
5/3/02

1 - DEPTH TO GROUND WATER ON 5-13-02

H2MGROUP

ENGINEERS
MELVILLE, N.Y.

ARCHITECTS

PLANNERS

SCIENTISTS

SURVEYORS
TOTOWA, N.J.

APPENDIX D

**SOIL SAMPLING AND GROUNDWATER PROFILING LABORATORY
ANALYTICAL REPORT**



Page 1 of 6

May 1, 2002

Charles Erlanger
H2M Group
575 Broadhollow Road
Melville, New York 11748

Re: Rackson, 333 Smith Street

Dear Mr. Erlanger:

Enclosed please find the Laboratory Analysis Report(s) for sample(s) received on April 29 2002. Long Island Analytical Laboratories analyzed the samples on April 30, 2002 for the following:

CLIENT ID	ANALYSIS
MWB MW-17	EPA 8260
MW-17 (65-70)	EPA 624
MW-17 (52-57)	EPA 624
MW-17 (44-49)	EPA 624

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

Long Island Analytical Laboratories, Inc.

Client: H2M Group	Client ID: Reckson, 333 Smith St. MWB MW-17
Date received: 04/29/02	Laboratory ID: 0215503
Date extracted: 04/30/02	Matrix: Soil
Date analyzed: 04/30/02	ELAP #: 11693

EPA METHOD 8260

Parameter	CAS No.	Results ug/kg
BENZENE	71-43-2	<5
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: Reckson, 333 Smith St. MWB MW-17
Date received: 04/29/02	Laboratory ID: 0215503
Date extracted: 04/30/02	Matrix: Soil
Date analyzed: 04/30/02	ELAP #: 11693

EPA METHOD 8260

Parameter	CAS No.	Results ug/kg
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<10
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5
MTBE	1634-04-4	<5

Michael Versaldi

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: Reckson, 333 Smith St. MW-17 (65-70)
Date received: 04/29/02	Laboratory ID: 0215504
Date extracted: 04/30/02	Matrix: Liquid
Date analyzed: 04/30/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	13
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Vernaldi

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: Reckson, 333 Smith St. MW-17 (52-57)
Date received: 04/29/02	Laboratory ID: 0215505
Date extracted: 04/30/02	Matrix: Liquid
Date analyzed: 04/30/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	19
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	6
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

Michael Veraldi
Laboratory Director

101-4 Colin Drive • Holbrook, New York 11741

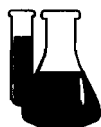
"TOMORROW'S ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: Reckson, 333 Smith St. MW-17 (44-49)
Date received: 04/29/02	Laboratory ID: 0215506
Date extracted: 04/30/02	Matrix: Liquid
Date analyzed: 04/30/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	50
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	14
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

Michael Vernaldi

Laboratory Director

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com



May 2, 2002

Charles Erlanger
H2M Group
575 Broadhollow Road
Melville, New York 11748

Re: Reckson, 333 Smith Street

Dear Mr. Erlanger:

Enclosed please find the Laboratory Analysis Report(s) for sample(s) received on April 30 2002. Long Island Analytical Laboratories analyzed the samples on May 1, 2002 for the following:

CLIENT ID	ANALYSIS
MW-16	EPA 8260
MW-16 (60-65)	EPA 624
MW-16 (52-57)	EPA 624
MW-16 (42.5-47.5)	EPA 624

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

Long Island Analytical Laboratories, Inc.

Client: H2M Group	Client ID: Reckson, 333 Smith St. MW-16
Date received: 04/30/02	Laboratory ID: 0215550
Date extracted: 05/01/02	Matrix: Soil
Date analyzed: 05/01/02	ELAP #: 11693

EPA METHOD 8260

Parameter	CAS No.	Results ug/kg
BENZENE	71-43-2	<5
BROMOBENZENE	108-86-1	<5
BROMOCHLOROMETHANE	74-97-5	<5
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
n-BUTYLBENZENE	104-51-8	<5
sec-BUTYLBENZENE	135-98-8	<5
tert-BUTYLBENZENE	98-06-6	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLORODIBROMOMETHANE	124-48-1	<5
CHLOROETHANE	75-00-3	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
2-CHLOROTOLUENE	95-49-8	<5
4-CHLOROTOLUENE	106-43-4	<5
1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	<5
1,2-DIBROMOETHANE	106-93-4	<5
DIBROMOMETHANE	74-95-3	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
DICHLORODIFLUOROMETHANE	75-71-8	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
cis-1,2-DICHLOROETHENE	156-59-2	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
1,3-DICHLOROPROPANE	142-28-9	<5
2,2-DICHLOROPROPANE	594-20-7	<5
1,1-DICHLOROPROPENE	563-58-6	<5



