

HAFB 05

16 November 2005

MEMORANDUM FOR NEW MEXICO ENVIRONMENT DEPARTMENT

Mr. Cornelius Amindyas
Hazardous Waste Bureau
5500 San Antonio Drive NE
Albuquerque, New Mexico 87109

FROM: 49 CES/CEV
550 Tabosa Ave
Holloman AFB NM 88330-8458

SUBJECT: Memorandum Scope of Work for Additional FT-31 Groundwater Monitoring and Well Installaiton, Sampling and Analysis, EPA ID NM6572124422

1. Attached please find the above referenced document.
2. If you have any questions please contact me at (505) 572-5395.



Daniel K. Holmquist

Environmental Restoration 49 CES/CEV

Attachment: Memorandum Scope of work for additional FT-31 Groundwater Monitoring and Well Installaiton, Sampling and Analysis (1 copy)

Cc (w/attachment):

Mr. Dave Strasser
New Mexico Environment Department
Hazardous Waste Bureau
5500 San Antonio Driv
Albuquerque, New Mexico 87109 - 2733

**MEMORANDUM
SCOPE OF WORK
FOR
ADDITIONAL FT-31 GROUNDWATER MONITORING WELL INSTALLATION
SAMPLING AND ANALYSIS
HOLLOMAN AFB, NEW MEXICO**

DATE: November 15, 2005

FROM: Dan Holmquist, 49 CES/CEV, Chuck Schick and Frank Gardner,
Bhate Environmental Associates, Inc.

TO: Dave Strasser and Cornelius Amindyas, NMED Hazardous Waste
Bureau

**SUBJECT: SCOPE OF WORK FOR ADDITIONAL FT-31 GROUNDWATER
MONITORING WELL INSTALLATION SAMPLING AND
ANALYSIS**

1.0 BACKGROUND

On July 27, 2005 the New Mexico Environment Department (NMED) provided written comments on the FT-31 Voluntary Corrective Measures (VCM) Completion Report for Holloman AFB (HAFB). Comment No. 9 directed HAFB to provide additional groundwater monitoring data. Specifically, the comment requested groundwater characterization in the area south and east of the VCM excavation. In order to expedite a response to this comment, HAFB re-sampled existing monitoring wells MW-10, MW-12 and MW-13 for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and target analyte list (TAL) metals. In addition, groundwater samples were collected and analyzed for total dissolved solids (TDS). The groundwater analytical results were relatively consistent with the contaminant distribution maps and cross sections presented in the FT-31 VCM Completion Report (February 2005). A summary of the October 2005 groundwater analytical results and their distribution is presented in Figure 1 (Attachment #1 to this memorandum work scope). The greatest concentrations of VOCs were detected at MW-13 with benzene at 105 µg/L. Several other VOCs were detected (o-xylene, 1,1-dichloroethene, 1,1-dichloroethane, 1,1,1-trichloroethane, and trichloroethene) at the three wells but none exceeded New Mexico Water Quality Control Commission (WQCC) or Federal drinking water standards. At least one SVOC, naphthalene (10.7 µg/L), was identified in the sample from MW-13. No VOCs were detected in MW-10. The distribution of dissolved metals in the groundwater samples did not exceed the background concentrations observed in the immediate proximity of the Base. TDS concentrations at these wells ranged from

22,600mg/L (MW-10) to 30,400 mg/L (MW-12) which is consistent with groundwater at the FT-31 Landfarm located immediately to the west. A copy of the laboratory analysis from the October 2005 groundwater sampling is presented as Attachment #2 to this memorandum. The October 2005 sampling of these monitoring wells identified areas requiring further delineation to determine the lateral extent of impact by these VOCs.

2.0 PURPOSE

Three additional groundwater monitoring wells down gradient of existing monitoring wells MW-12, and MW-13 are necessary to delineate the extent of groundwater contaminants to the South and East. To that end, this Scope of work defines:

1. The locations for additional groundwater monitoring wells.
2. The well drilling procedures.
3. Monitoring well construction.
4. Sample collection and laboratory analytical procedures.

3.0 SOIL BORING AND MONITORING WELL INSTALLATION AND SAMPLING

Existing SOPs and techniques described in previously submitted and approved work plans for soil boring, monitoring well installation, sampling and laboratory analysis were used to develop this scope of work. Specifically, the NMED approved work plan titled: "Additional Investigation Requirements Work Plan Site SS-02/05 (May 2005)" was used in the development of this scope. Further, drilling and well installation and sampling techniques described in comment #9 of the review of the FT-31 Voluntary Corrective Measures (VCM) Completion Report for Holloman AFB (NMED July 27, 2005) have been incorporated in this Scope.

3.1 Locations for Additional Monitoring Wells

The locations for the three additional groundwater monitoring wells (MW-14, MW-15 and MW-16) are presented in Figure 1. These wells will be installed at distances ranging from 100 feet to 150 feet down gradient from well MW-12.

These locations were selected based upon:

1. The gradient and flow direction measured at the FT 31 Landfarm wells,
2. The concentrations of VOCs observed in the wells,
3. The hydraulic conductivity measured in monitoring wells at the Base installed in similar materials, and
4. The time (10 years) since the previous groundwater sampling (Phase II RFI conducted in 1995).

Based upon these criteria, the anticipated movement of groundwater since the 1995 sampling ranges from 50 to 100 feet (the range of conductivity).

3.2 Soil Boring Installation and Soil Sampling

The boreholes for the three groundwater monitoring wells will be drilled using hollow stem auger (HSA) techniques. Soil samples will be collected continuously with split spoons for the first 10-feet and every five feet for the remaining depth of each boring until groundwater is encountered. Soil samples will be logged and handled by a qualified geologist. The borings will extend approximately 8-feet into the groundwater table. The anticipated total depth of the borings is 30 feet. A fraction of each sample will be headspace screened in the field using a photoionization detector (PID) or flame ionization detector (FID). Based upon the results of the headspace screening and/or other observations such as staining and odor, two samples from each boring will be selected for offsite laboratory analysis. If the screening techniques do not reveal a clear selection for laboratory analysis, then the sample from immediately above the groundwater table and from the mid depth of the borehole (approximately 15 feet) will be submitted for analysis. The laboratory analytical methods and procedures are specified in Section 4.0.

3.3 Monitoring Well Construction

A groundwater monitoring well will be installed in each completed boring. The well will be constructed of 2-inch ID polyvinyl chloride (PVC). Each well will be screened with 10 feet of 0.020 inch slotted PVC. The screened interval will be attached to flush threaded PVC riser pipe. The riser will extend two feet above the ground surface. The bottom of the screen will be capped with a threaded bottom plug. The annular space surrounding the screen will be backfilled with washed 10/20 Colorado silica sand (or equivalent) and capped with a 2-foot layer of bentonite pellets. The remaining annular space above the bentonite pellets will be filled with neat Portland cement. The surface completion will consist of a steel lockable well cover cemented into a concrete pad. The pad will be surrounded by three steel guard posts. A generalized monitoring well schematic is presented in Figure 2 (Attachment 3). The wells will be developed to promote hydraulic communication with the aquifer and to remove fines produced during the drilling process.

