PROJECT NUMBER 444-010-95

QUARTERLY GROUND WATER SAMPLING
JAMECO INDUSTRIES, INC.
248 WYANDANCH, AVE
WYANDANCH, NEW YORK

October 30, 1995

Prepared For:

New York State Department
of Environmental Conservation

and

Camille Gagnon
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QUARTERLY GROUND WATER SAMPLING REPORT
248 WYANDANCH AVENUE
WYANDANCH, NEW YORK

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1.0 Introduction

Goldman Environmental Consultants, Inc. (GEC) of Randolph, Massachusetts has been contracted by Watts Industries, Inc. (Watts) and Jameco Industries, Inc. (Jameco) to conduct Quarterly Ground Water Sampling at the Jameco facility located at 248 Wyandanch, Avenue in Wyandanch, New York. These activities are being conducted in accordance with Jameco's Maintenance Plan, that was approved by the New York Department of Environmental Conservation (NYSDEC).

The first quarterly sampling was conducted in July, 1994 by GEC and Jameco's previous consultants, AKRF, Inc. In conjunction with this sampling effort, GEC and AKRF also conducted a limited investigation to determine if there was evidence that a release of metals and/or chlorinated compounds had occurred beneath the site building. This investigation included the installation of three ground water observation wells through the floor of the building. As a result of this investigation dissolved-phase chlorinated compounds were detected in the shallow portions of the overburden aquifer beneath the building. Complete documentation of this investigation is presented in a document entitled Maintenance Plan First Quarterly Report prepared by AKRF and completed in August, 1994.

As a result of the investigations conducted by GEC and AKRF, and after conversations between GEC, Watts, and NYSDEC personnel, the scope of quarterly ground water sampling was amended so as to better characterize ground water conditions across the site. Changes in the scope were limited to adding one of the newly installed monitoring wells (MW-12) to the sampling list and removing two of the wells (MW-4 and MW-6) from the list. This submittal represents the first ground water sampling round where the revised scope of sampling and analysis has been employed.

All activities were conducted in accordance with GEC's Standard Operating Procedures and QA/QC Plan, copies of which are attached as Appendix A.

2.0 Ground Water Sampling and Surveying

On October 12, 1995, GEC personnel collected ground water samples from monitoring wells MW-1, MW-2, MW-3, MW-5, MW-7, MW-9 and MW-12. Prior to sample collection the approximate volume of standing water in each

well was computed and a volume of water equal to between three and five times the volume of standing water was evacuated from the monitoring well. GEC utilized dedicated standard check-valve bailers or pre-cleaned electric submersible pumps. The samples were collected using dedicated plastic bailers or electric submersible pumps and were stored on ice in laboratory-issued, preserved, glass and nalgene containers. All samples were shipped overnight to Thermo Analytical Laboratories (TMA), a New York State certified laboratory in Waltham, Massachusetts under fully documented chain of custody procedures.

Prior to initiation of well evacuation and sampling activities, GEC measured the depth to water in all of the on-site monitoring wells. Well MW-6, located in a dirt parking area, could not be located at the time of the site visit, and was not gauged as part of this effort. GEC personnel conducted a survey of monitoring wells, using standard "rod and level techniques" to determine the relative elevation of the monitoring wells as part of previous site investigations. As previously noted, well MW-6 could not be located during the site visit. Monitoring wells MW-10, MW-11 and MW-12, are located inside the site building are were only recently made accessible for surveying. Depth to water and ground water elevation for these wells is included in this Quarterly Sampling Report.

The results of the ground water gauging and well survey were used to determine the relative elevation of ground water at the site and to determine the direction of ground water flow. As a result of these activities, the ground water flow at the site appears to be toward the southeast. Complete results of the gauging and survey are included as Table 1.

3.0 Laboratory Analysis

Ground water samples were submitted for laboratory analysis to determine the concentration of volatile organic compounds (VOCs) (via EPA Method 8240), hexavalent chrome (via Colorimetric, 307-B Methods) and RCRA 8 Metals (total). The laboratory results are summarized on Tables 2 and 3 attached, and a complete laboratory report is included as Appendix B. Also included on these tables are the results of the sampling that was conducted during previous rounds. The results of these analyses are also summarized in the paragraphs below.

Volatile Organic Compounds

Results of recent analyses indicate that the concentrations of volatile organic compounds in ground water at the site remain essentially unchanged from previous sampling rounds. Low concentrations of chlorinated compounds were detected in the upgradient observation well (MW-1) and higher concentrations were detected in a well situated within the building footprint and downgradient of the building.

Hexavalent Chrome and Metals

Concentrations of total and dissolved metals and hexavalent chrome remain essentially unchanged from previous sampling rounds. Concentrations are relatively low across the entire site but are somewhat higher in the immediate vicinity of the plating area (within the building footprint) and downgradient of the former leaching lagoons. Hexavalent chrome was not detected in ground water samples collected from any of the observation wells.

4.0 Conclusions

In accordance with the NYSDEC-approved Maintenance Plan, and on behalf of Jameco and Watts, GEC has completed the most recent round of quarterly ground water sampling at the Jameco facility, located at 248 Wyandanch, Avenue in Wyandanch, New York.

The results of the ground water sampling indicate that concentrations of volatile organic compound and metals remain generally unchanged from the previous sampling rounds. GEC will continue to collect ground water samples from designated wells on a regular basis. The next sampling round is tentatively scheduled for February, 1996.

5.0 Warranty

The conclusions contained in this report are based on the information readily available to GEC as of October 30, 1995. GEC provides no warranties on information provided by third parties and contained herein. Data compiled was in accordance with GEC's approved scope of services, and the NYSDEC -approved Maintenance Plan and should not be construed beyond its limitations. Any interpretations or use of this report other than those expressed herein are not warranted. The use, partial use, or duplication of this report without the express written consent of Goldman Environmental Consultants, Inc. is strictly prohibited.

Respectfully submitted,
Goldman Environmental Consultants, Inc.

Prepared By:

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Senior Project Manager

Reviewed By:

Gary W. Siegel, P.E.
Vice President,
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TABLES

Table 1
GROUNDWATER ELEVATION MEASUREMENTS
Jameco Industries, Inc.
Wyandanch, Ave., Wyandanch, New York
(unit, feet)

Well Number	Screened Interval Depth	Depth to Water	Measuring Point Elevation	Groundwater Elevation
MW-1				
10/4/94	6.43 to 16.43	11.27	101.47	90.20
1/26/95		11.08	101.47	90.39
4/19/95		11.15	101.47	90.32
7/24/95		12.34	101.47	89.13
10/12/95		12.72	101.47	88.75
MW-2				
10/4/94	6.00 to 16.00	11.02	100	88.98
1/26/95		10.79	100	89.21
4/19/95		10.90	100	89.10
7/24/95		11.92	100	88.08
10/12/95		12.16	100	87.84
MW-3				
10/4/94	9.91 to 19.91	14.61	102.57	87.96
1/26/95		14.44	102.57	88.13
4/19/95		14.56	102.57	88.01
7/24/95		15.49	102.57	87.08
10/12/95		15.83	102.57	86.74
MW-4				
10/4/94	10.05 to 20.05	13.85	103.41	89.56
1/26/95		13.60	103.41	89.81
4/19/95		13.73	103.41	89.68
7/24/95		14.63	103.41	88.78
10/12/95		15.07	103.41	88.34
MW-5				
10/4/94	6.27 to 16.27	10.44	99.32	88.88
1/26/95		10.18	99.32	89.14
4/19/95		10.37	99.32	88.95
7/24/95		11.31	99.32	88.01
10/12/95		11.64	99.32	87.68
MW-6				
10/4/94	6.00 to 16.00	9.86	Not Found	NA
1/26/95		Not Found	Not Found	NA
4/19/95		Not Found	Not Found	NA
7/24/95		Not Found	Not Found	NA
10/12/95		Not Found	Not Found	
MW-7				
10/4/94	12.56 to 22.56	9.01	98.76	89.75
1/26/95		8.83	98.76	89.93
4/19/95		8.97	98.76	89.79
7/24/95		9.90	98.76	88.86
10/12/95		10.35	98.76	88.41
MW-8				
10/4/94	10.89 to 20.89	10.70	99.47	88.77
1/26/95		10.43	99.47	89.04
4/19/95		10.60	99.47	88.87
7/24/95		11.42	99.47	88.05
10/12/95		11.89	99.47	87.58
MW-9				
10/4/94	10.57 to 20.57	8.90	97.80	88.90
1/26/95		8.68	97.80	89.12
4/19/95		8.88	97.80	88.92
7/24/95		9.72	97.80	88.08
10/12/95		9.98	97.80	87.82
MW-10				
10/4/94	86.7 to 96.7	11.14	99.97	88.83
1/26/95		10.53	99.97	89.44
4/19/95		10.72	99.97	89.25
7/24/95		11.66	99.97	88.31
10/12/95		12.06	99.97	87.91

Prepared by PT
Reviewed by SB
Revised 11/2/95

GROUNDWATER ELEVATION MEASUREMENTS

Jameco Industries, Inc.
Wyandanch, Ave., Wyandanch, New York
(unit, feet)

Well Number	Screened Interval Depth	Depth to Water	Measuring Point Elevation	Groundwater Elevation
MW-11				
10/4/94	50.0 to 60.0	10.77	99.95	89.18
1/26/95		10.54	99.95	89.41
4/19/95		10.66	99.95	89.29
7/24/95		11.61	99.95	88.34
10/12/95		12.10	99.95	87.85
MW-12				
10/4/94	5.35 to 15.35	11.79	99.97	88.18
1/26/95		10.51	99.97	89.46
4/19/95		10.66	99.97	89.31
7/24/95		11.66	99.97	88.31
10/12/95		12.08	99.97	87.89
MW-13*				
10/4/94		10.00/10.25	99.67	89.63**
1/26/95		9.85/9.86	99.67	89.82**
4/19/95		10.02/10.01	99.67	89.65**
7/24/95	Destroyed	NA		

Notes:

* = Previously referred to as "Mystery Well"
** = Corrected for Petroleum Thickness assuming density of 0.87
Product thickness not measured during the 10/12/95 gauging event.