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: Reckson, 333 Smith St. MW-16
Date received: 04/30/02	Laboratory ID: 0215550
Date extracted: 05/01/02	Matrix: Soil
Date analyzed: 05/01/02	ELAP #: 11693

EPA METHOD 8260

Parameter	CAS No.	Results ug/kg
ETHYLBENZENE	100-41-4	<5
HEXACHLOROBUTADIENE	87-68-3	<5
ISOPROPYLBENZENE	98-82-8	<5
p-ISOPROPYLTOLUENE	99-87-6	<5
METHYLENE CHLORIDE	75-09-2	<5
NAPHTHALENE	91-20-3	<5
n-PROPYLBENZENE	103-65-1	<5
STYRENE	100-42-5	<5
1,1,1,2-TETRACHLOROETHANE	630-20-6	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,2,3-TRICHLOROBENZENE	87-61-6	<5
1,2,4-TRICHLOROBENZENE	120-82-1	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
1,2,3-TRICHLOROPROPANE	96-18-4	<5
1,3,5-TRIMETHYLBENZENE	108-67-8	<5
1,2,4-TRIMETHYLBENZENE	95-63-6	<5
VINYL CHLORIDE	75-01-4	<5
ACETONE	62-64-1	<50
CARBON DISULFIDE	75-15-0	<5
2-BUTANONE (MEK)	78-93-3	<10
VINYL ACETATE	108-05-4	<5
2-HEXANONE	591-78-6	<5
p & m-XYLENE	1330-20-7	<10
o-XYLENE	1330-20-7	<5
MTBE	1634-04-4	<5

Michael Vernaldi

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: Reckson, 333 Smith St. MW-16 (60-65)
Date received: 04/30/02	Laboratory ID: 0215551
Date extracted: 05/01/02	Matrix: Liquid
Date analyzed: 05/01/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	96
BENZENE	71-43-2	0.8
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	42
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	10
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Venzel

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: Reckson, 333 Smith St. MW-16 (52-57)
Date received: 04/30/02	Laboratory ID: 0215552
Date extracted: 05/01/02	1/02Matrix: Liquid
Date analyzed: 05/01/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	91
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	29
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	10
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5



Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: Reckson, 333 Smith St. MW-16 (42.5-47.5)
Date received: 04/30/02	Laboratory ID: 0215553
Date extracted: 05/01/02	Matrix: Liquid
Date analyzed: 05/01/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	29
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	10
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Veraldo

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

APPENDIX E

LABORATORY CHAINS OF CUSTODY

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS H2M/575 Broad Hollow Rd. Melville, NY 11747		CONTACT: Manfred Bohms PHONE: 631-756-8000 x1102 FAX: 631-694-4122		SAMPLER (SIGNATURE) R. Wengkus DATE 4/29/02 TIME		SAMPLE(S) SEALED YES / NO		
PROJECT LOCATION: Rockson 333 2nd St. (RKSX 02.02)		SAMPLER NAME (PRINT) Rocky Wengkus		CORRECT CONTAINER(S) YES / NO				
TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month.								
LABORATORY ID # <small>For Laboratory's Use Only</small>	MATRIX	TYPE	PRES.	SAMPLE # - LOCATION	ANALYSIS REQUIRED			# OF CONTAINERS
1. 0215503	S	GUS	ICE	MWB MW-17	2			
2. 0215504	GW	G	ICE	MW-17 (65-70)	2			
3. 0215505	GW	G	ICE	MW-17 (52-57)	2			
4. 0215506	GW	G	ICE	MW-17 (44-49)	2			
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								