3.4 Groundwater Sampling

Groundwater samples will be collected from each well using a disposable bailer and polypropylene line. Prior to sampling, the static water level in each well will be measured to the nearest 0.01 feet using an electronic water level measuring device. The well will be purged of either three standing casing volumes or until dry (and permitted to recover) prior to sample collection. Groundwater samples will be transferred directly from the bailer to the sample containers provided by

the analytical laboratory. The samples will be preserved, placed on ice to 4 degrees centigrade and transported under strict chain-of-custody to the analytical laboratory. Laboratory analytical methodology is presented in Section 4.0

3.5 Investigation Derived From Wastes (IDW)

The soil boring cuttings and groundwater will be managed in accordance with the existing Base wide procedures for IDW. Refer to Section 5.0 of the "Additional Investigation Requirements Work Plan Site SS-02/05" (May 2005) for specifics regarding IDW management. Soil cuttings will be screened with either a PID or an FID. If the soil is free of organic vapors, it will be spread on the ground surrounding the well. If PID screening indicates the presence of hydrocarbons, the soil will be placed in the landfarm at HAFB. Purge water will be containerized in labeled drums and transported to the POTW for disposal.

4.0 LABORATORY ANALYSIS

The soils and groundwater samples will be submitted to a qualified laboratory for analysis using recognized USEPA SW 846 methodology. The laboratory for this effort will be Accutest Laboratories, Inc. located in Orlando, Florida. The Base-wide Quality Assurance Project Plan (QAPP) will be followed throughout the processes of sample collection, handling and laboratory analysis.

Soil samples will be analyzed for:

VOCs by Method 8260B
SVOCs by Method 8270C
Metals by Method 6010

Groundwater samples will be analyzed for

VOCs by Method 8260B
SVOCs by Method 8270C
TAL Metals by Method 6010/7000
TDS by Method 160.1

5.0 REPORTING

Data derived from these additional characterization activities will be incorporated into the revised FT-31 Voluntary Corrective Measures (VCM) Completion Report for Holloman AFB and include the HAFB responses to the NMED July 27, 2005 comments.

LIST OF ATTACHMENTS

Attachment 1

Figure 1. Proposed Additional Groundwater Monitoring Wells

Attachment 2

Accutest Laboratories Report F35632
October 2005 Laboratory Analytical Results: MW-10, MW-12 and MW-13

Attachment 3

Figure 2 Generalized Diagram of Monitoring Well Construction

Attachment 1

Figure 1. Proposed Additional Groundwater Monitoring Wells

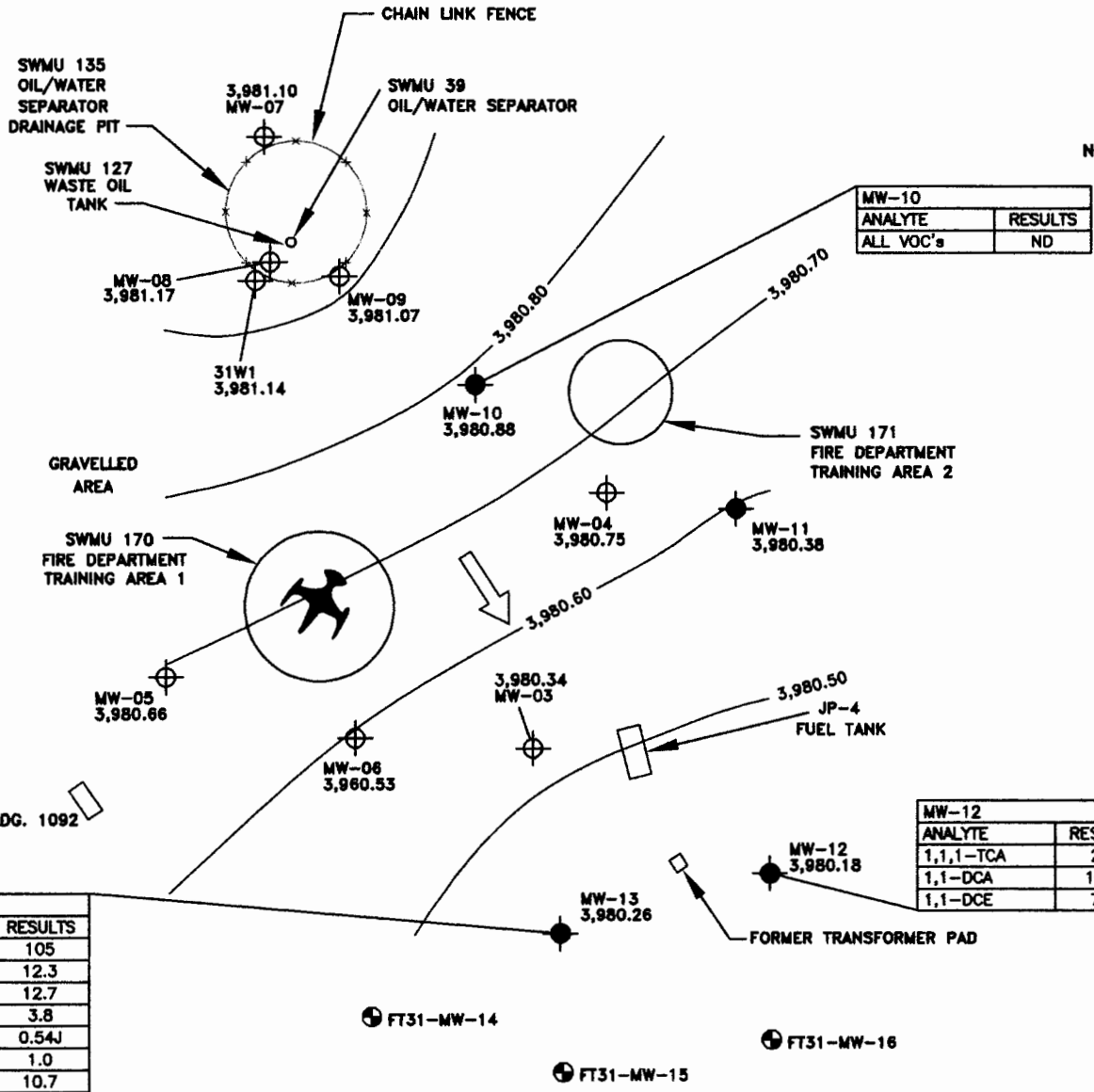
Holloman AFB

Legend:

- ⊕ PROPOSED ADDITIONAL MONITORING WELL
- ⊗ EXISTING MONITORING WELL
- PHASE II RFI MONITORING WELL
- ➔ GROUNDWATER FLOW DIRECTION

3,980.80 — GROUNDWATER ELEVATION (CONTOUR INTERVAL = 0.10 ft)

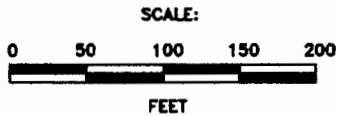
ALL CHEMICAL BOX RESULTS ARE IN µg/L



MW-10	
ANALYTE	RESULTS
ALL VOC's	ND

MW-12	
ANALYTE	RESULTS
1,1,1-TCA	2.3
1,1-DCA	10.4
1,1-DCE	7.5

MW-13	
ANALYTE	RESULTS
BENZENE	105
1,1-DCA	12.3
1,1-DCE	12.7
1,1,1-TCA	3.8
o-XYLENES	0.54J
TCE	1.0
NAPHTHALENE	10.7



NEW AND PREVIOUS GROUNDWATER ANALYTICAL RESULTS (OCTOBER 2005)

FT-31 PROPOSED ADDITIONAL
GROUNDWATER MONITORING WELLS
HOLLOMAN AIR FORCE BASE
NEW MEXICO

PROJECT NO. 9030232	SCALE AS SHOWN	DATE 11/1/05	DRAWN BY: MRM
			DRAWING NO: 9030167-05

Figure 1

Attachment 2

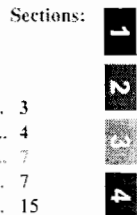
Accutest Laboratories Report F35632
October 2005 Laboratory Analytical Results: MW-10, MW-12 and MW-13

11/04/05

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Technical Report for

Bhate Environmental Associates, Inc.