Prepared by PT
Reviewed by SB
Revised 11/1/95

Table 2
SUMMARY OF GROUNDWATER ANALYSIS FOR VOLATILE ORGANIC COMPOUNDS
Watts Co., Wyandanch, New York
(unit, parts per billion [ppb], µg/L)

Sample Identification	Benzene	Bromodi-chloromethane	Chloro-benzene	Chloroform	Dibromochloro-methane	1,2-Dichloro benzene	1,3-Dichloro benzene	1,4-Dichloro benzene	1,1-Dichloro ethane	1,1-Dichloro ethene	cis-1,2-Dichloro ethene	trans-1,2-Dichloro ethene
MW-1												
6/91	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	ND
5/23/94	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	ND
1/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4/19/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
7/24/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10/12/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-2												
6/91	ND	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	82
5/23/94	ND	ND	ND	6	ND	ND	ND	ND	4	0.6	510	8
1/27/95	ND	ND	4	ND	ND	ND	ND	ND	ND	ND	280	ND
4/19/95	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	55	ND
7/24/95	ND	ND	6	ND	ND	1	2	2	ND	ND	4	ND
10/12/95	ND	ND	14	ND	ND	ND	ND	7.1	ND	ND	6.1*	ND
MW-3												
6/91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/23/94	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.4	ND
1/27/95	ND	ND	ND	ND	ND	ND	0.32	ND	ND	ND	2	ND
4/19/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	83	ND
7/24/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5	ND
10/12/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-5												
6/91	17	ND	34	ND	ND	ND	ND	ND	ND	ND	ND	5
5/23/94	ND	ND	0.2	ND	ND	0.5	0.4	0.6	0.7	ND	49	0.3
1/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND
4/19/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND
7/24/85	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10/12/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.2*	ND
MW-7												
6/91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/23/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	ND
1/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35	ND
4/19/95	ND	0.5	ND	0.8	0.5	ND	ND	ND	ND	ND	2	ND
7/24/95	ND	ND	ND	ND	0.5	ND	ND	ND	ND	ND	4	ND
10/12/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	71*	ND
MW-9												
6/91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/23/94	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6	ND
1/27/95	ND	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	190
4/19/95	ND	1	ND	34	ND	ND	ND	ND	ND	ND	ND	ND
7/24/95	ND	ND	ND	2	0.4	ND	ND	ND	ND	ND	ND	ND
10/12/95	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	ND
MW-12												
6/91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/23/94	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA
1/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1300	ND
4/19/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	650	12
7/24/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1000	16
10/12/95	ND	ND	16	ND	ND	ND	ND	ND	7.3	ND	700*	ND

Notes:

Standard* refers to the groundwater standard for each element for Class GA groundwaters (6NYCRR Parts 700-705)

MDL - Method Detection Limit ND - Not Detected NA - Not Analyzed NS - Not Sampled

MDL - Ranged from 0.20 ppb to 1 ppb depending on analysis and element.

Δ No compounds were detected above detection limits for samples from 6/91 and 5/18/94.

Wells that were not sampled on specific dates were not included in the sample identification column.

Laboratory analyses were conducted via EPA Method 8260 or 524 or equivalent.

Complete laboratory reports for 1/27/95 sampling are included in GEC's Quarterly Monitoring Report.

Information on this table is summarized from previous investigations.

* Reported as total 1,2-dichloroethene

** No guidance value exists

Prepared by: AA
Reviewed by: SB
Revised 10/30/95

Table 2
SUMMARY OF GROUNDWATER ANLAYSES FOR VOLATILE ORGANIC COMPOUNDS
Watts Co., Wyandanch, New York
(unit, parts per billion [ppb], µg/L)

Sample Identification	Ethyl Benzene	Methylene Chloride	4-Methyl-2-pentanone	1,1,2,2-Tetra-chloroethane	Tetrachloro ethene	Toluene	1,1,1-Trichloro ethane	1,1,2-Trichloro ethane	Trichloro ethene	1,2,4-Trimethyl benzene	Vinyl Chloride	Xylenes (total)
MW-1												
6/91	ND	ND	7	ND	ND	ND	11	ND	ND	ND	ND	ND
5/23/94	NA	0.2	NA	ND	ND	ND	30	ND	ND	ND	ND	NA
1/27/95	NA	ND	NA	ND	ND	ND	0.6	ND	ND	ND	ND	NA
4/19/95	ND	1	NA	0.3	ND	ND	0.6	ND	ND	ND	ND	ND
7/24/95	ND	ND	ND	ND	ND	ND	0.7	ND	ND	ND	ND	ND
10/12/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-2												
6/91	ND	ND	ND	ND	1500	ND	12	ND	5400	ND	ND	ND
5/23/94	NA	0.3	NA	ND	28	ND	4	0.4	1200	0.2	12.00	NA
1/27/95	NA	ND	NA	ND	26	ND	ND	ND	180	ND	33.00	NA
4/19/95	ND	ND	NA	ND	11	ND	ND	ND	46	ND	6.00	ND
7/24/95	ND	ND	ND	ND	0.5	ND	ND	ND	5	ND	ND	ND
10/12/95	ND	6.7	ND	ND	ND	ND	ND	ND	21	ND	ND	ND
MW-3												
6/91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/23/94	NA	0.2	NA	ND	ND	ND	ND	ND	10	ND	ND	NA
1/27/95	NA	ND	NA	ND	ND	ND	ND	ND	4	ND	ND	NA
4/19/95	ND	ND	NA	ND	25	ND	ND	ND	170	ND	ND	ND
7/24/95	ND	ND	ND	ND	4	ND	ND	ND	12	ND	ND	ND
10/12/95	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-5												
6/91	2	6	46	ND	30	14.00	30	ND	17	ND	ND	5
5/23/94	NA	0.3	NA	ND	9	0.90	0.2	ND	14	ND	5.00	NA
1/27/95	NA	ND	NA	ND	5	ND	ND	ND	5	ND	0.50	NA
4/19/95	ND	ND	NA	ND	4	ND	ND	ND	5	ND	ND	ND
7/24/85	ND	ND	ND	ND	280	ND	ND	ND	9	ND	ND	ND
10/12/95	ND	11	ND	ND	11	ND	ND	ND	5.6	ND	ND	ND
MW-7												
6/91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/23/94	NA	0.3	NA	ND	30	ND	ND	ND	4	ND	ND	NA
1/27/95	NA	ND	NA	ND	39	ND	ND	ND	3	ND	ND	NA
4/19/95	ND	ND	NA	ND	15	ND	ND	ND	0.6	ND	ND	ND
7/24/95	ND	ND	ND	ND	13	ND	ND	ND	0.8	ND	ND	ND
10/12/95	ND	12	ND	ND	51	ND	ND	ND	9.7	ND	ND	ND
MW-9												
6/91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
5/23/94	NA	ND	NA	ND	2	ND	ND	ND	0.3	ND	ND	NA
1/27/95	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
4/19/95	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
7/24/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
10/12/95	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-12												
6/91	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
5/23/94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/27/95	NA	370	NA	ND	120	ND	ND	ND	3300	ND	ND	NA
4/19/95	ND	ND	NA	ND	400	ND	ND	ND	1500	ND	58	ND
7/24/95	ND	ND	ND	ND	100	ND	ND	ND	1600	ND	54	ND
10/12/95	ND	11	ND	ND	75	ND	6.7	ND	1700	ND	17	ND

Notes:

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Complete laboratory reports for 1/27/95 sampling are included in GEC's Quarterly Monitoring Report.

Information on this table is summarized from previous investigations.