MATRIX S=SOIL; L=LIQUID; SL=SLUDGE; A=AIR; W=WIPE; P=PAINT CHIPS; B=BULK MATERIAL TYPE G=GRAB; C=COMPOSITE; SS=SPLIT SPOON PRES ICE, HCL, H ₂ SO ₄ , NAOH		TURNAROUND REQUIRED: Soil (GW-48hr) NORMAL STAT BY 1/1		COMMENTS/INSTRUCTIONS water 48hr turnaround soil - stand and turnaround	
RELINQUISHED BY (SIGNATURE) 	DATE 4/29/02 TIME 17:00	PRINTED NAME Manfred W. Bohms	RECEIVED BY LAB (SIGNATURE) 	DATE 4/29/02 TIME 4:49	PRINTED NAME
RELINQUISHED BY (SIGNATURE)	DATE TIME	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN 	DATE 4/29/02 TIME 4:00	PRINTED NAME D. King



CLIENT NAME/ADDRESS			CONTACT: <u>Manfred Bohms</u>		SAMPLER (SIGNATURE) <u>R. Wenskus</u>		DATE <u>4/30/02</u>		TIME		SAMPLE(S) SEALED		YES / NO			
PROJECT LOCATION: <u>Rickson, 333 Smith St.</u>			PHONE: <u>631 736-8000 x1102</u>		SAMPLER NAME (PRINT) <u>Rocky Wenskus</u>		CORRECT CONTAINER(S)		YES / NO		ANALYSIS REQUIRED <u>DOE</u> <u>8 260 TCL</u> <u>100 624</u>					
			FAX: <u>631 400-7436</u>													
TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month.																
LABORATORY ID # <small>For Laboratory Use Only</small>	MATRIX	TYPE	PRES.	SAMPLE # - LOCATION	# OF CONTAINERS											
1. <u>0215550</u>	<u>S</u>	<u>G</u>	<u>FLG</u>	<u>MU-16</u>	<u>X</u>	<u>Standard Turn around time</u>										<u>2</u>
2. <u>0215551</u>	<u>L</u>	<u>↓</u>	<u>↓</u>	<u>MU-16 (60-65)</u>	<u>X</u>	<u>↓</u>										<u>2</u>
3. <u>0215552</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>MW-16 (52-57)</u>	<u>X</u>	<u>48 Hour Turn around time</u>										<u>2</u>
4. <u>0215553</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>MW-16 (42.5-47.5)</u>	<u>X</u>	<u>↓</u>										<u>2</u>
5.																
6.																
7.																
8.																
9.																
10.																
11.																
12.																
13.																
14.																

MATRIX

S=SOIL; L=LIQUID; SL=SLUDGE; A=AIR; W=WIPE; P=PAINT CHIPS; B=BULK MATERIAL

TYPE

G=GRAB; C=COMPOSITE, SS=SPLIT SPOON

PRES

ICE, HCL, H₂SO₄, NAOH

TURNAROUND REQUIRED:

Soil () Wipe ()

NORMAL () STAT ()

BY / /

COMMENTS / INSTRUCTIONS

RELINQUISHED BY (SIGNATURE)	DATE	TIME	PRINTED NAME	RECEIVED BY LAB (SIGNATURE)	DATE	TIME	PRINTED NAME
<i>[Signature]</i>	4/30/02	11:00	Manfred W. Bohms	<i>[Signature]</i>	4/30/02	4:54	
RELINQUISHED BY (SIGNATURE)	DATE	TIME	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN	DATE	TIME	PRINTED NAME
				<i>[Signature]</i>	4/30/02	4:55	DK