HOLMN

PROJECT #9050043.01.06

Accutest Job Number: F35632

Sampling Date: 10/11/05

Report to:

Bhate Environmental Associates, Inc.

CWSchick@msn.com

ATTN: Chuck Schick

Total number of pages in report: 41



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi
 Harry Behzadi, Ph.D.
 Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK
This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

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SAMPLE DELIVERY GROUP CASE NARRATIVE

Sample Summary

Client: Bbate Environmental Associates, Inc.

Job No: F35632

Site: HOLMN

Report Date 10/24/2005 11:01:26

4 Samples, 1 Trip Blank were collected on 10/11/2005 and received at Accutest on 10/12/2005 properly preserved, at 1.2 Deg. C and intact. These Samples received an Accutest job number of F35632. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix: AQ Batch ID: VJ762

All samples were analyzed within the recommended method holding time.

Sample(s) F35309-2MS, F35309-2MSD, F35309-2MSMSD were used as the QC samples indicated.

All method blanks for this batch meet method specific criteria.

Blank Spike Recovery(s) for 2-Chloroethyl vinyl ether are outside control limits. Recovery biased high, analyte not detected in the samples, data integrity not affected.

MS/MSD Recovery(s) for 2-Chloroethyl vinyl ether, Isopropylbenzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

RPD(s) for MSD for 2-Chloroethyl vinyl ether are outside control limits for sample F35309-2MSD. Probable cause due to sample homogeneity.

Matrix: AQ Batch ID: VJ764

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F35550-3MS, F35550-3MSD, F35550-3MSMSD were used as the QC samples indicated.

Blank Spike Recovery(s) for 2-Chloroethyl vinyl ether, Acetone, Trans-1,4-Dichloro-2-Butene are outside control limits.

Recoveries biased high, analytes not detected in associated samples, data integrity not affected.

MS and/or MSD Recovery(s) for 2-Chloroethyl vinyl ether, Trans-1,4-Dichloro-2-Butene are outside control limits. Probable cause due to matrix interference.

RPD(s) for MSD for 2-Chloroethyl vinyl ether are outside control limits for sample F35550-3MSD. Probable cause due to sample homogeneity.

Extractables by GCMS By Method SW846 8270C

Matrix: AQ Batch ID: OP14669

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) F35532-1MS, F35532-1MSD were used as the QC samples indicated.

Blank Spike Recovery(s) for 2,6-Dinitrotoluene are outside control limits. MS/MSD in control. Method SW-846 8000 requirements are met.

Matrix Spike Recovery(s) for 2,4-Dinitrophenol, 2-Methylnaphthalene, 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4,6-Dinitro-o-cresol, 4-Bromophenyl phenyl ether, 4-Chloroaniline, 4-Nitroaniline, 4-Nitrophenol, Benzidine, Benzo(a)anthracene, Benzo(g,h,i)perylene, Benzoic Acid, Butyl benzyl phthalate, Hexachlorobutadiene, Hexachlorocyclopentadiene, N-Nitroso-di-n-propylamine, Pentachlorophenol are outside control limits. Probable cause due to matrix interference.

Matrix Spike Duplicate Recovery(s) for 2,4-Dinitrophenol, 2-Methylnaphthalene, 3,3'-Dichlorobenzidine, 3-Nitroaniline, 4-Bromophenyl phenyl ether, 4-Chloroaniline, 4-Chlorophenyl phenyl ether, 4-Nitroaniline, 4-Nitrophenol, Benzidine, Benzoic Acid, Butyl benzyl phthalate, Hexachlorobutadiene, Hexachlorocyclopentadiene, N-Nitroso-di-n-propylamine, Pentachlorophenol are outside control limits. Probable cause due to matrix interference. For method performance in clean matrix refer to Blank Spike.

Matrix Spike Recovery(s) for bis(2-Ethylhexyl)phthalate are outside control limits. Outside control limits due to high level in sample relative to spike amount.

RPD(s) for MSD for 4,6-Dinitro-o-cresol are outside control limits for sample OP14669-MSD. Probable cause due to sample homogeneity.

Bbate Environmental Associates, Inc.

Job No: F35632

HOLMN

Project No: PROJECT #9050043.01.06

Sample Number	Collected Date	Time By	Matrix Received	Code Type	Client Sample ID
F35632-1	10/11/05	08:59 KG	10/12/05	AQ Ground Water	MW13
F35632-2	10/11/05	08:00 KG	10/12/05	AQ Ground Water	MW12
F35632-3	10/11/05	08:32 KG	10/12/05	AQ Ground Water	MW10
F35632-4	10/11/05	08:59 KG	10/12/05	AQ Ground Water	MW13FD
F35632-5	10/11/05	00:00 KG	10/12/05	AQ Trip Blank Water	TRIP BLANK

samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used

Narrative prepared by:

Svetlana Izosimova, QAO (signature on file)

Date: October 24, 2005

OP14669-BS for 2,6-Dinitrotoluene: Sporadic marginal failure, within limits in MS/MSD

Metals By Method EPA 200.8

Matrix: AQ Batch ID: N:MP31954

F35632-3 for Thallium: Analysis performed at Accutest Laboratories, Dayton, NJ.
F35632-2 for Thallium: Analysis performed at Accutest Laboratories, Dayton, NJ.
F35632-1 for Thallium: Analysis performed at Accutest Laboratories, Dayton, NJ.
F35632-4 for Thallium: Analysis performed at Accutest Laboratories, Dayton, NJ.

Metals By Method SW846 6010B

Matrix: AQ Batch ID: MP8737

All samples were digested within the recommended method holding time.
All samples were analyzed within the recommended method holding time.
All method blanks for this batch meet method specific criteria.
Sample(s) F35632-IDUP, F35632-1MS, F35632-1SDL were used as the QC samples for metals.
MS Recovery(s) for Aluminum, Beryllium, Cadmium, Copper, Lead, Nickel, Potassium, Selenium, Silver, Zinc are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
Matrix Spike Recovery(s) for Calcium, Magnesium, Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.
RPD(s) for Duplicate for Arsenic are outside control limits. RPD acceptable due to low duplicate and sample concentrations.
RPD(s) for Serial Dilution for Arsenic, Cadmium, Chromium, Cobalt, Zinc, Aluminum, Calcium, Magnesium, Potassium, Vanadium are outside control limits. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
F35632-4 for Beryllium: Elevated reporting limit(s) due to matrix interference.
MP8737-SD1 for Magnesium: Serial dilution indicates possible matrix interference.
MP8737-SD1 for Calcium: Serial dilution indicates possible matrix interference.
MP8737-SD1 for Aluminum: Serial dilution indicates possible matrix interference.
F35632-1 for Selenium: Elevated reporting limit(s) due to matrix interference.
F35632-1 for Beryllium: Elevated reporting limit(s) due to matrix interference.
MP8737-SD1 for Vanadium: Serial dilution indicates possible matrix interference.
F35632-4 for Selenium: Elevated reporting limit(s) due to matrix interference.
F35632-3 for Iron: Elevated reporting limit(s) due to matrix interference.
F35632-2 for Copper: Elevated reporting limit(s) due to matrix interference.
F35632-3 for Beryllium: Elevated reporting limit(s) due to matrix interference.
F35632-2 for Selenium: Elevated reporting limit(s) due to matrix interference.
F35632-2 for Antimony: Elevated reporting limit(s) due to matrix interference.
MP8737-SD1 for Potassium: Serial dilution indicates possible matrix interference.
F35632-4 for Antimony: Elevated reporting limit(s) due to matrix interference.
F35632-2 for Beryllium: Elevated reporting limit(s) due to matrix interference.
F35632-3 for Selenium: Elevated reporting limit(s) due to matrix interference.
F35632-2 for Iron: Elevated reporting limit(s) due to matrix interference.