* Reported as total 1,2-dichloroethene

** No guidance value exists

Prepared by: AA
Reviewed by: SB
Revised 10/30/95

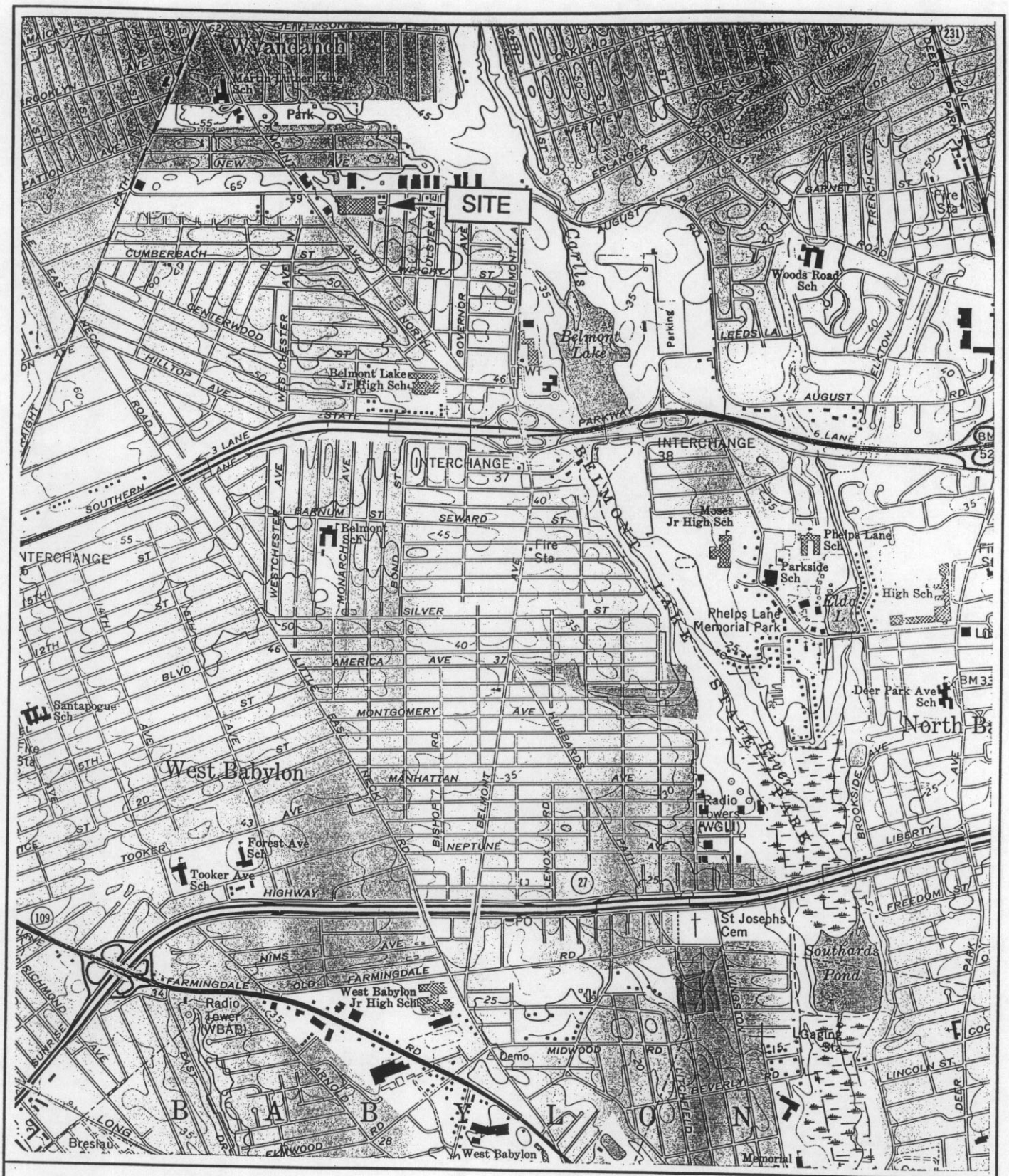
Table 3
SUMMARY OF GROUNDWATER ANALYSES FOR METALS (TOTAL)
Watts Co., Wyandanch, New York
(units, parts per million [ppm], mg/L)

Sample Identification	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Hexavalent Chromium	Copper	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
MW-1														
5/23/94	32	0.019	ND	ND	0.029	0.02	0.026	0.035	0	ND	ND	ND	ND	0.173
1/27/95	ND	0.042	ND	0.0068	0.065	ND	0.084	0.056	0.00029	0.042	ND	0.01	ND	0.250
4/19/95	ND	0.035	ND	0.0061	0.040	NA	0.054	0.044	ND	ND	ND	ND	ND	0.16
7/24/95	ND	0.048	ND	0.0077	0.052	ND	0.071	0.044	0.00034	ND	ND	ND	ND	0.18
10/27/95	NA	83.1	NA	ND	75.9	ND	NA	57.7	ND	NA	ND	ND	NA	NA
MW-2														
5/23/94	0.038	0.007	ND	ND	8.88	0.24	3.16	0.087	0	4.49	ND	ND	ND	0.747
1/27/95	ND	0.03	ND	0.014	4	ND	3.8	0.079	0.00048	5.7	ND	0.01	ND	0.700
4/19/95	ND	0.060	ND	0.021	4.9	NA	3.5	0.11	0.00044	4.3	ND	ND	ND	0.69
7/24/95	ND	0.054	ND	0.019	3.9	ND	4.1	0.10	0.0013	3.6	ND	ND	ND	0.67
10/27/95	NA	86	NA	ND	4090	ND	NA	108	0.38	NA	ND	14.7	NA	NA
MW-3														
5/23/94	ND	ND	ND	ND	0.119	0.02	0.597	ND	ND	1.75	ND	ND	ND	0.109
1/27/95	ND	ND	ND	ND	0.32	ND	4.5	ND	ND	3.5	ND	0.011	ND	0.680
4/19/95	ND	ND	ND	ND	0.20	NA	2.8	ND	ND	2.0	ND	ND	ND	0.37
7/24/95	ND	ND	ND	ND	0.061	ND	6.6	ND	0.0002	4.2	ND	ND	ND	0.89
10/27/95	NA	ND	NA	ND	201	ND	NA	41.6	ND	NA	ND	ND	NA	NA
MW-5														
5/23/94	0.040	0.029	ND	ND	0.117	0.02	0.639	0.022	0	0.373	ND	ND	ND	0.582
1/27/95	ND	0.046	ND	0.0066	0.1	ND	0.73	0.020	ND	0.23	ND	0.013	ND	0.480
4/19/95	ND	0.049	ND	0.0081	0.13	NA	0.92	0.038	ND	0.27	ND	ND	ND	0.42
7/24/95	ND	0.048	ND	0.007	0.10	ND	0.75	0.018	0.00022	0.19	ND	ND	ND	0.36
10/27/95	NA	87.8	NA	ND	221	ND	NA	38.2	ND	NA	ND	ND	NA	NA
MW-7														
5/23/94	ND	0.005	ND	ND	ND	0.01	ND	0.006	ND	0.025	ND	ND	ND	0.026
1/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.011	ND	ND
4/19/95	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND
7/24/95	ND	ND	ND	0.0052	ND	ND	0.013	ND	ND	ND	ND	ND	ND	0.035
10/27/95	NA	15.5	NA	ND	21.2	ND	NA	11.4	ND	NA	ND	ND	NA	NA
MW-9														
5/23/94	ND	ND	ND	ND	ND	0.01	ND	0.005	0	ND	ND	ND	ND	0.034
1/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.011	ND	0.024
4/19/95	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	0.025
7/24/95	ND	0.013	ND	ND	0.017	ND	0.019	0.010	ND	ND	ND	ND	ND	0.10
10/27/95	NA	13.3	NA	ND	21.2	ND	NA	13.6	ND	NA	ND	ND	NA	NA
MW-12														
5/23/94	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1/27/95	0.18	0.11	0.019	0.082	18	ND	21	0.310	0.0013	21	0.0055	ND	ND	5.600
4/19/95	ND	0.10	0.015	0.059	14	NA	25	0.23	0.0013	22	ND	ND	ND	4.7
7/24/95	0.16	0.073	0.011	0.05	10	ND	13	0.16	0.0013	16	ND	ND	ND	3.0
10/27/95	NA	47.2	NA	17.7	5870	ND	NA	90.5	0.52	NA	ND	ND	NA	NA
Standard*	**0.003****	**0.025**	**0.003**	**0.01**	**0.05**	**0.05**	**0.2**	**0.025**	**0.002**	**No Stnd.**	**0.01**	**0.05**	**.004****	**0.300**

Notes:
Samples were analyzed via the following SW-846
Standard* refers to the groundwater standard for each element for Class GA groundwaters (6NYCRR Parts 700-705)
** refers to a Guidance value where no Standard exists
ND - Not Detected NA - Not Analyzed NS - Not Sampled
Method Detection Limit ranges from 0.00020 ppm to 0.2 ppm depending on analysis and element.
Barium was detected during 10/12/95 sampling period between 43.5 and 870 ppm.