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT

CLIENT NAME/ADDRESS: H211/515 Broadhollow Rd				CONTACT: <i>Montr-B Bohms</i> PHONE: <i>631 756 8000 x1102</i> FAX: <i>631 694-4122</i>		SAMPLER (SIGNATURE) <i>R. Wensky</i>		DATE <i>5/13/02</i>		TIME		SAMPLE(S) SEALED YES / NO		
PROJECT LOCATION: <i>333 Smith Street</i>				SAMPLER NAME (PRINT) <i>R. Wensky</i>								CORRECT CONTAINER(S) YES / NO		
TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month.				ANALYSIS REQUIRED <i>EPA Method 604</i>										
LABORATORY ID # <small>For Laboratory Use Only</small>	MATRIX	TYPE	PRES.	SAMPLE # - LOCATION	# OF CONTAINERS									
1. <i>0216798</i>	<i>L</i>	<i>G</i>	<i>Ice</i>	<i>MW-6R (MS/MSD)</i>	<i>X</i>								<i>6</i>	
2. <i>0216799</i>	<i> </i>	<i> </i>	<i> </i>	<i>MW-10R</i>	<i>X</i>								<i>2</i>	
3. <i>0216800</i>	<i> </i>	<i> </i>	<i> </i>	<i>MW-17</i>	<i>X</i>								<i>2</i>	
4. <i>0216801</i>	<i> </i>	<i> </i>	<i> </i>	<i>MW-9R</i>	<i>X</i>								<i>2</i>	
5. <i>0216802</i>	<i> </i>	<i> </i>	<i> </i>	<i>MW-8R</i>	<i>X</i>								<i>2</i>	
6. <i>0216803</i>	<i> </i>	<i> </i>	<i> </i>	<i>MW-16</i>	<i>X</i>								<i>2</i>	
7. <i>0216804</i>	<i> </i>	<i> </i>	<i> </i>	<i>MW-5 Standpipe</i>	<i>X</i>								<i>2</i>	
8. <i>0216805</i>	<i> </i>	<i> </i>	<i> </i>	<i>MW-1</i>	<i>X</i>								<i>2</i>	
9. <i>0216806</i>	<i>↓</i>	<i>↓</i>	<i>↓</i>	<i>MW-2</i>	<i>X</i>								<i>2</i>	
10. <i>0216807</i>	<i>L</i>	<i>G</i>	<i>Ice</i>	<i>Field Blank</i>	<i>X</i>								<i>2</i>	
11. <i>0216808</i>	<i>L</i>		<i>Ice</i>	<i>Trip Blank</i>	<i>X</i>								<i>2</i>	
12. <i>0216809</i>				<i>MW-6R (MS)</i>	<i>X</i>								<i>2</i>	
13. <i>0216810</i>				<i>MW-6R (MSD)</i>	<i>X</i>								<i>2</i>	
MATRIX S=SOIL; L=LIQUID; SL=SLUDGE; A=AIR; W=WIFE; P=PAINT CHIPS; B=BULK MATERIAL TYPE G=GRAB; C=COMPOSITE, SS=SPLIT SPOON PRES ICE, HCL, H ₂ SO ₄ , NAOH					TURNAROUND REQUIRED: NORMAL <input type="checkbox"/> STAT <input type="checkbox"/> BY <i>1/1</i>					COMMENTS / INSTRUCTIONS <i>NYSDEC ASP Category B Protocol</i>				
RELINQUISHED BY (SIGNATURE) <i>R. Wensky</i>		DATE <i>5/14/02</i> TIME <i>16:00</i>		PRINTED NAME <i>R. Wensky/H2M</i>		RECEIVED BY (SIGNATURE) <i>[Signature]</i>		DATE <i>5/14/02</i> TIME <i>16:00</i>		PRINTED NAME <i>M. Bohms/H2M</i>				
RELINQUISHED BY (SIGNATURE) <i>[Signature]</i>		DATE <i>5/14/02</i> TIME <i>16:00</i>		PRINTED NAME <i>M. Bohms/H2M</i>		RECEIVED BY SAMPLE CUSTODIAN <i>[Signature]</i>		DATE <i>5/14</i> TIME		PRINTED NAME <i>K. Truglio</i>				

APPENDIX F

INITIAL GROUNDWATER MONITORING EVENT LABORATORY ANALYTICAL
REPORT (NYSDEC ASP CATEGORY B PACKAGE)



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

NYSDOH ELAP# 11693
USEPA# NY01273

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

May 20, 2002

Manfred Bohms
H2M Group
575 Broadhollow Road
Melville, New York 11748

Re: **333 Smith Street**

Dear Mr. Bohms:

Enclosed please find the Laboratory Analysis Report(s) for sample(s) received on May 14, 2002. Long Island Analytical Laboratories analyzed the samples on May 17, 2002 for the following:

CLIENT ID	ANALYSIS
MW-6R	EPA 624
MW-10R	EPA 624
MW-17	EPA 624
MW-9R	EPA 624
MW-8R	EPA 624
MW-16	EPA 624
MW-Standpipe	EPA 624
MW-1	EPA 624
MW-2	EPA 624
Field Blank	EPA 624
Trip Blank	EPA 624
MW-6R (MS)	EPA 624
MW-6R (MSD)	EPA 624

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

Long Island Analytical Laboratories, Inc.