Metals By Method SW846 7470A

Matrix: AQ Batch ID: MP8746

All samples were digested within the recommended method holding time.
All samples were analyzed within the recommended method holding time.
All method blanks for this batch meet method specific criteria.
Sample(s) F35518-IDUP, F35518-1MS, F35518-1MSD were used as the QC samples for metals.

Wet Chemistry By Method EPA 160.1

Matrix: AQ Batch ID: GN18588

All samples were analyzed within the recommended method holding time.
All method blanks for this batch meet method specific criteria.
Sample(s) F35632-IDUP were used as the QC samples for Solids, Total Dissolved.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the

Report of Analysis

Page 2 of 3

Client Sample ID: MW13	Date Sampled: 10/11/05
Lab Sample ID: F35632-1	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: HOLMN	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10		ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	2.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.60	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.5	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.50	ug/l	
110-54-3	Hexane	ND	2.0	1.0	ug/l	
98-82-8	Isopropylbenzene	3.7	1.0	0.50	ug/l	
99-87-6	p-Isopropyltoluene	0.65	1.0	0.50	ug/l	J
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
126-98-7	Methacrylonitrile	ND	20	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
74-88-4	Methyl iodide	ND	5.0	2.5	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	2.5	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	10.7	2.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	5.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	3.8	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.40	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Draft: 2 of 32

Report of Analysis

Page 1 of 3

Client Sample ID: MW13	Date Sampled: 10/11/05
Lab Sample ID: F35632-1	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: HOLMN	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J018468.D	1	10/12/05	MM	n/a	n/a	VJ762
Run #2	J018495.D	2	10/13/05	MM	n/a	n/a	VJ764

Purge Volume	
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	5.0	ug/l	
75-05-8	Acetonitrile	ND	20	10	ug/l	
107-02-8	Acrolein	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	5.0	ug/l	
107-05-1	Allyl chloride	ND	10	5.0	ug/l	
71-43-2	Benzene	105 ^a	2.0	1.0	ug/l	
100-44-7	Benzyl Chloride	ND	1.0	0.60	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	1.4	1.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	12.3	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	12.7	1.0	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

Page 1 of 3

Client Sample ID:	MW13	Date Sampled:	10/11/05
Lab Sample ID:	F35632-1	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C SW846 3510C		
Project:	HOLMN		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	F011974.D	1	10/13/05	NJ	10/12/05	OP14669	SF653
Run #2							

Run #	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	25	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	2.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.1	2.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.1	2.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.1	2.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	10	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	5.1	ug/l	
95-48-7	2-Methylphenol	ND	5.1	2.0	ug/l	
	3&4-Methylphenol	ND	5.1	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.1	2.0	ug/l	
100-02-7	4-Nitrophenol	ND	25	10	ug/l	
87-86-5	Pentachlorophenol	ND	25	10	ug/l	
108-95-2	Phenol	ND	5.1	2.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.1	2.0	ug/l	
88-96-2	2,4,6-Trichlorophenol	ND	5.1	2.0	ug/l	
83-32-9	Acenaphthene	ND	5.1	1.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	1.0	ug/l	
120-12-7	Anthracene	ND	5.1	1.0	ug/l	
92-87-5	Benzidine	ND	25	15	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	1.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	1.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	1.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	1.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	2.0	ug/l	
100-51-6	Benzyl Alcohol	ND	5.1	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	10	4.0	ug/l	
218-01-9	Chrysene	ND	5.1	1.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	1.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	2.0	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	MW13	Date Sampled:	10/11/05
Lab Sample ID:	F35632-1	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	HOLMN		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	1.0	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
108-05-4	Vinyl Acetate	ND	10	5.0	ug/l	
	m,p-Xylene	ND	2.0	0.50	ug/l	
95-47-6	o-Xylene	0.54	1.0	0.50	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	104%	86-115%
17060-07-0	1,2-Dichloroethane-D4	120%	117%	73-126%
2037-26-5	Toluene-D8	98%	100%	86-112%
460-00-4	4-Bromofluorobenzene	106%	109%	83-119%

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID: MW13	Date Sampled: 10/11/05
Lab Sample ID: F35632-1	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270C SW846 3510C	
Project: HOLMN	

ABN Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	65%		49-119%
321-60-8	2-Fluorobiphenyl	70%		45-118%
1718-51-0	Terphenyl-d14	66%		46-135%

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

Page 2 of 3

Client Sample ID: MW13	Date Sampled: 10/11/05
Lab Sample ID: F35632-1	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270C SW846 3510C	
Project: HOLMN	

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	1.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.1	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.1	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.1	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.1	2.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.1	2.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	5.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
132-64-9	Dibenzofuran	ND	5.1	1.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.1	2.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.1	2.5	ug/l	
84-66-2	Diethyl phthalate	ND	5.1	2.0	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	2.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.1	2.5	ug/l	
206-44-0	Fluoranthene	ND	5.1	1.0	ug/l	
86-73-7	Fluorene	ND	5.1	1.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.1	2.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.1	2.0	ug/l	
67-72-1	Hexachloroethane	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
78-59-1	Isophorone	ND	5.1	1.0	ug/l	
91-57-6	2-Methylnaphthalene	1.6	5.1	1.0	ug/l	J
88-74-4	2-Nitroaniline	ND	10	4.0	ug/l	
99-09-2	3-Nitroaniline	ND	10	4.0	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.0	ug/l	
91-20-3	Naphthalene	4.7	5.1	1.0	ug/l	J
98-95-3	Nitrobenzene	ND	5.1	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	2.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	1.0	ug/l	
129-00-0	Pyrene	ND	5.1	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.1	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
367 12 4	2-Fluorophenol	41%		19-90%		
4165-62-2	Phenol-d5	29%		10-68%		
118-79-6	2,4,6-Tribromophenol	76%		36-137%		

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID: MW13	Date Sampled: 10/11/05
Lab Sample ID: F35632-1	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: HOLMN	

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	23700	10	10	mg/l	1	10/12/05 14:20	LE	EPA 160.1

Report of Analysis

Client Sample ID: MW13	Date Sampled: 10/11/05
Lab Sample ID: F35632-1	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: HOLMN	

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	13600	200	16	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁸
Antimony	2.2 U	5.0	2.2	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Arsenic	16.1	10	2.9	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Barium	86.0 J	200	0.50	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Beryllium ^a	7.0 U	16	7.0	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Cadmium	1.5 J	5.0	0.60	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Calcium	927000	20000	510	ug/l	20	10/12/05	10/18/05	RS	SW846 6010B ³ SW846 3010A ⁶
Chromium	9.0 J	10	0.50	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Cobalt	2.4 J	50	0.40	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Copper	0.80 U	25	0.80	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Iron	6080	300	7.5	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Lead	1.2 U	5.0	1.2	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Magnesium	1430000	100000	120	ug/l	20	10/12/05	10/18/05	RS	SW846 6010B ³ SW846 3010A ⁶
Manganese	175	15	0.20	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Mercury	0.080 U	1.0	0.080	ug/l	1	10/13/05	10/13/05	JM	SW846 7470A ² SW846 7470A ⁷
Nickel	11.7 J	40	1.1	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Potassium	56500	5000	36	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Selenium ^a	60 U	100	60	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Silver	0.90 U	10	0.90	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Sodium	5220000	500000	7700	ug/l	100	10/12/05	10/19/05	RS	SW846 6010B ⁴ SW846 3010A ⁶
Thallium ^b	0.14 J	1.3	0.11	ug/l	2.5	10/17/05	10/18/05	ANJ	EPA 200.8 ⁵ EPA 200.8 ⁸
Vanadium	35.5 J	50	0.60	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶
Zinc	24.4	20	0.80	ug/l	1	10/12/05	10/13/05	RS	SW846 6010B ¹ SW846 3010A ⁶