Prepared by: AA
Reviewed by: SB
Revised 10/30/95

FIGURES



USGS 7.5' Series Topographic

BAY SHORE WEST, N.Y. Quadrangle

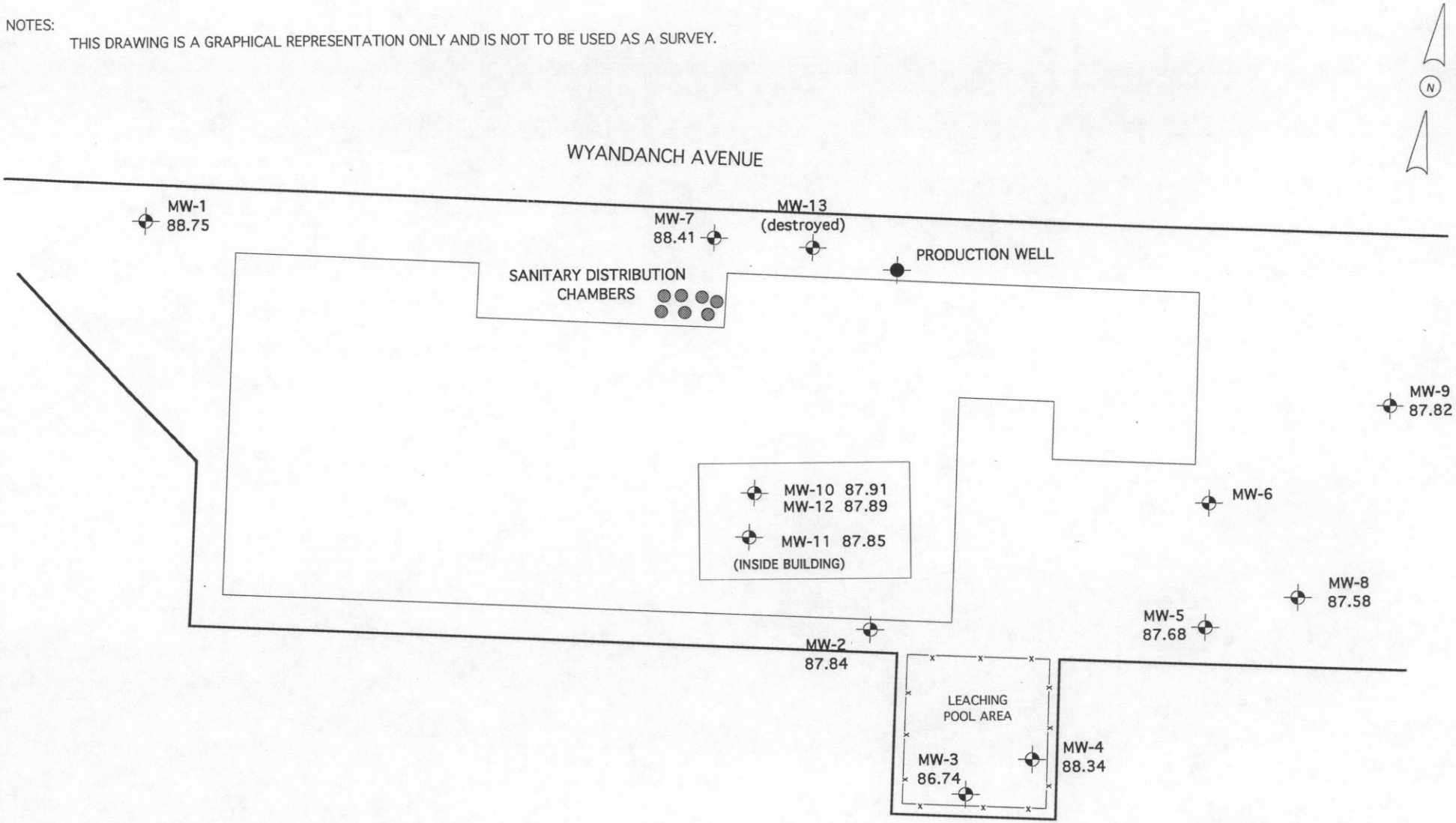
GEC
Goldman Environmental Consultants, Inc.
15 Pacella Park Drive
Randolph, MA 02368
(617) 961-1200 or (800) 446-2014

SITE LOCATION MAP
248 WYANDANCH AVENUE
WYANDANCH, NEW YORK
Project No. 444-010-95

FIGURE 1
SCALE
1 : 24 000
N

NOTES:

THIS DRAWING IS A GRAPHICAL REPRESENTATION ONLY AND IS NOT TO BE USED AS A SURVEY.



GROUND WATER ELEVATION PLAN

JAMECO INDUSTRIES
248 WYANDANCH AVENUE
WYANDANCH, NEW YORK

JOB NUMBER: 444-006-94	SCALE: 1" = 100' ±
DATE: October 12, 1995	DRAWN BY: JRD
	CHECKED BY

GEC Goldman Environmental Consultants, Inc.
15 Pacella Park Drive
Randolph, MA 02368
(617) 961-1200 or (800) 446-2014

2
FIGURE

APPENDIX A

STANDARD OPERATING PROCEDURES

Standard Operating Procedure
Sample Preservation and Chain of Custody

This protocol is designed to ensure that proper techniques are employed in the preservation and chain-of custody of samples collected for laboratory analyses or for screening. This Protocol is intended to be consistent with Massachusetts Publication #WSC-310-91 (Standard References for Monitoring Wells), and 40 CFR 136 (Guidelines Establishing Test Procedures for the Analysis of Pollutants).

The results of screening and/or laboratory analysis of solid, liquid or gaseous media constitute the basis of evaluation of the majority of the disposal sites under investigation. It is therefore imperative that the preservation of the samples be appropriate to the media being analyzed as well as the analysis which is being performed. In addition, the integrity of the sample is dependent upon the premise that a clear chain of responsibility for the sample integrity has been maintained. Without this "Chain-of-Custody", the integrity of the laboratory results may inevitably come into question.

The preservation and Chain-of-Custody (COC) protocols outlined in the following paragraphs are not intended to be all inclusive, and this protocol is written with the understanding that the sampling of certain media or analyses may require specific sample preservation. This protocol is, however, intended to cover the majority of the media and analyses performed as well as the COC procedures employed at the majority of waste disposal sites.

A COC program must be followed during sampling and handling activities from the field through laboratory operations. This program is designed to assure that each sample is accounted for at all times. Field data sheets, COC records, and sample labels must also be completed by the appropriate sampling and laboratory personnel for each sample. The objective of the sample custody identification and control system is to assure, to the extent practical, that:

- all samples are uniquely identified;
- the correct samples are analyzed for the correct parameters and are traceable through their records;
- important sample characteristics are preserved;
- samples are protected from damage or loss;
- any processing of samples (e.g., filtration, preservation) is documented; and
- client confidentially is maintained.

A sample is considered under a COC if it meets all of the following criteria:

- the sample is in your custody,
- the sample is in your view, after being in your possession,
- the sample is in your possession and then you locked it up to prevent tampering, and
- the sample is in a designated, secured area.

The following paragraphs outline GEC's preservation and COC protocol.

1) Prior to initiating any work, the Health and Safety Plan developed for the specific site activities should be reviewed by all field personnel. The indicated measures on the Plan should be enacted prior to initiation of any sampling activities. Any concerns not addressed in the Plan are to be brought immediately to the attention of the Health and Safety Officer. Personnel participating in the excavations will dress with protective equipment appropriate for the anticipated conditions.

2) Sample integrity is assured by use of containers appropriate to both the matrix to be sampled and the analytes of interest. Sample containers must be prepared in the laboratory in a manner consistent with USEPA protocols. Unless the proper sample bottle preparation and sample preservation measures are taken in the field, sample composition can be altered by contamination, degradation, biological transformation, chemical interaction, and other factors during the time between sample collection and analysis. Prior to sampling GEC personnel will ensure that the sample containers obtained from either a laboratory or a commercial supplier have been prepared in accordance with DEP and EPA protocols. Sample containers are to be used once and discarded. Under no circumstance should a soil, water or gaseous media which has been collected for analysis be placed in a previously used sample container unless that container has been recleaned and preserved by a certified laboratory.

   As part of the COC protocol, sample containers should have prepared labels for each sample. The label should include sample identification, date and time of collection, sample parameters to be analyzed, any preservatives used, and the name of the sample collector.

   Upon collection of the sample(s), documentation of chain of custody (i.e. COC form) should be initiated and should include at least the following:

   - date and time of sampling;
   - sampling locations;
   - sample bottle identification;
   - and specific sample acquisition measures.

   The COC and sample description requires:

   - a unique identification of each sample;
   - the name(s), address(es) and telephone number(s) of the sampler(s) and the person(s) shipping the samples and all subsequent transfers of custody;
   - the type and method of analyses requested;

- the date and time of sample collection and transfer of custody; and the name(s) of those responsible for receiving the samples at the laboratory.

3) In some cases, field filtration of samples may be required. Information regarding the method of filtration should be determined in advance and communicated to the laboratory. Filtering of any sample collected for organic analysis should be avoided. Decanting of a liquid media is a preferred method for the removal of particulate matter. When field filtering is required, an appropriate filter medium must be selected to avoid potential sample contamination during the filtering process.

4) Sample holding times are specified for the initiation of chemical analyses, usually beginning at the time of sample collection but occasionally beginning at the time of sample receipt at the laboratory. This determination must be made prior to sampling to allow proper logistical planning for sample shipments. Holding times also vary with the regulatory basis under which analyses are conducted. It is essential that the laboratory be consulted before sampling take place in order to properly schedule work.

5) Sample containers are most often packed in plastic, insulated "coolers" for shipment. Bottles are to be packed tightly so that only minimal motion of the sample containers is possible. Materials which are considered to be highly hazardous may require special handling and packing for shipment. Ice, or a similar heat transfer fluid, should be placed over the top of the sample containers and should be placed within a water tight plastic bag to assure that the samples are kept as dry as possible. In addition, all applicable paper work should also be enclosed within a second water-tight bag and included in the cooler. The sample cooler should then be taped shut.

6) Upon receipt of the samples at the laboratory, any laboratory identification numbers should also be included on the COC form. Finally, those responsible for receipt of the samples should be indicated on the COC form as well as the date and time of the sample drop-off.

Standard Operating Procedure
Field Sampling Protocols
Quality Assurance/Quality Control

I. Purpose

The purpose of the GEC QA/QC program is to generate analytical data that is of known and defensible quality. These procedures apply to all projects in which sampling is involved. QA/QC from one project is not transferable to another.

II. Decontamination

1) Decontamination should be performed on all reusable field sampling equipment and protective gear. Sampling equipment should be decontaminated before the collection of a sample and after sampling has been completed. Protective gear should be decontaminated after the collection of a sample.

2) It is necessary to use the following decontamination solutions in the field:

   - Non-phosphate detergent plus tap water wash.
   - Distilled/ deionized water rinse.
   - 10% Nitric Acid rinse.*
   - Distilled/ deionized water rinse.*
   - Methanol rinse, when sampling volatiles only.
   - Acetone then hexane rinse.**
   - Distilled/ deionized water rinse. **

   * Only if sample is to be analyzed for metals.
   ** Only if sample is to be analyzed for semi-volatile organics, PCBs or pesticides.

3) Sample bottles and sampling equipment should not be stored near gasoline, solvents, or other potential sources of contamination. If unavoidable bottles and equipment should be sealed in containers or plastic.

4) Heavy equipment, including hand tools, should be cleaned by steam cleaning or manual scrubbing prior and subsequent to use in hazardous waste investigations.

III. Measures or Quality Control/Quality Assurance

1. Trip Blanks

- Trip blanks are used in order to detect additional sources of contamination that might affect analytical results. The following are potential sources of additional contamination:
  a. Sample containers,
  b. Contamination during shipment to and from the site,
  c. Ambient air contact with analytical instrumentation at the laboratory during analysis, or
  d. Laboratory reagent used in analytical procedures.

- One trip blank is required for every set of samples sent to the lab regardless of job size. Generally, the trip blank should be for VOCs. If, however, VOCs are not a parameter of the sampling round, consult the laboratory as to which parameter should have an associated trip blank.

- Trip blanks are to be kept with containers used in the sampling round at all times. More specifically, they should accompany the site specific sampling containers from the time the containers leave the laboratory until they are returned for analysis.

- Obtain containers and trip blanks prepared specifically for each job from the laboratory. Return unused containers to the laboratory upon completion of a project.

2. Field Blanks

- Field blanks are used to indicate potential contamination contracted from ambient air or from sampling equipment. It also serves as a QA/QC for decontamination procedures.

- Collect one set of field blanks for every 20 samples per project. It is not necessary to take a field blank for jobs in which less than 10 samples are collected.

- Procedure

  a. Collect two sets of sample containers to cover all sampling parameters. One set will be full of analyte free water (obtain extra analyte free water to fill two VOA vials). The other set is empty.
  b. Go to the most contaminated area and run the water from the full containers, through the decontaminated sampling equipment and into the associated empty containers.
  c. Send to the lab for analysis.

- Use containers and field blanks prepared specifically for job.

3. Duplicate Samples

- Duplicate samples are collected in order to serve as a laboratory check. Therefore, it is important that the lab does not know which samples are to serve for this purpose.

- Frequency

  a. Obtain one (1) duplicate sample for every 10 samples of each matrix. If less than ten samples are collected of a given matrix, a duplicate must be collected anyway.
  b. If a total of less than 10 samples are collected, collect one (1) duplicate of the majority medium.
  c. If a total of less than five (5) samples are collected, it is not necessary to collect a duplicate sample.

  * Note that the frequency as outlined here pertains to the number of samples collected per project, not per location of a given project.

- Procedures

  The idea behind the duplicate sample is to collect two samples as close to identical as possible.

  a. For water

     Alternately fill containers for the same parameter with equal amounts of liquid per bailer. Fill duplicate VOC vials from the same bailer of liquid.

  b. For soil

     -- VOC samples must be taken from the discreet sampling locations.
     -- For all other samples, mix the applicable soil in a decontaminated stainless steel or polyethylene bowl or tray. Then fill sample containers with the soil mix.
     -- When confronted with the option of collecting a water sample or a soil sample, choose the water sample.

- Labeling for the laboratory

  a. Label the containers normally and give the duplicate samples different reference numbers.

  b. Indicate the quantity of duplicates in the "special instructions" or "remarks" portion of the chain of custody and laboratory services sheet, however, do not indicate the reference numbers of the duplicates.

  c. Upon receipt of analytical results, contact the laboratory and convey all data pertaining to the duplicates for their QA/QC.

4. Background samples

- Background samples are taken only if it is required for comparison of site conditions to the surrounding environment. This is to be dictated by client needs on a site to site basis.

5. Performance Evaluation Samples

- The project manger should consider the use of the following performance evaluation samples on a periodic basis. Typically, these will be reserved for larger jobs:

a. Laboratory performance evaluation samples

-- Collect duplicate samples and send to two different laboratories for comparison. Avoid using soil samples for this procedure.
-- Send a sample of known quantity and quality to the laboratory in order to determine laboratory performance. Such samples can be prepared by any laboratory.

b. Gas chromatograph (GC) performance evaluation samples

-- Acquire a sample of known quantity and quality from a laboratory. Analyze the sample with the gas chromatograph in order to determine the integrity of GC results.

IV. Field Sampling QA/QC

1) When sampling a well, collect VOA samples first and Oil & Grease samples last.

2) Start sampling at the presumed least contaminated areas, proceeding to the more contaminated areas.

3) Preservatives

- Consult the laboratory in order to determine which sampling parameters require preservatives. The laboratory will provide sampling containers specific for each job.
- It is necessary to fill the sample container when using preserved bottles; preservative is added with this assumption
- If samples are not collected correctly, they will not pass GEC QA/QC.

4) A chain-of-custody must accompany each set of samples from the job site to the laboratory. Be sure to identify the presence of trip blanks on the chain-of-custody sheets.

5) If possible, use the numbering system outlined on the attached sheet for identifying samples.

V. Ordering Sample Containers

1) Pre-plan sampling strategy to determine the sample parameters, the number of sample points including QA/QC samples, and the matrix of the given sample points.

2) Call laboratory and tell them:

   - Sample parameters,
   - Number of samples to be collected,
   - The number of container sets needed for trip blanks, field blanks, and duplicates, and
   - The matrix of each sample to be collected.

3) Sample containers should be ordered specifically for each job. Any sample containers unused at the end of the job should be sent back to the laboratory.

VI. Conclusions

1) Pre-planning is crucial.

2) Keep open communication with the laboratory on all matters.

3) If you make a mistake in sampling collection, accept it, and retake the necessary samples.

Standard Operating Procedure
Decontamination Procedures for Field Equipment

All field equipment (bailers, well sounder, gloves, etc.) must be decontaminated before each use, between samples and before it is returned to the equipment room. Decontamination procedures vary for the type of analyses to be performed. The following basic procedures should always be used to decontaminate equipment regardless of the type of analysis:

1) Scrub equipment with soapy water (Liquinox, Alconox, trisodiumphosphate or equivalent).
2) Rinse with tap water, if available.
3) Rinse with deionized water from green spray bottle.

For Metals, perform the following additional procedures:

4) Rinse with 10% nitric acid (HNO_3).
5) Final rinse with deionized water.

For base/neutral/acid extractables, PCB's and pesticides perform the following, additional procedures:

4) Rinse with acetone and let dry.
5) Rinse with hexane and let dry.
6) Final rinse with deionized water.

For Volatile Organics and all other analyses, perform the following additional procedures:

4) Rinse with methanol.
5) Final rinse with deionized water

NOTE: When sampling for more than one of the above types of analyses, use the protocol for volatile organics last.
Solvent use should be gauged carefully so that a minimal amount of solvent is left after use. Allow any remaining solvent to evaporate.

Standard Operating Procedure
Observation Well Sampling
Using a Bucket-Type Bailer

This protocol is designed to ensure that proper techniques are used, safety is considered and quality assurance maintained during the performance of observation well sampling. A GEC representative is assigned to oversee and/or perform all observation well sampling for the project. The duties of the representative are to ensure that the scope of work is followed.

Sampling of groundwater observation wells is the primary means by which the chemical characteristics of groundwater can be determined. Therefore, it is imperative that care be taken in the development and subsequent sampling of observation wells. Water standing in the well prior to sampling may be stagnant and may not be representative of true groundwater quality in the aquifer in question

Procedures for performance of groundwater observation well evacuation and sampling are outline in the following paragraphs:

Well Evacuation:

1) Prior to initiating any work, the Health and Safety Plan developed for the specific site activities should be reviewed by all field personnel. The indicated measures on the Plan should be enacted prior to initiation of the sampling activities. Any concerns not addressed in the Plan are to be brought immediately to the attention of the Health and Safety Officer. Personnel participating in the sampling will dress with protective equipment appropriate for the anticipated conditions.

2) Decontaminate all equipment to be used in the performance of the activities. Decontamination should at least be performed by alternately rinsing all equipment with methanol and distilled water and vigorously scrubbing the equipment with a clean brush.

3) The extent that contamination may be known at a given site, observation wells should be sampled in an order from "least contaminated" to "most contaminated".

4) Screen the well headspace with a photoionization detector (PID) or other appropriate instrumentation to confirm that concentrations of potential contaminants are within acceptable limits.

5) Test the well for accumulation of non-aqueous phase product (LNAPL or DNAPL) using a pre-cleaned interface probe or transparent disposable bailer. If present, collect a sample of the NAPL and place in an appropriate sample container. This sample should be kept away from other samples.

6) Measure and record the depth to NAPL(if present), depth to water, and total depth of the wells. If NAPL is present, sampling for dissolved phase contaminants should generally not be performed. In addition, if sampling is to be performed, appropriate measures should be taken to assure that any water removed from a contaminated well is disposed appropriately.

7) Calculate the volume of saturated well casing and the volume of water which will be removed to assure sufficient well evacuation. Evacuate well water into a clean, small (< 0.5 gallons), bucket or similar vessel in which precleaned and calibrated conductivity and pH probes have been placed. Attach a precleaned bailer to cable or line for lowering the bailer into the well. Lower the bailer slowly into the well until it contacts the water surface. Allow the bailer to sink and fill with a minimum of surface disturbance. Raise the bailer to the surface . Do not allow the bailer line to contact the ground. Drain the bailer into the small bucket.

8) Purging should continue until between three and five well volumes have been evacuated and pH, temperature, and specific conductivity values do not vary appreciably.

9) Record final pH, conductivity and temperature values.

10) Allow between one (1) and four (4) hours for the well to equilibrate prior to sampling. Discard string, and discard or decontaminate the bailer or pump in accordance with the Protocol for Decontamination.

Well Sampling:

1) Sampling of observation wells will be conducted only with clean, decontaminated Teflon, or stainless steel sampling bailers or with clean disposable bailers. Disposable bailers shall not be re-used for any purpose. In addition, disposable gloves are worn for each individual well sampling and line used to support the bailer is to be discarded between wells.

2) Samples at any given well will be collected in order of decreasing order of sensitivity to volatilization (i.e. VOC, total organic carbon, semi-volatile organics (BNA), ammonia, PCBs, pesticides, oil and grease, phenols, cyanide, sulfate and chloride, nitrate and ammonia, metals and radionuclides).

3) Lower the bailer slowly until it contacts the water surface. Allow the bailer to sink to a point such that the bailer becomes filled with water, but not to the point where the string comes in contact with the water. Note: Under specific sampling conditions this sample collection procedure may vary. Under these conditions specific notation is required regarding any modifications or amendments made to the Protocol.

4) Slowly raise the bailer to the surface and remove the bailer from the well. Care should be taken to ensure that the string and bailer do not come in contact with the ground or other potential contaminant sources.

5) Carefully and slowly transfer the contents of the bailer into appropriately preserved, pre-labeled containers. Check that the sample containers seal properly and that the cap is sealed tightly. Record applicable information in the field logbook and complete all chain-of-custody documents.

6) Discard string, and discard or decontaminate the bailer appropriately.

APPENDIX B

LABORATORY ANALYTICAL REPORTS

TMA

Thermo Analytical

QUALITY ENVIRONMENTAL SERVICES

Report for

Goldman Environmental Consultants

WORK ORDER #S510081

Scientific Services Since 1922

TMA
Thermo Analytical

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200
1-800-4 LAB TEST FAX (617) 890-3883

Thermo Analytical
300 Second Avenue
P.O. Box 521
Waltham, MA 02254
Attn: Client Services
Phone: (617) 890-7200

Goldman Env. Consultants
15 Pacella Park Drive
Randolph MA 02368

Attn: Sam Butcher
Invoice Number:

Order #: S5-10-081
Date: 10/27/95 20:58
Work ID: Jameco
Date Received: 10/13/95
Date Completed: 10/27/95
Client Code: GOLDMAN

SAMPLE IDENTIFICATION

Sample Number	Sample Description	Sample Number	Sample Description
01	MW-1	05	MW-7
02	MW-2	06	MW-9
03	MW-3	07	MW-12
04	MW-5		

Certified By

Sample Description: MW-1 Lab No: 01A
Test Description: Volatile Organics-Aqueous Method: EPA_8240 Test Code: VOA_W
Collected: 10/12/95 11:00 Category: WATER

DATE INJECTED 10/20/95 DILUTION FACTOR 1.00
All results reported in micrograms/Liter

COMPOUND	RESULT	DET LIMIT	COMPOUND	RESULT	DET LIMIT
Chloromethane	U	10	Bromodichloromethane	U	5.0
Vinyl Chloride	U	10	2-Chloroethyl Vinyl Ether	U	5.0
Bromomethane	U	10	4-Methyl-2-pentanone	U	10
Chloroethane	U	10	cis-1,3-Dichloropropene	U	5.0
Trichlorofluoromethane	U	5.0	Toluene	U	5.0
Acetone	U	10	trans-1,3-Dichloropropene	U	5.0
1,1-Dichloroethene	U	5.0	1,1,2-Trichloroethane	U	5.0
Carbon Disulfide	U	5.0	2-Hexanone	U	10
Methylene Chloride	U	5.0	Tetrachloroethene	U	5.0
1,2-Dichloroethene (total)	U	5.0	Dibromochloromethane	U	5.0
1,1-Dichloroethane	U	5.0	Chlorobenzene	U	5.0
Vinyl Acetate	U	10	Ethylbenzene	U	5.0
2-Butanone	U	10	m and p-Xylene	U	5.0
Chloroform	U	5.0	o-Xylene	U	5.0
1,1,1-Trichloroethane	U	5.0	Styrene	U	5.0
Carbon Tetrachloride	U	5.0	Bromoform	U	5.0
Benzene	U	5.0	1,1,2,2-Tetrachloroethane	U	5.0
1,2-Dichloroethane	U	5.0	1,3-Dichlorobenzene	U	5.0
Trichloroethene	U	5.0	1,4-Dichlorobenzene	U	5.0
1,2-Dichloropropane	U	5.0	1,2-Dichlorobenzene	U	5.0

SURROGATE STANDARDS

	RESULT	LEVEL	% RECOVERY
1,2-Dichloroethane-D4	58	50	115
Toluene-D8	58	50	116
1-Bromo-4-fluorobenzene	57	50	115

NOTES AND DEFINITIONS FOR THIS REPORT
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-1 Lab No: 01C
Test Description: RCRA Metals in Water Method: SW846 Test Code: RC_MET
Collected: 10/12/95 11:00 Category: WATER

	METAL	RESULT	DETECTION LIMIT		METAL	RESULT	DETECTION LIMIT
Ag	Silver	U	10	As	Arsenic	83.1	5.0
Ba	Barium	255	10	Pb	Lead	57.7	5.0
Cd	Cadmium	U	5.0	Se	Selenium	U	5.0
Cr	Chromium	75.9	20	Hg	Mercury	U	0.20

NOTES AND DEFINITIONS FOR THIS REPORT
All results reported in micrograms/Lit
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-2 Lab No: 02A
Test Description: Volatile Organics-Aqueous Method: EPA_8240 Test Code: VOA_W
Collected: 10/12/94 11:00 Category: WATER

DATE INJECTED 10/19/95 DILUTION FACTOR 1.00
All results reported in micrograms/Liter

COMPOUND	RESULT	DET LIMIT	COMPOUND	RESULT	DET LIMIT
Chloromethane	U	10	Bromodichloromethane	U	5.0
Vinyl Chloride	U	10	2-Chloroethyl Vinyl Ether	U	5.0
Bromomethane	U	10	4-Methyl-2-pentanone	U	10
Chloroethane	U	10	cis-1,3-Dichloropropene	U	5.0
Trichlorofluoromethane	U	5.0	Toluene	U	5.0
Acetone	U	10	trans-1,3-Dichloropropene	U	5.0
1,1-Dichloroethene	U	5.0	1,1,2-Trichloroethane	U	5.0
Carbon Disulfide	U	5.0	2-Hexanone	U	10
Methylene Chloride	6.7	5.0	Tetrachloroethene	U	5.0
1,2-Dichloroethene (total)	6.1	5.0	Dibromochloromethane	U	5.0
1,1-Dichloroethane	U	5.0	Chlorobenzene	14	5.0
Vinyl Acetate	U	10	Ethylbenzene	U	5.0
2-Butanone	U	10	m and p-Xylene	U	5.0
Chloroform	U	5.0	o-Xylene	U	5.0
1,1,1-Trichloroethane	U	5.0	Styrene	U	5.0
Carbon Tetrachloride	U	5.0	Bromoform	U	5.0
Benzene	U	5.0	1,1,2,2-Tetrachloroethane	U	5.0
1,2-Dichloroethane	U	5.0	1,3-Dichlorobenzene	U	5.0
Trichloroethene	21	5.0	1,4-Dichlorobenzene	7.1	5.0
1,2-Dichloropropane	U	5.0	1,2-Dichlorobenzene	U	5.0

SURROGATE STANDARDS

	RESULT	LEVEL	% RECOVERY
1,2-Dichloroethane-D4	54	50	109
Toluene-D8	49	50	99
1-Bromo-4-fluorobenzene	53	50	106

NOTES AND DEFINITIONS FOR THIS REPORT
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-2 Lab No: 02C
Test Description: RCRA Metals in Water Method: SW846 Test Code: RC_MET
Collected: 10/12/94 11:00 Category: WATER

	METAL	RESULT	DETECTION LIMIT		METAL	RESULT	DETECTION LIMIT
Ag	Silver	14.7	10	As	Arsenic	86.0	5.0
Ba	Barium	502	10	Pb	Lead	108	5.0
Cd	Cadmium	U	5.0	Se	Selenium	U	5.0
Cr	Chromium	4090	20	Hg	Mercury	0.38	0.20

NOTES AND DEFINITIONS FOR THIS REPORT
All results reported in micrograms/Lit
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-3 Lab No: 03A
Test Description: Volatile Organics-Aqueous Method: EPA_8240 Test Code: VOA_W
Collected: 10/12/95 11:00 Category: WATER

DATE INJECTED 10/20/95 DILUTION FACTOR 1.00
All results reported in micrograms/Liter

COMPOUND	RESULT	DET LIMIT	COMPOUND	RESULT	DET LIMIT
Chloromethane	U	10	Bromodichloromethane	U	5.0
Vinyl Chloride	U	10	2-Chloroethyl Vinyl Ether	U	5.0
Bromomethane	U	10	4-Methyl-2-pentanone	U	10
Chloroethane	U	10	cis-1,3-Dichloropropene	U	5.0
Trichlorofluoromethane	U	5.0	Toluene	U	5.0
Acetone	U	10	trans-1,3-Dichloropropene	U	5.0
1,1-Dichloroethene	U	5.0	1,1,2-Trichloroethane	U	5.0
Carbon Disulfide	U	5.0	2-Hexanone	U	10
Methylene Chloride	12	5.0	Tetrachloroethene	U	5.0
1,2-Dichloroethene (total)	U	5.0	Dibromochloromethane	U	5.0
1,1-Dichloroethane	U	5.0	Chlorobenzene	U	5.0
Vinyl Acetate	U	10	Ethylbenzene	U	5.0
2-Butanone	U	10	m and p-Xylene	U	5.0
Chloroform	U	5.0	o-Xylene	U	5.0
1,1,1-Trichloroethane	U	5.0	Styrene	U	5.0
Carbon Tetrachloride	U	5.0	Bromoform	U	5.0
Benzene	U	5.0	1,1,2,2-Tetrachloroethane	U	5.0
1,2-Dichloroethane	U	5.0	1,3-Dichlorobenzene	U	5.0
Trichloroethene	U	5.0	1,4-Dichlorobenzene	U	5.0
1,2-Dichloropropane	U	5.0	1,2-Dichlorobenzene	U	5.0

SURROGATE STANDARDS

	RESULT	LEVEL	% RECOVERY
1,2-Dichloroethane-D4	60	50	120
Toluene-D8	58	50	115
1-Bromo-4-fluorobenzene	59	50	118

NOTES AND DEFINITIONS FOR THIS REPORT
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-3 Lab No: 03C
Test Description: RCRA Metals in Water Method: SW846 Test Code: RC_MET
Collected: 10/12/95 11:00 Category: WATER

	METAL	RESULT	DETECTION LIMIT		METAL	RESULT	DETECTION LIMIT
Ag	Silver	U	10	As	Arsenic	U	5.0
Ba	Barium	43.5	10	Pb	Lead	41.6	5.0
Cd	Cadmium	U	5.0	Se	Selenium	U	5.0
Cr	Chromium	201	20	Hg	Mercury	U	0.20

NOTES AND DEFINITIONS FOR THIS REPORT
All results reported in micrograms/Lit
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3882

Sample Description: MW-5 Lab No: 04A
Test Description: Volatile Organics-Aqueous Method: EPA_8240 Test Code: VOA_W
Collected: 10/12/95 11:00 Category: WATER

DATE INJECTED 10/20/95 DILUTION FACTOR 1.00
All results reported in micrograms/Liter

COMPOUND	RESULT	DET LIMIT	COMPOUND	RESULT	DET LIMIT
Chloromethane	U	10	Bromodichloromethane	U	5.0
Vinyl Chloride	U	10	2-Chloroethyl Vinyl Ether	U	5.0
Bromomethane	U	10	4-Methyl-2-pentanone	U	10
Chloroethane	U	10	cis-1,3-Dichloropropene	U	5.0
Trichlorofluoromethane	U	5.0	Toluene	U	5.0
Acetone	U	10	trans-1,3-Dichloropropene	U	5.0
1,1-Dichloroethene	U	5.0	1,1,2-Trichloroethane	U	5.0
Carbon Disulfide	U	5.0	2-Hexanone	U	10
Methylene Chloride	11	5.0	Tetrachloroethene	11	5.0
1,2-Dichloroethene (total)	8.2	5.0	Dibromochloromethane	U	5.0
1,1-Dichloroethane	U	5.0	Chlorobenzene	U	5.0
Vinyl Acetate	U	10	Ethylbenzene	U	5.0
2-Butanone	U	10	m and p-Xylene	U	5.0
Chloroform	U	5.0	o-Xylene	U	5.0
1,1,1-Trichloroethane	U	5.0	Styrene	U	5.0
Carbon Tetrachloride	U	5.0	Bromoform	U	5.0
Benzene	U	5.0	1,1,2,2-Tetrachloroethane	U	5.0
1,2-Dichloroethane	U	5.0	1,3-Dichlorobenzene	U	5.0
Trichloroethene	5.6	5.0	1,4-Dichlorobenzene	U	5.0
1,2-Dichloropropane	U	5.0	1,2-Dichlorobenzene	U	5.0

SURROGATE STANDARDS

	RESULT	LEVEL	% RECOVERY
1,2-Dichloroethane-D4	60	50	120
Toluene-D8	57	50	114
1-Bromo-4-fluorobenzene	59	50	118

NOTES AND DEFINITIONS FOR THIS REPORT
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-5 Lab No: 04C
Test Description: RCRA Metals in Water Method: SW846 Test Code: RC_MET
Collected: 10/12/95 11:00 Category: WATER

	METAL	RESULT	DETECTION LIMIT		METAL	RESULT	DETECTION LIMIT
Ag	Silver	U	10	As	Arsenic	87.8	5.0
Ba	Barium	795	10	Pb	Lead	38.2	5.0
Cd	Cadmium	U	5.0	Se	Selenium	U	5.0
Cr	Chromium	221	20	Hg	Mercury	U	0.20

NOTES AND DEFINITIONS FOR THIS REPORT
All results reported in micrograms/Lit
U = Undetected at stated detection limit

TMA
Thermo Analytical
300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-7 Lab No: 05A
Test Description: Volatile Organics-Aqueous Method: EPA_8240 Test Code: VOA_W
Collected: 10/12/95 11:00 Category: WATER

DATE INJECTED 10/20/95 DILUTION FACTOR 1.00
All results reported in micrograms/Liter

COMPOUND	RESULT	DET LIMIT	COMPOUND	RESULT	DET LIMIT
Chloromethane	U	10	Bromodichloromethane	U	5.0
Vinyl Chloride	U	10	2-Chloroethyl Vinyl Ether	U	5.0
Bromomethane	U	10	4-Methyl-2-pentanone	U	10
Chloroethane	U	10	cis-1,3-Dichloropropene	U	5.0
Trichlorofluoromethane	U	5.0	Toluene	U	5.0
Acetone	U	10	trans-1,3-Dichloropropene	U	5.0
1,1-Dichloroethene	U	5.0	1,1,2-Trichloroethane	U	5.0
Carbon Disulfide	U	5.0	2-Hexanone	U	10
Methylene Chloride	12	5.0	Tetrachloroethene	51	5.0
1,2-Dichloroethene (total)	71	5.0	Dibromochloromethane	U	5.0
1,1-Dichloroethane	U	5.0	Chlorobenzene	U	5.0
Vinyl Acetate	U	10	Ethylbenzene	U	5.0
2-Butanone	U	10	m and p-Xylene	U	5.0
Chloroform	U	5.0	o-Xylene	U	5.0
1,1,1-Trichloroethane	U	5.0	Styrene	U	5.0
Carbon Tetrachloride	U	5.0	Bromoform	U	5.0
Benzene	U	5.0	1,1,2,2-Tetrachloroethane	U	5.0
1,2-Dichloroethane	U	5.0	1,3-Dichlorobenzene	U	5.0
Trichloroethene	9.7	5.0	1,4-Dichlorobenzene	U	5.0
1,2-Dichloropropane	U	5.0	1,2-Dichlorobenzene	U	5.0

SURROGATE STANDARDS

	RESULT	LEVEL	% RECOVERY
1,2-Dichloroethane-D4	60	50	120
Toluene-D8	57	50	113
1-Bromo-4-fluorobenzene	58	50	116

NOTES AND DEFINITIONS FOR THIS REPORT
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-7 Lab No: 05C
Test Description: RCRA Metals in Water Method: SW846 Test Code: RC_MET
Collected: 10/12/95 11:00 Category: WATER

	METAL	RESULT	DETECTION LIMIT		METAL	RESULT	DETECTION LIMIT
Ag	Silver	U	10	As	Arsenic	15.5	5.0
Ba	Barium	870	10	Pb	Lead	11.4	5.0
Cd	Cadmium	U	5.0	Se	Selenium	U	5.0
Cr	Chromium	21.2	20	Hg	Mercury	U	0.20

NOTES AND DEFINITIONS FOR THIS REPORT
All results reported in micrograms/Lit
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-9 Lab No: 06A
Test Description: Volatile Organics-Aqueous Method: EPA_8240 Test Code: VOA_W
Collected: 10/12/95 11:00 Category: WATER

DATE INJECTED 10/20/95 DILUTION FACTOR 1.00
All results reported in micrograms/Liter

COMPOUND	RESULT	DET LIMIT	COMPOUND	RESULT	DET LIMIT
Chloromethane	U	10	Bromodichloromethane	U	5.0
Vinyl Chloride	U	10	2-Chloroethyl Vinyl Ether	U	5.0
Bromomethane	U	10	4-Methyl-2-pentanone	U	10
Chloroethane	U	10	cis-1,3-Dichloropropene	U	5.0
Trichlorofluoromethane	U	5.0	Toluene	U	5.0
Acetone	U	10	trans-1,3-Dichloropropene	U	5.0
1,1-Dichloroethene	U	5.0	1,1,2-Trichloroethane	U	5.0
Carbon Disulfide	U	5.0	2-Hexanone	U	10
Methylene Chloride	11	5.0	Tetrachloroethene	U	5.0
1,2-Dichloroethene (total)	U	5.0	Dibromochloromethane	U	5.0
1,1-Dichloroethane	U	5.0	Chlorobenzene	U	5.0
Vinyl Acetate	U	10	Ethylbenzene	U	5.0
2-Butanone	U	10	m and p-Xylene	U	5.0
Chloroform	12	5.0	o-Xylene	U	5.0
1,1,1-Trichloroethane	U	5.0	Styrene	U	5.0
Carbon Tetrachloride	U	5.0	Bromoform	U	5.0
Benzene	U	5.0	1,1,2,2-Tetrachloroethane	U	5.0
1,2-Dichloroethane	U	5.0	1,3-Dichlorobenzene	U	5.0
Trichloroethene	U	5.0	1,4-Dichlorobenzene	U	5.0
1,2-Dichloropropane	U	5.0	1,2-Dichlorobenzene	U	5.0

SURROGATE STANDARDS

	RESULT	LEVEL	% RECOVERY
1,2-Dichloroethane-D4	60	50	120
Toluene-D8	57	50	113
1-Bromo-4-fluorobenzene	59	50	119

NOTES AND DEFINITIONS FOR THIS REPORT
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-9 Lab No: 06C
Test Description: RCRA Metals in Water Method: SW846 Test Code: RC_MET
Collected: 10/12/95 11:00 Category: WATER

	METAL	RESULT	DETECTION LIMIT		METAL	RESULT	DETECTION LIMIT
Ag	Silver	U	10	As	Arsenic	13.3	5.0
Ba	Barium	395	10	Pb	Lead	13.6	5.0
Cd	Cadmium	U	5.0	Se	Selenium	U	5.0
Cr	Chromium	21.2	20	Hg	Mercury	U	0.20

NOTES AND DEFINITIONS FOR THIS REPORT
All results reported in micrograms/Lit
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-12 Lab No: 07A
Test Description: Volatile Organics-Aqueous Method: EPA_8240 Test Code: VOA_W
Collected: 10/12/95 02:30 Category: WATER

DATE INJECTED 10/20/95 DILUTION FACTOR 1.00
All results reported in micrograms/Liter

COMPOUND	RESULT	DET LIMIT	COMPOUND	RESULT	DET LIMIT
Chloromethane	U	10	Bromodichloromethane	U	5.0
Vinyl Chloride	17	10	2-Chloroethyl Vinyl Ether	U	5.0
Bromomethane	U	10	4-Methyl-2-pentanone	U	10
Chloroethane	U	10	cis-1,3-Dichloropropene	U	5.0
Trichlorofluoromethane	U	5.0	Toluene	U	5.0
Acetone	U	10	trans-1,3-Dichloropropene	U	5.0
1,1-Dichloroethene	U	5.0	1,1,2-Trichloroethane	U	5.0
Carbon Disulfide	U	5.0	2-Hexanone	U	10
Methylene Chloride	11	5.0	Tetrachloroethene	75	5.0
1,2-Dichloroethene (total)	700	50	Dibromochloromethane	U	5.0
1,1-Dichloroethane	7.3	5.0	Chlorobenzene	U	5.0
Vinyl Acetate	U	10	Ethylbenzene	U	5.0
2-Butanone	U	10	m and p-Xylene	U	5.0
Chloroform	16	5.0	o-Xylene	U	5.0
1,1,1-Trichloroethane	6.7	5.0	Styrene	U	5.0
Carbon Tetrachloride	U	5.0	Bromoform	U	5.0
Benzene	U	5.0	1,1,2,2-Tetrachloroethane	U	5.0
1,2-Dichloroethane	U	5.0	1,3-Dichlorobenzene	U	5.0
Trichloroethene	1700	50	1,4-Dichlorobenzene	U	5.0
1,2-Dichloropropane	U	5.0	1,2-Dichlorobenzene	U	5.0

SURROGATE STANDARDS

	RESULT	LEVEL	% RECOVERY
1,2-Dichloroethane-D4	60	50	120
Toluene-D8	57	50	114
1-Bromo-4-fluorobenzene	59	50	118

NOTES AND DEFINITIONS FOR THIS REPORT
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Sample Description: MW-12 Lab No: 07C
Test Description: RCRA Metals in Water Method: SW846 Test Code: RC_MET
Collected: 10/12/95 02:30 Category: WATER

	METAL	RESULT	DETECTION LIMIT		METAL	RESULT	DETECTION LIMIT
Ag	Silver	U	10	As	Arsenic	47.2	5.0
Ba	Barium	688	10	Pb	Lead	90.5	5.0
Cd	Cadmium	17.7	5.0	Se	Selenium	U	5.0
Cr	Chromium	5870	20	Hg	Mercury	0.52	0.20

NOTES AND DEFINITIONS FOR THIS REPORT
All results reported in micrograms/Lit
U = Undetected at stated detection limit

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

Hex Chromium-Chelat/AA Minimum: Maximum:
Method: EPA600 218.4

Samp	Sample Description	Result	Units	Limit	Prepared	Analyzed	By
01D	MW-1	U	ug/L	10.0	10/13/95	10/13/95	SRP
02D	MW-2	U	ug/L	10.0	10/13/95	10/13/95	SRP
03D	MW-3	U	ug/L	10.0	10/13/95	10/13/95	SRP
04D	MW-5	U	ug/L	10.0	10/13/95	10/13/95	SRP
05D	MW-7	U	ug/L	10.0	10/13/95	10/13/95	SRP
06D	MW-9	U	ug/L	10.0	10/13/95	10/13/95	SRP
07D	MW-12	U	ug/L	10.0	10/13/95	10/13/95	SRP

300 Second Avenue, P.O. Box 521, Waltham, Massachusetts 02254-0521 (617) 890-7200 1-800-4LAB TEST Fax: (617) 890-3883

EPA-600/4-79-020 - Chromium, Hexavalent - Atomic Absorption, chelation-extraction Method 218.4

USEPA Test Methods for Evaluating Solid Wastes (SW846, Third Edition) Method 7470 - Preparation of water for mercury analysis.

USEPA Test Methods for Evaluating Solid Wastes (SW846, Third Edition) Method 3010 - Acid digestion of aqueous samples and extracts for total metals for analysis by Flame Atomic Absorption Spectroscopy or Inductively Coupled Plasma Spectroscopy

Volatile Organics in Water - Hazardous Substance List

SW846 Method 8240 - Modified

"Test Methods for Evaluating Solid Waste", SW-846, US EPA, Office of Solid Waste and Emergency Response, Washington; 3rd Edition.

Aqueous samples are analyzed in accordance with Method 8240 using a purge and trap technique followed by Gas Chromatography/Mass Spectroscopy.

Quality assurance procedures for GCMS include daily tuning and calibration of the mass spectrometer and the use of surrogate standards in each sample to monitor method performance. Quantitation is performed by the internal standard method. Analysis of blanks, duplicate samples and standards are run frequently as further quality assurance procedures.

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As a precaution, the laboratory screened the volatiles samples using method 8240 rather than the quoted method 524.2. This is an effective laboratory practice for groundwater monitoring well samples for which the lab has no historical sample data. Some of target compound results warranted reporting of results from the 8240 analysis because of the larger calibration range found in the method.

Sample MW-7 was analyzed neat and at a 10X dilution to bring the target analytes within the calibration range. Results are reported from both analyses and the detection limits are adjusted accordingly.

TMA
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TMA
Thermo Analytical

Chain of Custody Record

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300 Second Avenue, P.O. Box 521 • Waltham MA 02254-0521 • (617) 890-7200 Fax: (617) 890-3883 DATE _____ PAGE ___ OF ___

CLIENT GEC
ADDRESS 15 PACELLA PK DR
RANDOLPH MA
02368
Project Name JAMECO
Sampler (Signature)

Sample No.	Date	Time	COMP.	GRAB	Location	Parameters: BTEX 524	Parameters: Total RCRA 8	Parameters: Hex Chrome	Other: Iced	Other: Filtered	Other: Preservative	Sample Type	NUMBER OF CONTAINERS	Observations/ Comments
MW-1	10/12	11:00		X		X	X	X	X		X	GW	4	524 w/ HCl PRES Hex Cr w/ HNO_3
MW-2				X							X			
MW-3				X							X			
MW-5				X							X			
MW-7				X							X			
MW-9				X							X			
MW-902		2:30		X							X			
													28	TOTAL NUMBER OF CONTAINERS

RELINQUISHED BY	DATE	RECEIVED BY	DATE	RELINQUISHED BY	DATE	RECEIVED BY	DATE	METHOD OF SHIPMENT
Signature		Signature		Signature		Signature		FED EX
Printed Name	TIME	Printed Name	TIME	Printed Name	TIME	Printed Name	TIME	
Company		Company		Company		Company		SPECIAL SHIPMENT/HANDLING OR STORAGE REQUIREMENTS
RELINQUISHED BY	DATE	RECEIVED BY	DATE	RELINQUISHED BY	DATE	RECEIVED BY (Laboratory)	DATE	
Signature		Signature		Signature		J. Dubuque	10/13/10	
Printed Name	TIME	Printed Name	TIME	Printed Name	TIME	J. DePaolo	9:30	
Company		Company		Company		Thermo Analytical		