Client: H2M Group	Client ID: 333 Smith Street MW-6R
Date received: 05/14/02	Laboratory ID: 0216798
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	39
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	15
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Versado

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741


"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street MW-10R
Date received: 05/14/02	Laboratory ID: 0216799
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	36
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	9
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5


 Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street MW-17
Date received: 05/14/02	Laboratory ID: 0216800
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	56
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	12
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Versalle

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street MW-9R
Date received: 05/14/02	Laboratory ID: 0216801
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	52
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	9
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Verabli

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street MW-8R
Date received: 05/14/02	Laboratory ID: 0216802
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	31
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	9
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Versaldi

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street MW-16
Date received: 05/14/02	Laboratory ID: 0216803
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	62
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	6
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	23
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Versalle

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street MW-Standpipe
Date received: 05/14/02	Laboratory ID: 0216804
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	47
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	20
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Versalle

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROW'S ANALYTICAL SOLUTIONS TODAY" Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street MW-1
Date received: 05/14/02	Laboratory ID: 0216805
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	20
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	9
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Versado

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROW'S ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street MW-2
Date received: 05/14/02	Laboratory ID: 0216806
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	38
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	9
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Verardo

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROW'S ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street Field Blank
Date received: 05/14/02	Laboratory ID: 0216807
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Versa

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street Trip Blank
Date received: 05/14/02	Laboratory ID: 0216808
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	<0.7
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	<5
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	<5
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	9
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	<5
TOLUENE	108-88-3	<5
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	<5
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Versado

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROWS ANALYTICAL SOLUTIONS TODAY" Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street MW-6R (MS)
Date received: 05/14/02	Laboratory ID: 0216809
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	50
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	41
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	55
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	33
TOLUENE	108-88-3	46
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	63
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Vennard

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROW'S ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Client: H2M Group	Client ID: 333 Smith Street MW-6R (MSD)
Date received: 05/14/02	Laboratory ID: 0216810
Date extracted: 05/17/02	Matrix: Liquid
Date analyzed: 05/17/02	ELAP #: 11693

EPA METHOD 624

Parameter	CAS No.	Results ug/L
MTBE	1634-04-4	<5
BENZENE	71-43-2	39
BROMODICHLOROMETHANE	75-27-4	<5
BROMOFORM	75-25-2	<5
BROMOMETHANE	74-83-9	<5
CARBON TETRACHLORIDE	56-23-5	<5
CHLOROBENZENE	108-90-7	41
CHLOROETHANE	75-00-3	<5
2-CHLOROETHYL VINYL ETHER	110-75-8	<5
CHLOROFORM	67-66-3	<5
CHLOROMETHANE	74-87-3	<5
DIBROMOCHLOROMETHANE	124-48-1	<5
1,2-DICHLOROBENZENE	95-50-1	<5
1,3-DICHLOROBENZENE	541-73-1	<5
1,4-DICHLOROBENZENE	106-46-7	<5
1,1-DICHLOROETHANE	75-34-3	<5
1,2-DICHLOROETHANE	107-06-2	<5
1,1-DICHLOROETHENE	75-35-4	55
trans-1,2-DICHLOROETHENE	156-60-5	<5
1,2-DICHLOROPROPANE	78-87-5	<5
cis-1,3-DICHLOROPROPENE	10061-01-5	<5
trans-1,3-DICHLOROPROPENE	10061-02-6	<5
ETHYL BENZENE	100-41-4	<5
METHYLENE CHLORIDE	75-09-2	<5
1,1,2,2,-TETRACHLOROETHANE	79-34-5	<5
TETRACHLOROETHENE	127-18-4	33
TOLUENE	108-88-3	46
1,1,1-TRICHLOROETHANE	71-55-6	<5
1,1,2-TRICHLOROETHANE	79-00-5	<5
TRICHLOROETHENE	79-01-6	63
TRICHLOROFLUOROMETHANE	75-69-4	<5
VINYL CHLORIDE	75-01-4	<5
p & m -XYLENES	1330-20-7	<10
o-XYLENE	1330-20-7	<5

Michael Verardo

Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

101-4 Colin Drive • Holbrook, New York 11741

"TOMORROW'S ANALYTICAL SOLUTIONS TODAY"

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

APPENDIX G

DATA USABILITY SUMMARY REVIEW

Data Validation Services

120 Cobble Creek Road P. O. Box 208

North Creek, N. Y. 12853

Phone 518-251-4429

Facsimile 518-251-4428

July 12, 2002

Manfred Bohms
H2M Group
575 Broad Hollow Rd.
Melville, NY 11747

RE: Data Usability Summary Report (DUSR) for the Reckson Associates site Data Packages
LIA Sub No.0216798

Dear Mr. Bohms:

Review has been completed for the data package generated by Long Island Analytical Laboratory, Inc. that pertains to samples collected at the Reckson Associates Realty site. Nine aqueous samples collected 5/13/02 were processed for volatiles by USEPA 8260B. Field and trip blanks, and sample matrix spikes were also processed.