- (1) Instrument QC Batch: MA4614
- (2) Instrument QC Batch: MA4615
- (3) Instrument QC Batch: MA4622
- (4) Instrument QC Batch: MA4623
- (5) Instrument QC Batch: N:MA16496
- (6) Prep QC Batch: MP8737
- (7) Prep QC Batch: MP8746
- (8) Prep QC Batch: N:MP31954

(a) Elevated reporting limit(s) due to matrix interference.
 (b) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result >= MDL but < RL

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result >= MDL but < RL

Report of Analysis

Page 2 of 3

Client Sample ID:	MW12	Date Sampled:	10/11/05
Lab Sample ID:	F35632-2	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	HOLMN		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10		ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	2.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.60	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.5	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.50	ug/l	
110-54-3	Hexane	ND	2.0	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.50	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
126-98-7	Methacrylonitrile	ND	20	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
74-88-4	Methyl iodide	ND	5.0	2.5	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	2.5	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	2.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	5.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	2.3	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.40	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit
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 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

Page 1 of 3

Client Sample ID:	MW12	Date Sampled:	10/11/05
Lab Sample ID:	F35632-2	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	HOLMN		

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	J018469.D	1	10/12/05	MM	n/a	n/a	VJ762

Run #1	Purge Volume
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	5.0	ug/l	
75-05-8	Acetonitrile	ND	20	10	ug/l	
107-02-8	Acrolein	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	5.0	ug/l	
107-05-1	Allyl chloride	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
100-44-7	Benzyl Chloride	ND	1.0	0.60	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	1.2	1.0	0.50	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	10.4	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	7.5	1.0	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit
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J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	MW12	Date Sampled:	10/11/05
Lab Sample ID:	F35632-2	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	HOLMN		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	2270	200	16	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Antimony ^a	8.8 U	10	8.8	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Arsenic	10.7 J	10	2.9	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Barium	31.7 J	200	0.50	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Beryllium ^a	14 U	20	14	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Cadmium	0.97 J	5.0	0.60	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Calcium	855000	20000	510	ug/l	20	10/12/05	10/18/05	RS SW846 6010B ³	SW846 3010A ⁵
Chromium	0.54 J	10	0.50	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Cobalt	0.40 U	50	0.40	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Copper ^a	32 U	50	32	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Iron ^a	1900 U	3000	1900	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Lead	1.2 U	5.0	1.2	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Magnesium	1730000	100000	120	ug/l	20	10/12/05	10/18/05	RS SW846 6010B ³	SW846 3010A ⁵
Manganese	25.6	15	0.20	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Mercury	0.080 U	1.0	0.080	ug/l	1	10/13/05	10/13/05	JM SW846 7470A ²	SW846 7470A ⁶
Nickel	3.3 J	40	1.1	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Potassium	99600	5000	36	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Selenium ^a	60 U	100	60	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Silver	0.90 U	10	0.90	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Sodium	6090000	1000000	15000	ug/l	200	10/12/05	10/18/05	RS SW846 6010B ³	SW846 3010A ⁵
Thallium ^b	0.11 U	1.3	0.11	ug/l	2.5	10/17/05	10/18/05	ANJ EPA 200.8 ⁴	EPA 200.8 ⁷
Vanadium	25.4 J	50	0.60	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Zinc	3.7 J	20	0.80	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵

- (1) Instrument QC Batch: MA4614
- (2) Instrument QC Batch: MA4615
- (3) Instrument QC Batch: MA4622
- (4) Instrument QC Batch: N:MA16496
- (5) Prep QC Batch: MP8737
- (6) Prep QC Batch: MP8746
- (7) Prep QC Batch: N:MP31954

- (a) Elevated reporting limit(s) due to matrix interference.
- (b) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result >= MDL but < RL

Report of Analysis

Client Sample ID:	MW12	Date Sampled:	10/11/05
Lab Sample ID:	F35632-2	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	HOLMN		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
108-05-4	Vinyl Acetate	ND	10	5.0	ug/l	
	m,p-Xylene	ND	2.0	0.50	ug/l	
95-47-6	o-Xylene	ND	1.0	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		86-115%
17060-07-0	1,2-Dichloroethane-D4	119%		73-126%
2037-26-5	Toluene-D8	98%		86-112%
460-00-4	4-Bromofluorobenzene	113%		83-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW10	Date Sampled: 10/11/05
Lab Sample ID: F35632-3	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260B	
Project: HOLMN	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J018470.D	1	10/12/05	MM	n/a	n/a	VJ762
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	5.0	ug/l	
75-05-8	Acetonitrile	ND	20	10	ug/l	
107-02-8	Acrolein	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	5.0	ug/l	
107-05-1	Allyl chloride	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
100-44-7	Benzyl Chloride	ND	1.0	0.60	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW12	Date Sampled: 10/11/05
Lab Sample ID: F35632-2	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: HOLMN	

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	30400	10	10	mg/l	1	10/12/05 14:20	LE	EPA 160.1

RL = Reporting Limit U = Indicates a result < MDL
 MDL = Method Detection Limit J = Indicates a result >= MDL but < RL

Report of Analysis

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Client Sample ID:	MW10	Date Sampled:	10/11/05
Lab Sample ID:	F35632-3	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	HOLMN		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
108-05-4	Vinyl Acetate	ND	10	5.0	ug/l	
	m,p-Xylene	ND	2.0	0.50	ug/l	
95-47-6	o-Xylene	ND	1.0	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		86-115%
17060-07-0	1,2-Dichloroethane-D4	119%		73-126%
2037-26-5	Toluene-D8	99%		86-112%
460-00-4	4-Bromofluorobenzene	112%		83-119%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	MW10	Date Sampled:	10/11/05
Lab Sample ID:	F35632-3	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	HOLMN		

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10		ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	2.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.60	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.5	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.50	ug/l	
110-54-3	Hexane	ND	2.0	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.50	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
126-98-7	Methacrylonitrile	ND	20	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
74-88-4	Methyl iodide	ND	5.0	2.5	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	2.5	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	2.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	5.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.40	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID: MW10	Date Sampled: 10/11/05
Lab Sample ID: F35632-3	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270C SW846 3510C	
Project: HOLMN	

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	1.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.1	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.1	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.1	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.1	2.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.1	2.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	5.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
132-64-9	Dibenzofuran	ND	5.1	1.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.1	2.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.1	2.5	ug/l	
84-66-2	Diethyl phthalate	2.9	5.1	2.0	ug/l	J
131-11-3	Dimethyl phthalate	ND	5.1	2.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.1	2.5	ug/l	
206-44-0	Fluoranthene	ND	5.1	1.0	ug/l	
86-73-7	Fluorene	ND	5.1	1.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.1	2.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.1	2.0	ug/l	
67-72-1	Hexachloroethane	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
78-59-1	Isophorone	ND	5.1	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.1	1.0	ug/l	
88-74-4	2-Nitroaniline	ND	10	4.0	ug/l	
99-09-2	3-Nitroaniline	ND	10	4.0	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.0	ug/l	
91-20-3	Naphthalene	ND	5.1	1.0	ug/l	
98-95-3	Nitrobenzene	ND	5.1	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	2.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	1.0	ug/l	
129-00-0	Pyrene	ND	5.1	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.1	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	40%		19-90%
4165-62-2	Phenol-d5	28%		10-68%
118-79-6	2,4,6-Tribromophenol	73%		36-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW10	Date Sampled: 10/11/05
Lab Sample ID: F35632-3	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270C SW846 3510C	
Project: HOLMN	

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	F011975.D	1	10/13/05	NJ	10/12/05	OP14669	SF653

Run #1	Initial Volume	Final Volume
Run #2	990 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	25	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	2.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.1	2.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.1	2.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.1	2.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	10	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	5.1	ug/l	
95-48-7	2-Methylphenol	ND	5.1	2.0	ug/l	
	3&4-Methylphenol	ND	5.1	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.1	2.0	ug/l	
100-02-7	4-Nitrophenol	ND	25	10	ug/l	
87-86-5	Pentachlorophenol	ND	25	10	ug/l	
108-95-2	Phenol	ND	5.1	2.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.1	2.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.1	2.0	ug/l	
83-32-9	Acenaphthene	ND	5.1	1.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	1.0	ug/l	
120-12-7	Anthracene	ND	5.1	1.0	ug/l	
92-87-5	Benidine	ND	25	15	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	1.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	1.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	1.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	1.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	2.0	ug/l	
100-51-6	Benzyl Alcohol	ND	5.1	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	10	4.0	ug/l	
218-01-9	Chrysene	ND	5.1	1.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	1.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW10	Date Sampled: 10/11/05
Lab Sample ID: F35632-3	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: HOLMN	

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	458	200	16	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Antimony	2.2 U	5.0	2.2	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Arsenic	6.8 J	10	2.9	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Barium	18.0 J	200	0.50	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Beryllium ^a	7.0 U	16	7.0	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Cadmium	0.60 U	5.0	0.60	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Calcium	832000	20000	510	ug/l	20	10/12/05	10/18/05	RS SW846 6010B ³	SW846 3010A ⁵
Chromium	0.50 U	10	0.50	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Cobalt	0.40 U	50	0.40	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Copper	0.80 U	25	0.80	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Iron ^a	3800 U	6000	3800	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Lead	1.2 U	5.0	1.2	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Magnesium	1190000	100000	120	ug/l	20	10/12/05	10/18/05	RS SW846 6010B ³	SW846 3010A ⁵
Manganese	7.3 J	15	0.20	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Mercury	0.080 U	1.0	0.080	ug/l	1	10/13/05	10/13/05	JM SW846 7470A ²	SW846 7470A ⁶
Nickel	1.5 J	40	1.1	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Potassium	33500	5000	36	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Selenium ^a	60 U	100	60	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Silver	0.90 U	10	0.90	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Sodium	4030000	1000000	15000	ug/l	200	10/12/05	10/18/05	RS SW846 6010B ³	SW846 3010A ⁵
Thallium ^b	0.11 U	1.3	0.11	ug/l	2.5	10/17/05	10/18/05	ANJ EPA 200.8 ⁴	EPA 200.8 ⁷
Vanadium	28.3 J	50	0.60	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Zinc	1.5 J	20	0.80	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵

- (1) Instrument QC Batch: MA4614
- (2) Instrument QC Batch: MA4615
- (3) Instrument QC Batch: MA4622
- (4) Instrument QC Batch: N:MA16496
- (5) Prep QC Batch: MP8737
- (6) Prep QC Batch: MP8746
- (7) Prep QC Batch: N:MP31954

- (a) Elevated reporting limit(s) due to matrix interference.
- (b) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result >= MDL but < RL

Report of Analysis

Client Sample ID: MW10	Date Sampled: 10/11/05
Lab Sample ID: F35632-3	Date Received: 10/12/05
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8270C SW846 3510C	
Project: HOLMN	

ABN Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		49-119%
321-60-8	2-Fluorobiphenyl	64%		45-118%
1718-51-0	Terphenyl-d14	70%		46-135%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 3

Client Sample ID:	MW13FD	Date Sampled:	10/11/05
Lab Sample ID:	F35632-4	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	HOLMN		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J018496.D	1	10/13/05	MM	n/a	n/a	VJ764
Run #2	J018509.D	2	10/13/05	MM	n/a	n/a	VJ764

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	5.0	ug/l	
75-05-8	Acetonitrile	ND	20	10	ug/l	
107-02-8	Acrolein	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	5.0	ug/l	
107-05-1	Allyl chloride	ND	10	5.0	ug/l	
71-43-2	Benzene	100 ^a	2.0	1.0	ug/l	
100-44-7	Benzyl Chloride	ND	1.0	0.60	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	1.4	1.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	12.1	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	12.0	1.0	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	MW10	Date Sampled:	10/11/05
Lab Sample ID:	F35632-3	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	HOLMN		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	22600	10	10	mg/l	1	10/12/05 14:20	LE	EPA 160.1

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result >= MDL but < RL

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Report of Analysis

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Client Sample ID:	MW13FD	Date Sampled:	10/11/05
Lab Sample ID:	F35632-4	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Method:	SW846 8260B
Method:	SW846 8260B	Project:	HOLMN
Project:	HOLMN	Percent Solids:	n/a

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	0.97	1.0	0.50	ug/l	J
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
108-05-4	Vinyl Acetate	ND	10	5.0	ug/l	
	m,p-Xylene	ND	2.0	0.50	ug/l	
95-47-6	o-Xylene	0.53	1.0	0.50	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%	105%	86-115%
17060-07-0	1,2-Dichloroethane-D4	118%	119%	73-126%
2037-26-5	Toluene-D8	100%	98%	86-112%
460-00-4	4-Bromofluorobenzene	108%	111%	83-119%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	MW13FD	Date Sampled:	10/11/05
Lab Sample ID:	F35632-4	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Method:	SW846 8260B
Method:	SW846 8260B	Project:	HOLMN
Project:	HOLMN	Percent Solids:	n/a

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10		ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	2.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.60	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.5	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.50	ug/l	
110-54-3	Hexane	ND	2.0	1.0	ug/l	
98-82-8	Isopropylbenzene	3.7	1.0	0.50	ug/l	
99-87-6	p-Isopropyltoluene	0.63	1.0	0.50	ug/l	J
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
126-98-7	Methacrylonitrile	ND	20	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
74-88-4	Methyl iodide	ND	5.0	2.5	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	2.5	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	10.8	2.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	5.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	3.8	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.40	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	MW13FD	Date Sampled:	10/11/05
Lab Sample ID:	F35632-4	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Method:	SW846 8270C SW846 3510C
Project:	HOLMN	Percent Solids:	n/a

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.1	1.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.1	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.1	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.1	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.1	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.1	2.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.1	2.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	5.1	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.1	2.0	ug/l	
132-64-9	Dibenzofuran	ND	5.1	1.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.1	2.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.1	2.5	ug/l	
84-66-2	Diethyl phthalate	ND	5.1	2.0	ug/l	
131-11-3	Dimethyl phthalate	ND	5.1	2.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.1	2.5	ug/l	
206-44-0	Fluoranthene	ND	5.1	1.0	ug/l	
86-73-7	Fluorene	ND	5.1	1.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.1	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.1	2.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.1	2.0	ug/l	
67-72-1	Hexachloroethane	ND	5.1	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.1	2.0	ug/l	
78-59-1	Isophorone	ND	5.1	1.0	ug/l	
91-57-6	2-Methylnaphthalene	1.9	5.1	1.0	ug/l	J
88-74-4	2-Nitroaniline	ND	10	4.0	ug/l	
99-09-2	3-Nitroaniline	ND	10	4.0	ug/l	
100-01-6	4-Nitroaniline	ND	10	4.0	ug/l	
91-20-3	Naphthalene	5.6	5.1	1.0	ug/l	
98-95-3	Nitrobenzene	ND	5.1	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.1	2.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.1	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.1	1.0	ug/l	
129-00-0	Pyrene	ND	5.1	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.1	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	43%		19-90%
4165-62-2	Phenol-d5	31%		10-68%
118-79-6	2,4,6-Tribromophenol	80%		36-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	MW13FD	Date Sampled:	10/11/05
Lab Sample ID:	F35632-4	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Method:	SW846 8270C SW846 3510C
Project:	HOLMN	Percent Solids:	n/a

Run #1	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #2	F011976.D	1	10/13/05	NJ	10/12/05	OP14669	SF653

Run #1	Initial Volume	Final Volume
Run #2	990 ml	1.0 ml

ABN Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	25	10	ug/l	
95-57-8	2-Chlorophenol	ND	5.1	2.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.1	2.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.1	2.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.1	2.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	10	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	5.1	ug/l	
95-48-7	2-Methylphenol	ND	5.1	2.0	ug/l	
	3&4-Methylphenol	ND	5.1	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.1	2.0	ug/l	
100-02-7	4-Nitrophenol	ND	25	10	ug/l	
87-86-5	Pentachlorophenol	ND	25	10	ug/l	
108-95-2	Phenol	ND	5.1	2.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.1	2.0	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.1	2.0	ug/l	
83-32-9	Acenaphthene	ND	5.1	1.0	ug/l	
208-96-8	Acenaphthylene	ND	5.1	1.0	ug/l	
120-12-7	Anthracene	ND	5.1	1.0	ug/l	
92-87-5	Benzidine	ND	25	15	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.1	1.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.1	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.1	1.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.1	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.1	1.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.1	1.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.1	2.0	ug/l	
100-51-6	Benzyl Alcohol	ND	5.1	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.1	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	10	4.0	ug/l	
218-01-9	Chrysene	ND	5.1	1.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.1	1.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.1	2.0	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID:	MW13FD	Date Sampled:	10/11/05
Lab Sample ID:	F35632-4	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Project:	HOLMN		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	5850	200	16	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Antimony ^a	8.8 U	10	8.8	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Arsenic	6.5 J	10	2.9	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Barium	53.2 J	200	0.50	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Beryllium ^a	7.0 U	16	7.0	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Cadmium	0.94 J	5.0	0.60	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Calcium	895000	20000	510	ug/l	20	10/12/05	10/18/05	RS SW846 6010B ³	SW846 3010A ⁵
Chromium	3.6 J	10	0.50	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Cobalt	0.51 J	50	0.40	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Copper	0.80 U	25	0.80	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Iron	1340	300	7.5	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Lead	1.2 U	5.0	1.2	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Magnesium	1340000	100000	120	ug/l	20	10/12/05	10/18/05	RS SW846 6010B ³	SW846 3010A ⁵
Manganese	102	15	0.20	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Mercury	0.080 U	1.0	0.080	ug/l	1	10/13/05	10/13/05	JM SW846 7470A ²	SW846 7470A ⁶
Nickel	6.0 J	40	1.1	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Potassium	41500	5000	36	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Selenium ^a	60 U	100	60	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Silver	0.90 U	10	0.90	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Sodium	4240000	1000000	15000	ug/l	200	10/12/05	10/18/05	RS SW846 6010B ³	SW846 3010A ⁵
Thallium ^b	0.53 J	1.3	0.11	ug/l	2.5	10/17/05	10/18/05	ANJ EPA 200.8 ⁴	EPA 200.8 ⁷
Vanadium	25.0 J	50	0.60	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵
Zinc	16.0 J	20	0.80	ug/l	1	10/12/05	10/13/05	RS SW846 6010B ¹	SW846 3010A ⁵

- (1) Instrument QC Batch: MA4614
- (2) Instrument QC Batch: MA4615
- (3) Instrument QC Batch: MA4622
- (4) Instrument QC Batch: N:MA16496
- (5) Prep QC Batch: MP8737
- (6) Prep QC Batch: MP8746
- (7) Prep QC Batch: N:MP31954

- (a) Elevated reporting limit(s) due to matrix interference.
- (b) Analysis performed at Accutest Laboratories, Dayton, NJ.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result >= MDL but < RL

Report of Analysis

Client Sample ID:	MW13FD	Date Sampled:	10/11/05
Lab Sample ID:	F35632-4	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C		
Project:	HOLMN		

ABN Special List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		49-119%
321-60-8	2-Fluorobiphenyl	71%		45-118%
1718-51-0	Terphenyl-d14	74%		46-135%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Page 1 of 3

Client Sample ID:	TRIP BLANK	Date Sampled:	10/11/05
Lab Sample ID:	F35632-5	Date Received:	10/12/05
Matrix:	AQ - Trip Blank Water	Method:	SW846 8260B
Method:	SW846 8260B	Project:	HOLMN
Project:	HOLMN	Prep Date:	n/a
		Prep Batch:	n/a
		Analytical Batch:	VJ764

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J018494.D	1	10/13/05	MM	n/a	n/a	VJ764
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	25	5.0	ug/l	
75-05-8	Acetonitrile	ND	20	10	ug/l	
107-02-8	Acrolein	ND	10	5.0	ug/l	
107-13-1	Acrylonitrile	ND	10	5.0	ug/l	
107-05-1	Allyl chloride	ND	10	5.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
100-44-7	Benzyl Chloride	ND	1.0	0.60	ug/l	
108-86-1	Bromobenzene	ND	1.0	0.50	ug/l	
74-97-5	Bromochloromethane	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.50	ug/l	
75-25-2	Bromoform	ND	1.0	0.50	ug/l	
104-51-8	n-Butylbenzene	ND	1.0	0.50	ug/l	
135-98-8	sec-Butylbenzene	ND	1.0	0.50	ug/l	
98-06-6	tert-Butylbenzene	ND	1.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	1.0	0.50	ug/l	
544-10-5	1-Chlorohexane	ND	2.0	1.0	ug/l	
95-49-8	o-Chlorotoluene	ND	1.0	0.50	ug/l	
106-43-4	p-Chlorotoluene	ND	1.0	0.50	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	5.0	2.5	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	1.0	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	1.0	0.50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.50	ug/l	
142-28-9	1,3-Dichloropropane	ND	1.0	0.50	ug/l	
594-20-7	2,2-Dichloropropane	ND	1.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID:	MW13FD	Date Sampled:	10/11/05
Lab Sample ID:	F35632-4	Date Received:	10/12/05
Matrix:	AQ - Ground Water	Method:	SW846 8260B
Method:	SW846 8260B	Project:	HOLMN
Project:	HOLMN	Prep Date:	n/a
		Prep Batch:	n/a
		Analytical Batch:	VJ764

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Solids, Total Dissolved	23300	10	10	mg/l	1	10/12/05 14:20	LE	EPA 160.1

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result >= MDL but < RL

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Report of Analysis

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Client Sample ID:	TRIP BLANK	Date Sampled:	10/11/05
Lab Sample ID:	F35632-5	Date Received:	10/12/05
Matrix:	AQ - Trip Blank Water	Method:	SW846 8260B
Method:	SW846 8260B	Project:	HOLMN
Project:	HOLMN	Percent Solids:	n/a

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	1.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	1.0	0.50	ug/l	
108-88-3	Toluene	ND	1.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	1.0	0.50	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	0.50	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	10	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
108-05-4	Vinyl Acetate	ND	10	5.0	ug/l	
	m,p-Xylene	ND	2.0	0.50	ug/l	
95-47-6	o-Xylene	ND	1.0	0.50	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		86-115%
17060-07-0	1,2-Dichloroethane-D4	114%		73-126%
2037-26-5	Toluene-D8	99%		86-112%
460-00-4	4-Bromofluorobenzene	113%		83-119%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

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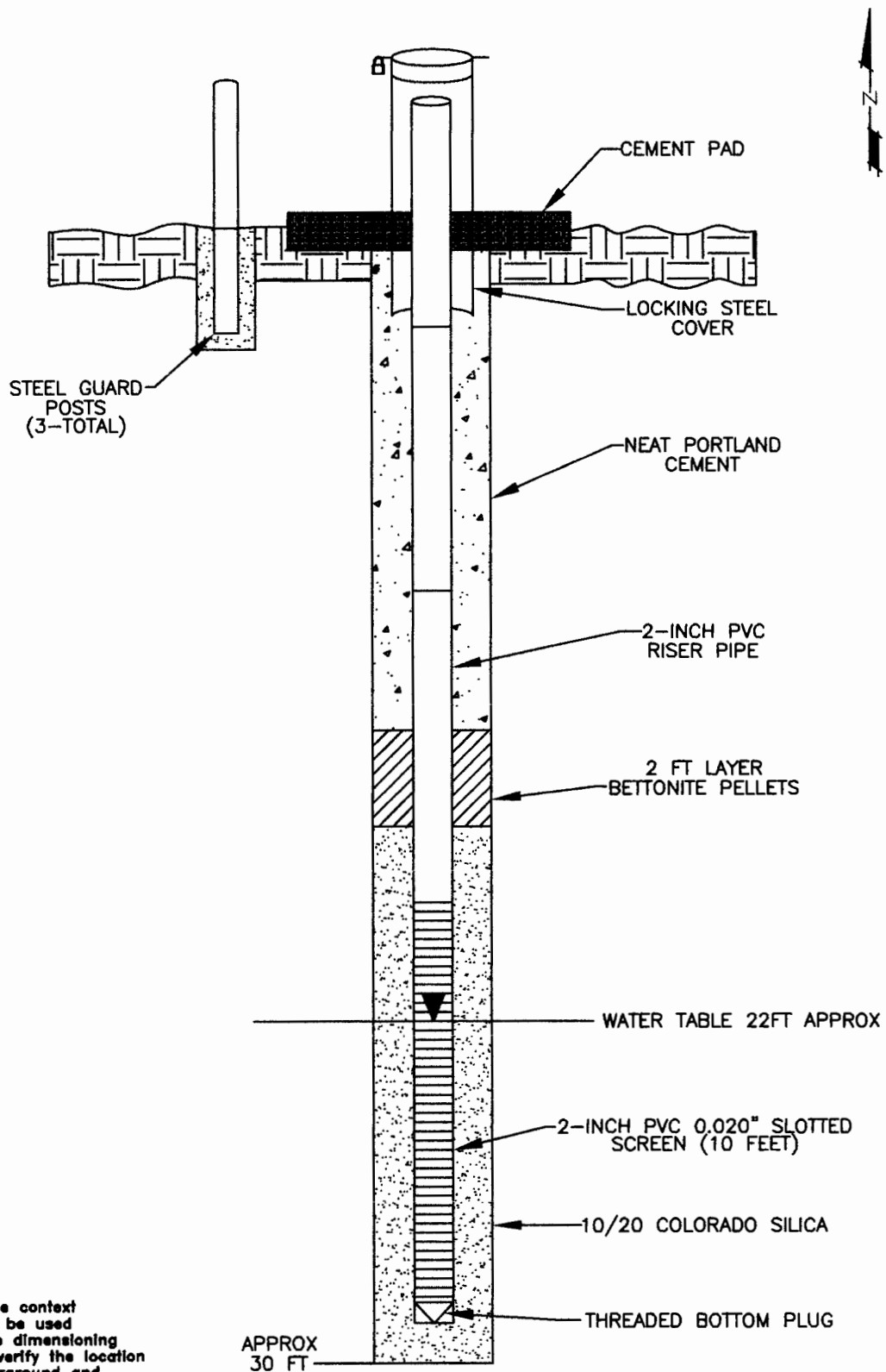
Client Sample ID:	TRIP BLANK	Date Sampled:	10/11/05
Lab Sample ID:	F35632-5	Date Received:	10/12/05
Matrix:	AQ - Trip Blank Water	Method:	SW846 8260B
Method:	SW846 8260B	Project:	HOLMN
Project:	HOLMN	Percent Solids:	n/a

VOA Special List

CAS No.	Compound	Result	RL	MDL	Units	Q
124-48-1	Dibromochloromethane	ND	1.0	0.40	ug/l	
75-71-8	Dichlorodifluoromethane	ND	1.0	0.50	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
1476-11-5	cis-1,4-Dichloro-2-Butene	ND	10		ug/l	
541-73-1	m-Dichlorobenzene	ND	1.0	0.50	ug/l	
95-50-1	o-Dichlorobenzene	ND	1.0	0.50	ug/l	
106-46-7	p-Dichlorobenzene	ND	1.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.50	ug/l	
97-63-2	Ethyl methacrylate	ND	5.0	2.0	ug/l	
76-13-1	Freon 113	ND	1.0	0.60	ug/l	
591-78-6	2-Hexanone	ND	5.0	2.5	ug/l	
87-68-3	Hexachlorobutadiene	ND	2.0	0.50	ug/l	
110-54-3	Hexane	ND	2.0	1.0	ug/l	
98-82-8	Isopropylbenzene	ND	1.0	0.50	ug/l	
99-87-6	p-Isopropyltoluene	ND	1.0	0.50	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	5.0	2.5	ug/l	
126-98-7	Methacrylonitrile	ND	20	10	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
74-88-4	Methyl iodide	ND	5.0	2.5	ug/l	
80-62-6	Methyl methacrylate	ND	5.0	2.5	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.50	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	5.0	2.5	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.50	ug/l	
91-20-3	Naphthalene	ND	2.0	1.0	ug/l	
76-01-7	Pentachloroethane	ND	10	5.0	ug/l	
107-12-0	Propionitrile	ND	20	10	ug/l	
103-65-1	n-Propylbenzene	ND	1.0	0.50	ug/l	
100-42-5	Styrene	ND	1.0	0.50	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.40	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	1.0	0.50	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	1.0	0.50	ug/l	

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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NOTES:

This information is depicted to provide visual aid within the context of this report and should not be used as a sole reference in precise dimensioning of features indicated. Please verify the location of all features including underground and aboveground utilities prior to conducting any subsurface exploration or site assessment.



GENERALIZED WELL CONSTRUCTION

PROJECT NO.	SCALE	DATE	DRAWN BY:
9050043	NTS	11/15/05	TES
			DRAWING NO. 9050043-02

FT-31 PROPOSED ADDITIONAL
GROUNDWATER MONITORING WELLS
HOLLOMAN AIR FORCE BASE
NEW MEXICO

Figure 2