The data packages submitted contained full deliverables for validation, but this usability report is generated from review of the QC summary form information, with review of sample raw data, and limited review of associated QC raw data. Full validation has not been performed, but review was conducted in accordance with the NYSDEC 1997 DUSR description. The reported QC summary forms have been reviewed for application of validation qualifiers with guidance from the USEPA Region 2 validation SOPs and the USEPA National Functional Guidelines for Organic Data Review, as affects the usability of the sample data. The following items were reviewed:

- * Data Completeness
- * Custody Documentation
- * Holding Times
- * Surrogate Recoveries
- * Matrix Spike Recoveries/Duplicate Correlations
- * Preparation/Calibration Blanks
- * Instrumental Tunes
- * Control Spike/Laboratory Control Samples
- * Calibration Standards
- * Method Compliance
- * Sample Result Verification

Those items showing deficiencies are discussed in the following sections of this report. All others were found to be acceptable as outlined in the above-mentioned validation procedures, and as applicable for the methodology. Unless noted specifically in the following text, reported results are substantiated by the raw data, and generated in compliance with protocol requirements.

In summary, sample processing was conducted with compliance to protocol requirements and with adherence to quality criteria, and most reported results are usable as reported, or with minor edit to nondetection.

Copies of the laboratory case narratives are attached and should be reviewed in conjunction with this text.

General

The field custody form should include entries of sample collection dates and times.

Volatile Analyses by EPA 8260B

Surrogate and internal standard recoveries, holding times, and instrument tunes were compliant with protocol requirements. Calibration standard responses were acceptable.

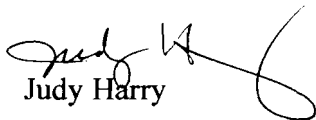
Due to presence in the associated blanks, all sample detected results for trichlorofluoromethane and methylene chloride are considered contamination, and results should be edited to nondetection ("U") at the CRDL, or originally reported concentration, whichever is greater.

Matrix spike evaluations were performed on MW-6R. Accuracy and precision were acceptable, with the exception of one elevated duplicate correlation for an analyte not detected in the sample. Reported results are unaffected.

Tentatively Identified Compounds (TICs) identified as carbon dioxide should be disregarded as sample components.

Please do not hesitate to contact me if questions or comments arise during your review of this report.

Very truly yours,


Judy Harry



CASE NATTATIVE VOLATILES

Client H₂M Group
Project 333 Smith Street
LIAL Project # 0216798

A. Number of Samples and Date of Receipt

Thirteen (13) aqueous samples were delivered to the laboratory intact on 05/14/02.

B. Parameters

Test requested was Volatile Organics. This data package contains results for Volatile Organics.

C. Analytical Techniques

Samples were analyzed for Volatile Organics according to Method 8260B. The analyses were performed on instrument GCMSV#2, using GC column RTX624 which is 75 meters, 0.53 mm ID, 3.0mm df (crossbond 6% cyanopropylphenyl-94%) dimethypolysiloxane. The Purge & Trap was Tekmar LSC 2000.

D. QC/QA Samples

System Monitoring Compound recoveries met QC criteria
Holding Times were meet. Tuning Checks met requirements. Internal Standard Areas and Retention Times were acceptable. Calibration met requirements. Blank analysis did not indicate the presence of contamination.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Signature

Name: Michael Veraldi

Date:

Title: Laboratory Director

000002

COVER PAGE

Lab Name: Long Island Analytical Laboratories, Inc.
Lab Code: 0216798-ASP

Client: H₂M Group
Project Name: 333 Smith St.

Client Sample No.	Lab Sample ID
MW-6R (MS/MSD)	0216798
MW-10R	0216799
MW-17	0216800
MW-9R	0216801
MR-8R	0216802
MW-16	0216803
MW-Standpipe	0216804
MW-1	0216805
MW-2	0216806
Field Blank	0216807
Trip Blank	0216808
MW-6R (MS)	0216809
MW-6R (MSD)	0216809

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Signature

Michael Veraldi

Name: Michael Veraldi

Date:

6/14/02

Title: Laboratory Director



**LONG
ISLAND
ANALYTICAL
LABORATORIES INC.**

000003

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

101-4 Colin Drive • Holbrook, New York 11741
Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

Data Validation Services

120 Cobble Creek Road P. O. Box 208

North Creek, NY 12853

Phone (518) 251-4429

Fax (518) 251-4428

LETTER OF TRANSMITTAL

TO: Manfred Bohms

COMPANY: H2M Group

FROM: Judy Harry 

DATE: 07-12-02

ENCLOSED: DUSR for the Reckson Realty site

Associated invoice

COMMENTS:

APPENDIX H

WASTE MANIFESTS

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

NJ 7-44

Manifest
Document No.

8-3-4-1-7

2. Page 1
of 1

BL80417

3. Generator's Name and Mailing Address

RECKSON REALTY ASSOCIATES
BROAD HOLLOW ROAD MELVILLE NY 11747

4. Generator's Phone (631) 325-2700

TRANSPORTER # 516648

DECAL # 10202

330 SMITH STREET

FARMINGDALE NY 11735

5. Transporter 1 Company Name

AUCHTER INDUSTRIAL VAC SERVICE

6. US EPA ID Number

NJ 7-44 3-2-0-1-7-2-1-0-8

A. Transporter's Phone

908-862-2277

7. Transporter 2 Company Name

8. US EPA ID Number

B. Transporter's Phone

9. Designated Facility Name and Site Address

CLEAN EARTH OF NORTH JERSEY, INC.
105 JACOBUS AVENUE
SOUTH KEARNTON NJ 07032

10. US EPA ID Number

NJ 7-44 3-2-0-1-7-2-1-0-8

C. Facility's Phone

973 344-4004

11. Waste Shipping Name and Description

12. Containers

No. Type

13. Total

Quantity

14. Unit

Wt/Vol

a. NON REGULATED MATERIAL

ID#

ID#

x42 x8000

6

b.

c.

d.

D. Additional Descriptions for Materials Listed Above

(a) 100% SAND & GRAVEL

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

LEAD APP. 990000 (a) 1.1.15

(a)

This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Michael A. Borkin/H2M agent for Reckson

Signature

Month Day Year

6 3 02

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

W. H. McLaughlin

Signature

W. H. McLaughlin

Month Day Year

6 3 02

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month Day Year

GENERATOR'S COPY



115 JACOBUS AVE
SOUTH KEARNY
NJ 07032
(973) 344-4004

CUSTOMER # 990001
CUSTOMER ALLIED WASTE INC.
CONTACT M. FLYNN
PHONE 631-325-2700

JOB SITE RECKSON REALTY ASSOCIATES
333 SMITH STREET
FARMINGDALE
NY 11735

EPA ID. # N/A

ZONE

RIVER

B/LA

☐ PULL ☒ PICK-UP ☐ PULL/REPLACE ☐ PUMP TANK ☐ OTHER
☐ DELIVER ☐ IN/WITH ☐ DELIVER/WAIT & PULL ☐ PUMP DRUMS

PURCHASE ORDER #

AN EARTH TO PROVIDE	YES	NO	#	CLEAN EARTH TO PROVIDE	YES	NO	#	CLEAN EARTH TO PROVIDE	YES	NO	#
ANIFEST	Y			LINER		N		LIFT	Y		
LABEL	Y			MT. DRUM		N		XTRA HOSE		N	
LABEL	Y			OVERPACK		N		HELPER		N	

REQ. E.T.A.

POS. E.T.A.

NO. AND TYPES CONT.	WASTE DESCRIPTION	APP. #	PRC. #	NO. AND TYPES CONT.	WASTE DESCRIPTION	APP. #	PRC. #
1/2 DM	40-00 DRILL CUTTINGS 102Y	135	III				
II			IV				

COMMENTS:

NEED LIFT DATE

WASTE

AUCHTER INDUSTRIAL VAC SERVICE TRANSPORTING FOR S&W

SCHEDULED DATE 06/03/01

NO. OF CONTAINERS	CONT. TYPE	PROPER D.O.T. SHIPPING NAME	WASTE TYPE	DISPOSAL SITE(S)	T _{RA}	MANIFEST # (S)	DISPOSAL SITE(S)	T _{RA}	MANIFEST # (S)
1		NON REGULATED MATERIAL	102Y						
APP 135									
COMPLETED ON:				BY:					
3									
COMPLETED ON:				BY:					
6									
COMPLETED ON:				BY:					
1									
COMPLETED ON:				BY:					

DATE COMPLETED:

OPERATIONS DEPARTMENT SIGNOFF:

**NON-HAZARDOUS
WASTE MANIFEST**

1. Generator's US EPA ID No.

N.J. 0000000000

Manifest
Document No.

8-45-000

2. Page 1
of 1

BL83418

3. Generator's Name and Mailing Address

RECKSON REALTY ASSOCIATES

BROAD HOLLOW ROAD MELVILLE NY 11747

4. Generator's Phone (631 325-2700

5. Transporter 1 Company Name

BUCHTER INDUSTRIAL VAC SERVICE

6. US EPA ID Number

N.J. 0000000000

A. Transporter's Phone

908-862-2277

7. Transporter 2 Company Name

8. US EPA ID Number

.

B. Transporter's Phone

9. Designated Facility Name and Site Address

CLEAN EARTH OF NORTH JERSEY, INC.

105 JACOBUS AVENUE

SOUTH KEARNY, NJ 07032

10. US EPA ID Number

N.J. 0000000000

C. Facility's Phone

973 344-4004

11. Waste Shipping Name and Description

a. NON REGULATED MATERIAL

107 L

10.2

12. Containers

No.

Type

13. Total
Quantity14. Unit
Wt/Vol

6

U

330

G

D. Additional Descriptions for Materials Listed Above

(8) 100% RINSE WATER

E. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

GENS APP. 290000 12:134

(a)

This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Typed Name

Signature

Month Day Year

6 3 02

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

6 3 02

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

. . .

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month Day Year

. . .

GENERATOR'S COPY



115 JACOBUS AVE
SOUTH KEARNY
NJ 07032
(973) 844-4004

CUSTOMER # 990001
CUSTOMER ALLIED WASTE INC.
CONTACT M. FLYNN
PHONE 631-325-2700

JOB SITE RECKSON REALTY ASSOCIATES
333 SMITH STREET
PARMINDALE
NY 11735

EPA ID. # N/A

ZONE
BH

VER

B.114

☐ PULL ☐ PICK-UP ☐ PULL/REPLACE ☐ PUMP TANK ☐ OTHER
☐ DELIVER ☐ IN/WITH ☐ DELIVER/WAIT & PULL ☐ PUMP DRUMS

PURCHASE ORDER #

WEARTH TO PROVIDE	YES	NO	#	CLEAN EARTH TO PROVIDE	YES	NO	#	CLEAN EARTH TO PROVIDE	YES	NO	#
MANIFEST	Y			LINER		N		LIFT	Y		
AD LABEL	Y			MT. DRUM		N		XTRA HOSE		N	
LABEL	Y			OVERPACK		N		HELPER		N	

REQ. E.T.A.

POS. E.T.A.

NO. AND TYPES CONT.	WASTE DESCRIPTION	APP.#	PRC.#	NO. AND TYPES CONT.	WASTE DESCRIPTION	APP.#	PRC.#
I	6.00 RINSE/PURGE WATER 1072	134	III				
II			IV				

COMMENTS:

NEED LIFT GATE

WASTE
AUGUSTA INDUSTRIAL VAC SERVICE TRANSPORTING FOR S&W

SCHEDULED DATE 06/08/01

NO. OF CONTAINERS	CONT. TYPE	PROPER D.O.T. SHIPPING NAME	WASTE TYPE	DISPOSAL SITE(S)	T.R.A.	MANIFEST # (S)	DISPOSAL SITE(S)	T.R.A.	MANIFEST # (S)
A		NON REGULATED MATERIAL	1072						
APP 134									
COMPLETED ON:				BY:					
COMPLETED ON:				BY:					
COMPLETED ON:				BY:					
COMPLETED ON:				BY:					
COMPLETED ON:				BY:					

DATE COMPLETED:

OPERATIONS DEPARTMENT SIGNOFF: