PROJECT NUMBER 444-010-95

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

May 31, 1995

Prepared For:

New York State Department
of Environmental Conservation

and

Camille Gagnon
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P.O. Box 6431
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GEC **Goldman** *Environmental Consultants, Inc.*
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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, 1995 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 April 19, 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 and 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 National Environmental Testing (NET), a New York State certified laboratory in Bedford, 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. In addition, wells MW-10, MW-11 and MW-12, are located inside the building and surveying within the building was not possible at the time of the visit.

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 524.2), hexavalent chrome (via Colorimetric, 307-B Methods) and 13 Priority Pollutant 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 in August, 1994. 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 July 1995.

5.0 Warranty

The conclusions contained in this report are based on the information readily available to GEC as of May 16, 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:

Samuel W. Butcher
Senior Project Manager

Reviewed By:

Gary W. Siegel, P.E.
Vice President,
Environmental Engineering

TABLES

GROUNDWATER ELEVATION MEASUREMENTS

Jameco Industries, Inc.
248 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	90.2
1/26/95		11.08	101.47	90.39
4/19/95		11.15	101.47	90.32
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		10.9	100	89.10
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
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
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
MW-6				
10/4/94	6.00 to 16.00	9.86	Not Found	N.A.
1/26/95		Not Found	Not Found	N.A.
4/19/95		Not Found	Not Found	N.A.
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
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
MW-9				
10/4/94	10.57 to 20.57	8.90	97.8	88.9
1/26/95		8.68	97.80	89.12
4/19/95		8.88	97.80	88.92
MW-10				
10/4/94	86.7 to 96.7	11.14	Unknown	N.A.
1/26/95		10.53	Unknown	N.A.
4/19/95		10.72	Unknown	N.A.
MW-11				
10/4/94	50.0 to 60.0	10.77	Unknown	N.A.
1/26/95		10.54	Unknown	N.A.
4/19/95		10.66	Unknown	N.A.
MW-12				
10/4/94	5.35 to 15.35	11.79	Unknown	N.A.
1/26/95		10.51	Unknown	N.A.
4/19/95		10.66	Unknown	N.A.
MW-13*				
10/4/94		10.00/10.25	99.67	89.64
1/26/95		9.85/9.86	99.67	89.82
4/19/95		10.02/10.01	99.67	89.65

* Previously referred to as "Mystery Well"

Prepared by SB Reviewed by SB Revised 1/27/95

Table 2
Summary of Groundwater Analyses for Volatile Organic Compounds (VOC)
Watts Co., Wyandanch, New York
(units, 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	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	ND	ND	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	7	ND	ND	ND	11	ND	ND	ND	ND	ND
5/23/94	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	ND	NA	0.2	NA	ND	ND	ND	30	ND	ND	ND	ND	NA
1/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	ND	0.6	ND	ND	ND	ND	NA
4/19/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	NA	0.3	ND	ND	0.6	ND	ND	ND	ND	ND
MW-2																								
6/91	ND	ND	ND	5	ND	ND	ND	ND	ND	ND	ND	82	ND	ND	ND	ND	1500	ND	12	ND	5400	ND	ND	ND
5/23/94	ND	ND	ND	6	ND	ND	ND	ND	4	0.6	510	8	NA	0.3	NA	ND	28	ND	4	0.4	1200	0.2	12.00	NA
1/27/95	ND	ND	4	ND	ND	ND	ND	ND	ND	ND	280	ND	NA	ND	NA	ND	26	ND	ND	ND	180	ND	33.00	NA
4/19/95	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	55	ND	ND	ND	NA	ND	11	ND	ND	ND	46	ND	6.00	ND
MW-3																								
6/91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	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	NA	0.2	NA	ND	ND	ND	ND	ND	10	ND	ND	NA
1/27/95	ND	ND	ND	ND	ND	ND	0.32	ND	ND	ND	2	ND	NA	ND	NA	ND	ND	ND	ND	ND	4	ND	ND	NA
4/19/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	83	ND	ND	ND	NA	ND	25	ND	ND	ND	170	ND	ND	ND
MW-5																								
6/91	17	ND	34	ND	ND	ND	ND	ND	ND	ND	ND	5	2	6	46	ND	30	14.00	30	ND	17	ND	ND	5
5/23/94	ND	ND	0.2	ND	ND	0.5	0.4	0.6	0.7	ND	49	0.3	NA	0.3	NA	ND	9	0.90	0.2	ND	14	ND	5.00	NA
1/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	NA	ND	NA	ND	5	ND	ND	ND	5	ND	0.50	NA
4/19/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2	ND	ND	ND	NA	ND	4	ND	ND	ND	5	ND	ND	ND
MW-7																								
6/91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	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	NA	0.3	NA	ND	30	ND	ND	ND	4	ND	ND	NA
1/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35	ND	NA	ND	NA	ND	39	ND	ND	ND	3	ND	ND	NA
4/19/95	ND	0.5	ND	0.8	0.5	ND	ND	ND	ND	ND	2	ND	ND	ND	NA	ND	15	ND	ND	ND	0.6	ND	ND	ND
MW-9																								
6/91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	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	NA	ND	NA	ND	2	ND	ND	ND	0.3	ND	ND	NA
1/27/95	ND	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	190	NA	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	NA
4/19/95	ND	1	ND	34	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-12																								
6/91	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	44	ND	ND	ND	ND	ND	ND	ND
5/23/94	NA	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1/27/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1300	ND	NA	370	NA	ND	120	ND	ND	ND	3300	ND	ND	NA
4/19/95	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	650	12	ND	ND	NA	ND	400	ND	ND	ND	1500	ND	58	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.

** No guidance value exists

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.

Prepared by: PT
Reviewed by: AA
Last Revised 5/31/95

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
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
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
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
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
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
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
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)

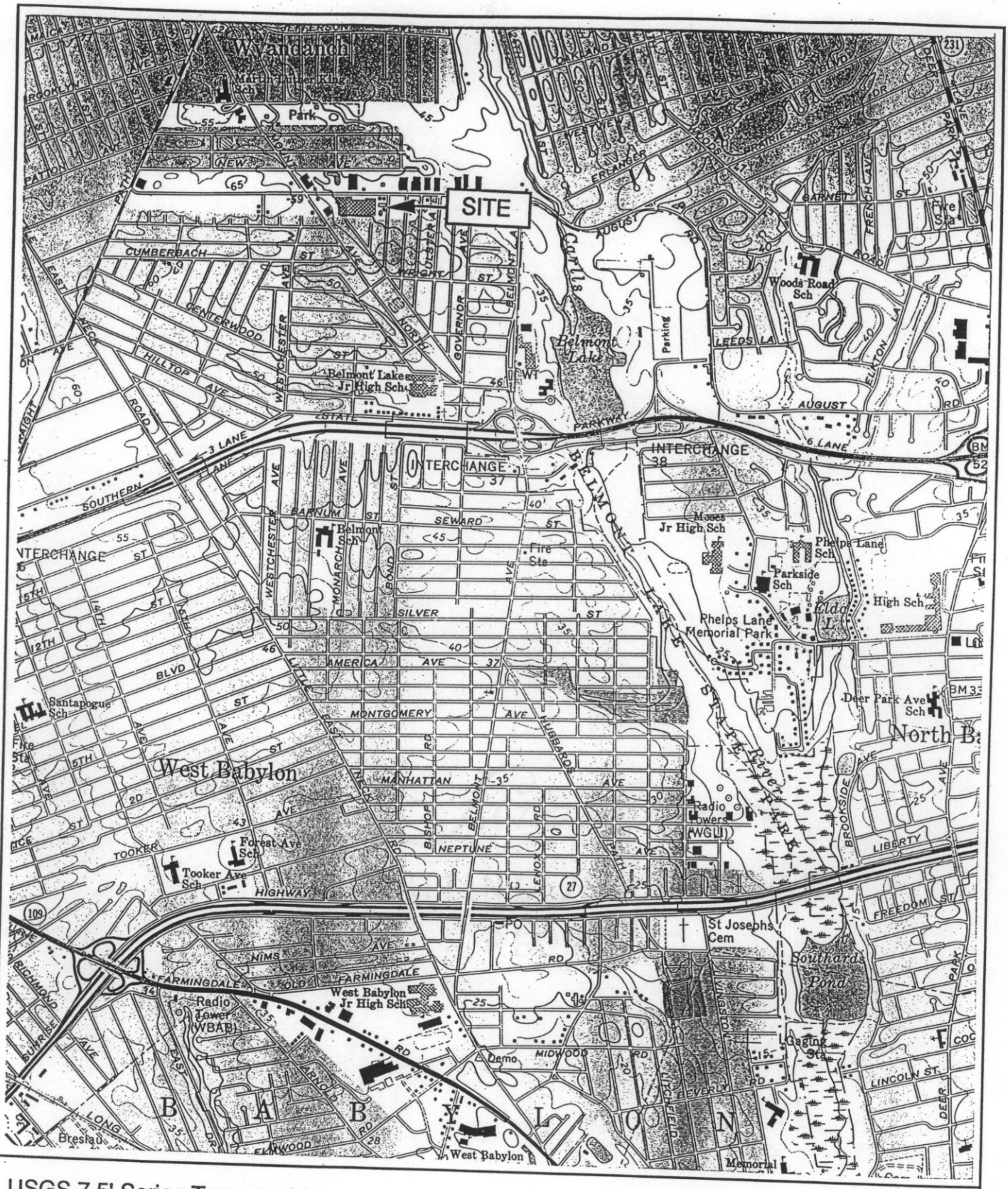
** refers to a Guidance value where no Standard exists

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

MDL - Ranged from 0.00020 ppm to 0.2 ppm depending on analysis and element.

Prepared by: PT
Reviewed by: AA
Last Revised 5/31/95

FIGURES



USGS 7.5' Series Topographic

BAY SHORE WEST, N.Y. Quadrangle

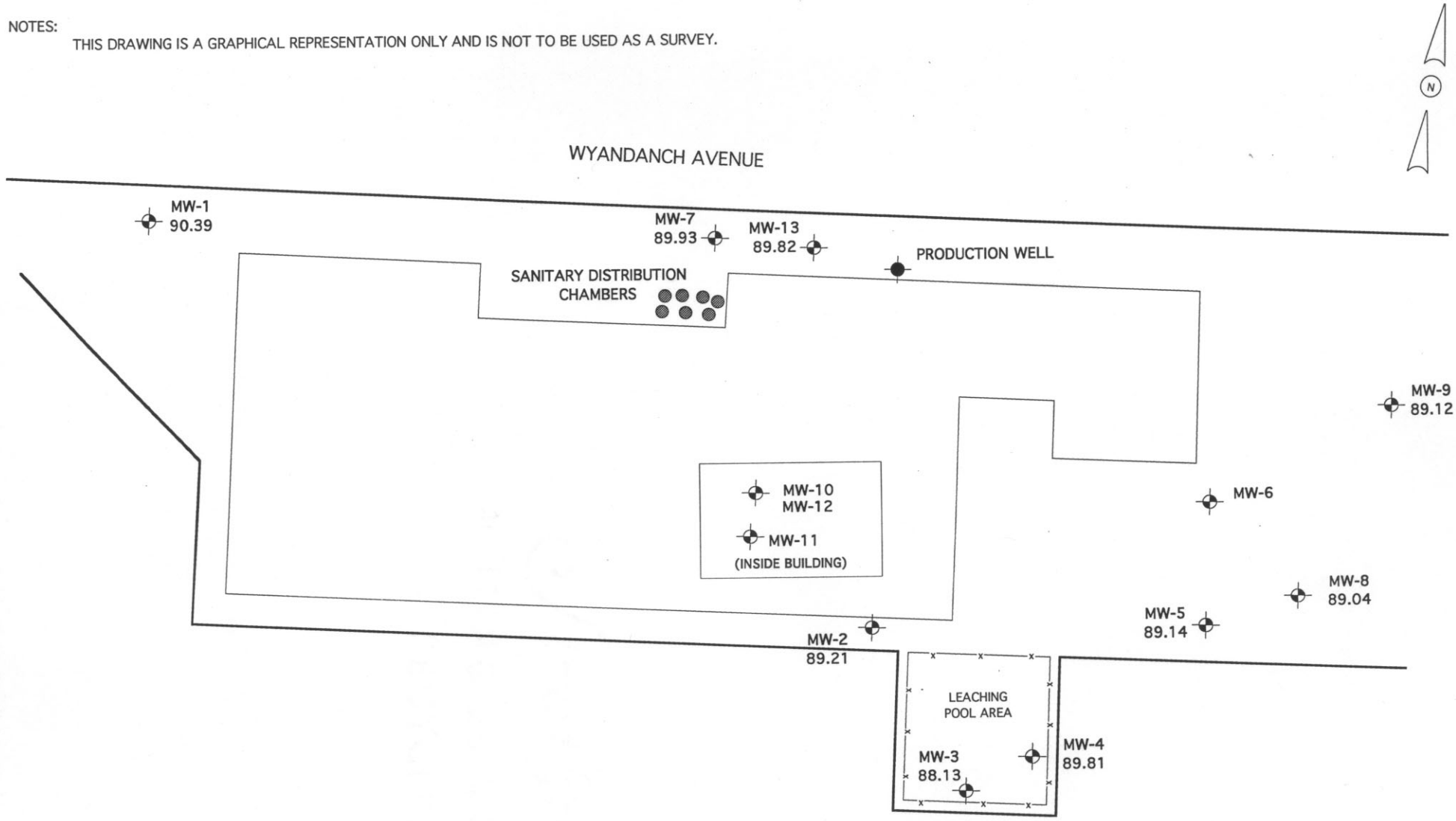
GEC Goldman Environmental Consultants, Inc.
15 Pacella Park Drive
Randolph, MA 02368
(617) 961-1200 or (800) 446-2014

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: JANUARY 27, 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

ANALYTICAL REPORT

Report To: Sam Butcher
Goldman Env. Const. Co.
15 Pacella Park Drive
Randolph, MA 02368

Project: JAMECO Monitoring

05/11/1995

NET Job Number: 95.01442

National Environmental Testing

NET Atlantic, Inc.
Cambridge Division
12 Oak Park
Bedford, MA 01730

Massachusetts Certification Number
M MA023

NET Cambridge Division

ANALYTICAL REPORT

Report To:	Reported By:
Sam Butcher Goldman Env. Const. Co. 15 Pacella Park Drive Randolph, MA 02368	National Environmental Testing NET Atlantic, Incorporated Cambridge Division 12 Oak Park Bedford, MA 01730

Report Date: 05/11/1995 NET Job Number: 95.01442

Project: JAMECO Monitoring NET Client No: 39500

P.O. No: 444-006-94 Collected By: CLIENT Shipped Via: AIRBORNE

Job Description: NY 524.2, PPMets, CR+6 Airbill No: 2933212940

This report has been approved and certified for release by the following staff. Please feel free to call the NET Project Manager at 617-275-3535 with any questions or comments.

Alison P. Darrow
NET Project Manager

Report prepared by
NET Reports Group

Analytical data for the following samples are included in this data report.

SAMPLE ID	NET ID	DATE TAKEN	TIME TAKEN	DATE REC'D	MATRIX
MW-1	122300	04/19/1995	11:45	04/20/1995	GROUND WATER
MW-2	122301	04/19/1995	13:30	04/20/1995	GROUND WATER
MW-3	122302	04/19/1995	13:30	04/20/1995	GROUND WATER
MW-5	122303	04/19/1995	13:00	04/20/1995	GROUND WATER
MW-7	122304	04/19/1995	13:00	04/20/1995	GROUND WATER
MW-9	122305	04/19/1995	13:00	04/20/1995	GROUND WATER
MW-12	122306	04/19/1995	14:30	04/20/1995	GROUND WATER

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-1

NET Sample No: 122300

Parameter	Method	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Colorimet. Hexaval. ChromiumAQ	APHA 307B (14th Ed., 19	<0.015	mg/L	04/20/1995	1015HC	390	gmp
Metal Priority Pollutants, AQ	EPA 200 series	COMPLETE		04/23/1995		125	ecw
Aqueous Digestion EPA200 AQ	EPA 200 mod	04/26/1995	date	04/26/1995	5727cw		gsw
Aqueous Digestion GFAA EPA AQ	EPA 200 mod	04/26/1995		04/26/1995	5727cw		gsw
Antimony (Sb) 200 ICP AQ	EPA 200 ICP, 200.7	<0.10	mg/L	05/02/1995	5727cw	361	gmp
Arsenic (As) 200 GFAA AQ	EPA 200 furnace, 200mod	0.035	mg/L	05/02/1995	5727cw	217	mwt
Beryllium (Be) 200 ICP AQ	EPA 200 ICP, 200.7mod.	<0.0050	mg/L	04/27/1995		351	gmp
Cadmium (Cd) 200 ICP AQ	EPA 200 ICP, 200.7mod.	0.0061	mg/L	04/27/1995		523	gmp
Chromium (Cr) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	0.040	mg/L	04/27/1995		502	gmp
Copper (Cu) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	0.054	mg/L	04/27/1995		529	gmp
Lead (Pb) 200 GFAA AQ	EPA 200 furnace, 200 mo	0.044	mg/L	05/01/1995		232	mwt
Mercury (Hg) 200 CVAA AQ	EPA 200 cold vapor, 245	<0.00020	mg/L	05/03/1995	5727cw	494	drm
Nickel (Ni) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	<0.040	mg/L	04/27/1995		478	gmp
Selenium (Se) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.0050	mg/L	05/03/1995	5727cw	160	mwt
Silver (Ag) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	<0.010	mg/L	04/27/1995		478	gmp
Thallium (Tl) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.010	mg/L	05/02/1995	5727cw	129	mwt
Zinc (Zn) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	0.16	mg/L	04/27/1995		530	gmp

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-1

NET Sample No: 122300

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Volatiles by GC/MS 524.2 AQ						
Benzene	<0.2	ug/L	05/03/1995		241	bel
Bromobenzene	<0.4	ug/L				
Bromochloromethane	<0.3	ug/L				
Bromodichloromethane	<0.4	ug/L				
Bromoform	<0.3	ug/L				
Bromomethane	<0.3	ug/L				
n-Butylbenzene	<0.4	ug/L				
sec-Butylbenzene	<0.2	ug/L				
tert-Butylbenzene	<0.3	ug/L				
Carbon Tetrachloride	<0.6	ug/L				
Chlorobenzene	<0.2	ug/L				
Chloroethane	<0.4	ug/L				
Chloroform	<0.7	ug/L				
Chloromethane	<0.5	ug/L				
2-Chlorotoluene	<0.4	ug/L				
4-Chlorotoluene	<0.3	ug/L				
1,2-Dibromo-3-chloropropane	<0.8	ug/L				
Dibromochloromethane	<0.3	ug/L				
1,2-Dibromoethane (EDB)	<0.3	ug/L				
Dibromomethane	<0.3	ug/L				
1,2-Dichlorobenzene	<0.4	ug/L				
1,3-Dichlorobenzene	<0.2	ug/L				
1,4-Dichlorobenzene	<0.5	ug/L				
Dichlorodifluoromethane	<1.5	ug/L				
1,1-Dichloroethane	<0.3	ug/L				
1,2-Dichloroethane	<0.7	ug/L				
1,1-Dichloroethene	<1.3	ug/L				
cis-1,2-Dichloroethene	<0.4	ug/L				
trans-1,2-Dichloroethene	<0.2	ug/L				
1,2-Dichloropropane	<0.3	ug/L				
1,3-Dichloropropane	<0.3	ug/L				
2,2-Dichloropropane	<0.6	ug/L				
1,1-Dichloropropene	<0.3	ug/L				
cis -1,3-Dichloropropene	<0.4	ug/L				
trans-1,3-Dichloropropene	<0.4	ug/L				
Ethylbenzene	<0.3	ug/L				
Hexachlorobutadiene	<0.6	ug/L				
Isopropylbenzene	<0.4	ug/L				
4-Isopropyltoluene	<0.4	ug/L				
Methylene Chloride	1	ug/L				
Naphthalene	<2.8	ug/L				
n-Propylbenzene	<0.4	ug/L				
Styrene	<0.4	ug/L				
1,1,1,2-Tetrachloroethane	<0.5	ug/L				
1,1,2,2-Tetrachloroethane	0.3	ug/L				
Tetrachloroethene	<0.4	ug/L				
Toluene	<0.2	ug/L				

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-1

NET Sample No: 122300

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
1,2,3-Trichlorobenzene	<0.9	ug/L				
1,2,4-Trichlorobenzene	<0.7	ug/L	05/03/1995		241	bel
1,1,1-Trichloroethane	0.6	ug/L				
1,1,2-Trichloroethane	<0.2	ug/L				
Trichloroethene	<0.3	ug/L				
Trichlorofluoromethane	<0.6	ug/L				
1,2,4-Trimethylbenzene	<0.4	ug/L				
1,3,5-Trimethylbenzene	<0.4	ug/L				
1,2,3-Trichloropropane	<0.6	ug/L				
Vinyl Chloride	<0.4	ug/L				
m-Xylene	<0.4	ug/L				
o-Xylene	<0.7	ug/L				
p-Xylene	<0.7	ug/L				

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-2

NET Sample No: 122301

Parameter	Method	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Colorimet. Hexaval. ChromiumAQ	APHA 307B (14th Ed., 19	<0.015	mg/L	04/20/1995	1015HC	390	gmp
Metal Priority Pollutants, AQ	EPA 200 series	COMPLETE		04/23/1995		125	ecw
Aqueous Digestion EPA200 AQ	EPA 200 mod	04/26/1995	date	04/26/1995	5727cw		gsw
Aqueous Digestion GFAA EPA AQ	EPA 200 mod	04/26/1995		04/26/1995	5727cw		gsw
Antimony (Sb) 200 ICP AQ	EPA 200 ICP, 200.7	<0.10	mg/L	05/02/1995	5727cw	361	gmp
Arsenic (As) 200 GFAA AQ	EPA 200 furnace, 200mod	0.060	mg/L	05/02/1995	5727cw	217	mwt
Beryllium (Be) 200 ICP AQ	EPA 200 ICP, 200.7mod.	<0.0050	mg/L	04/27/1995		351	gmp
Cadmium (Cd) 200 ICP AQ	EPA 200 ICP, 200.7mod.	0.021	mg/L	04/27/1995		523	gmp
Chromium (Cr) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	4.9	mg/L	04/27/1995		502	gmp
Copper (Cu) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	3.5	mg/L	04/27/1995		529	gmp
Lead (Pb) 200 GFAA AQ	EPA 200 furnace, 200 mo	0.11	mg/L	05/01/1995		232	mwt
Mercury (Hg) 200 CVAA AQ	EPA 200 cold vapor, 245	0.00044	mg/L	05/03/1995	5727cw	494	drm
Nickel (Ni) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	4.3	mg/L	04/27/1995		478	gmp
Selenium (Se) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.0050	mg/L	05/03/1995	5727cw	160	mwt
Silver (Ag) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	<0.010	mg/L	04/27/1995		478	gmp
Thallium (Tl) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.010	mg/L	05/02/1995	5727cw	129	mwt
Zinc (Zn) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	0.69	mg/L	04/27/1995		530	gmp

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-2

NET Sample No: 122301

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Volatiles by GC/MS 524.2 AQ						
Benzene	<1.	ug/L	05/05/1995		240	bel
Bromobenzene	<2.	ug/L				
Bromochloromethane	<2.	ug/L				
Bromodichloromethane	<2.	ug/L				
Bromoform	<2.	ug/L				
Bromomethane	<2.	ug/L				
n-Butylbenzene	<2.	ug/L				
sec-Butylbenzene	<1.	ug/L				
tert-Butylbenzene	<2.	ug/L				
Carbon Tetrachloride	<3.	ug/L				
Chlorobenzene	1	ug/L				
Chloroethane	<2.	ug/L				
Chloroform	<4.	ug/L				
Chloromethane	<2.	ug/L				
2-Chlorotoluene	<2.	ug/L				
4-Chlorotoluene	<2.	ug/L				
1,2-Dibromo-3-chloropropane	<4.	ug/L				
Dibromochloromethane	<2.	ug/L				
1,2-Dibromoethane (EDB)	<2.	ug/L				
Dibromomethane	<2.	ug/L				
1,2-Dichlorobenzene	<2.	ug/L				
1,3-Dichlorobenzene	<1.	ug/L				
1,4-Dichlorobenzene	<2.	ug/L				
Dichlorodifluoromethane	<7.5	ug/L				
1,1-Dichloroethane	<2.	ug/L				
1,2-Dichloroethane	<4.	ug/L				
1,1-Dichloroethene	<6.5	ug/L				
cis-1,2-Dichloroethene	55	ug/L				
trans-1,2-Dichloroethene	<1.	ug/L				
1,2-Dichloropropane	<2.	ug/L				
1,3-Dichloropropane	<2.	ug/L				
2,2-Dichloropropane	<3.	ug/L				
1,1-Dichloropropene	<2.	ug/L				
cis -1,3-Dichloropropene	<2.	ug/L				
trans-1,3-Dichloropropene	<2.	ug/L				
Ethylbenzene	<2.	ug/L				
Hexachlorobutadiene	<3.	ug/L				
Isopropylbenzene	<2.	ug/L				
4-Isopropyltoluene	<2.	ug/L				
Methylene Chloride	<5.0	ug/L				
Naphthalene	<14.	ug/L				
n-Propylbenzene	<2.	ug/L				
Styrene	<2.	ug/L				
1,1,1,2-Tetrachloroethane	<2.	ug/L				
1,1,2,2-Tetrachloroethane	<2.	ug/L				
Tetrachloroethene	11	ug/L				
Toluene	<1.	ug/L				

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-2

NET Sample No: 122301

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
1,2,3-Trichlorobenzene	<4.	ug/L				
1,2,4-Trichlorobenzene	<4.	ug/L	05/05/1995		240	bel
1,1,1-Trichloroethane	<2.	ug/L				
1,1,2-Trichloroethane	<1.	ug/L				
Trichloroethene	46	ug/L				
Trichlorofluoromethane	<3.	ug/L				
1,2,4-Trimethylbenzene	<2.	ug/L				
1,3,5-Trimethylbenzene	<2.	ug/L				
1,2,3-Trichloropropane	<3.	ug/L				
Vinyl Chloride	6	ug/L				
m-Xylene	<2.	ug/L				
o-Xylene	<4.	ug/L				
p-Xylene	<4.	ug/L				

Note on volatiles analysis: This sample was previously analyzed on 5/3/95, within holding time. However, high concentrations of target analytes required re-analysis at 1:5 dilution to confirm results. Sample was re-analyzed 5/5, two days out of holding time, to confirm results of initial analysis.

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-3

NET Sample No: 122302

Parameter	Method	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Colorimet. Hexaval. ChromiumAQ	APHA 307B (14th Ed., 19	<0.015	mg/L	04/20/1995	1015HC	390	gmp
Metal Priority Pollutants, AQ	EPA 200 series	COMPLETE		04/23/1995		125	ecw
Aqueous Digestion EPA200 AQ	EPA 200 mod	04/26/1995	date	04/26/1995	5727cw		gsw
Aqueous Digestion GFAA EPA AQ	EPA 200 mod	04/26/1995		04/26/1995	5727cw		gsw
Antimony (Sb) 200 ICP AQ	EPA 200 ICP, 200.7	<0.10	mg/L	05/02/1995	5727cw	361	gmp
Arsenic (As) 200 GFAA AQ	EPA 200 furnace, 200mod	<0.010	mg/L	05/02/1995	5727cw	217	mwt
Beryllium (Be) 200 ICP AQ	EPA 200 ICP, 200.7mod.	<0.0050	mg/L	04/27/1995		351	gmp
Cadmium (Cd) 200 ICP AQ	EPA 200 ICP, 200.7mod.	<0.0050	mg/L	04/27/1995		523	gmp
Chromium (Cr) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	0.20	mg/L	04/27/1995		502	gmp
Copper (Cu) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	2.8	mg/L	04/27/1995		529	gmp
Lead (Pb) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.010	mg/L	05/01/1995		232	mwt
Mercury (Hg) 200 CVAA AQ	EPA 200 cold vapor, 245	<0.00020	mg/L	05/03/1995	5727cw	494	drm
Nickel (Ni) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	2.0	mg/L	04/27/1995		478	gmp
Selenium (Se) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.0050	mg/L	05/03/1995	5727cw	160	mwt
Silver (Ag) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	<0.010	mg/L	04/27/1995		478	gmp
Thallium (Tl) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.010	mg/L	05/02/1995	5727cw	129	mwt
Zinc (Zn) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	0.37	mg/L	04/27/1995		530	gmp

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-3

NET Sample No: 122302

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Volatiles by GC/MS 524.2 AQ						
Benzene	<1.	ug/L	05/03/1995		241	bel
Bromobenzene	<2.	ug/L				
Bromochloromethane	<2.	ug/L				
Bromodichloromethane	<2.	ug/L				
Bromoform	<2.	ug/L				
Bromomethane	<2.	ug/L				
n-Butylbenzene	<2.	ug/L				
sec-Butylbenzene	<1.	ug/L				
tert-Butylbenzene	<2.	ug/L				
Carbon Tetrachloride	<3.	ug/L				
Chlorobenzene	<1.	ug/L				
Chloroethane	<2.	ug/L				
Chloroform	<4.	ug/L				
Chloromethane	<2.	ug/L				
2-Chlorotoluene	<2.	ug/L				
4-Chlorotoluene	<2.	ug/L				
1,2-Dibromo-3-chloropropane	<4.	ug/L				
Dibromochloromethane	<2.	ug/L				
1,2-Dibromoethane (EDB)	<2.	ug/L				
Dibromomethane	<2.	ug/L				
1,2-Dichlorobenzene	<2.	ug/L				
1,3-Dichlorobenzene	<1.	ug/L				
1,4-Dichlorobenzene	<2.	ug/L				
Dichlorodifluoromethane	<7.5	ug/L				
1,1-Dichloroethane	<2.	ug/L				
1,2-Dichloroethane	<4.	ug/L				
1,1-Dichloroethene	<6.5	ug/L				
cis-1,2-Dichloroethene	83	ug/L				
trans-1,2-Dichloroethene	<1.	ug/L				
1,2-Dichloropropane	<2.	ug/L				
1,3-Dichloropropane	<2.	ug/L				
2,2-Dichloropropane	<3.	ug/L				
1,1-Dichloropropene	<2.	ug/L				
cis -1,3-Dichloropropene	<2.	ug/L				
trans-1,3-Dichloropropene	<2.	ug/L				
Ethylbenzene	<2.	ug/L				
Hexachlorobutadiene	<3.	ug/L				
Isopropylbenzene	<2.	ug/L				
4-Isopropyltoluene	<2.	ug/L				
Methylene Chloride	<5.0	ug/L				
Naphthalene	<14.	ug/L				
n-Propylbenzene	<2.	ug/L				
Styrene	<2.	ug/L				
1,1,1,2-Tetrachloroethane	<2.	ug/L				
1,1,2,2-Tetrachloroethane	<2.	ug/L				
Tetrachloroethene	25	ug/L				
Toluene	<1.	ug/L				

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-3

NET Sample No: 122302

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
1,2,3-Trichlorobenzene	<4.	ug/L				
1,2,4-Trichlorobenzene	<4.	ug/L	05/03/1995		241	bel
1,1,1-Trichloroethane	<2.	ug/L				
1,1,2-Trichloroethane	<1.	ug/L				
Trichloroethene	170	ug/L				
Trichlorofluoromethane	<3.	ug/L				
1,2,4-Trimethylbenzene	<2.	ug/L				
1,3,5-Trimethylbenzene	<2.	ug/L				
1,2,3-Trichloropropane	<3.	ug/L				
Vinyl Chloride	<2.	ug/L				
m-Xylene	<2.	ug/L				
o-Xylene	<4.	ug/L				
p-Xylene	<4.	ug/L				

Note on volatiles analysis: This sample was previously analyzed on 5/3/95, within holding time. However, high concentrations of target analytes required re-analysis at 1:5 dilution to confirm results. Sample was re-analyzed 5/5, two days out of holding time, to confirm results of initial analysis.

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-5

NET Sample No: 122303

Parameter	Method	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Colorimet. Hexaval. ChromiumAQ	APHA 307B (14th Ed., 19	<0.015	mg/L	04/20/1995	1015HC	390	gmp
Metal Priority Pollutants, AQ	EPA 200 series	COMPLETE		04/23/1995		125	ecw
Aqueous Digestion EPA200 AQ	EPA 200 mod	04/26/1995	date	04/26/1995	5727cw		gsw
Aqueous Digestion GFAA EPA AQ	EPA 200 mod	04/26/1995		04/26/1995	5727cw		gsw
Antimony (Sb) 200 ICP AQ	EPA 200 ICP, 200.7	<0.10	mg/L	05/02/1995	5727cw	361	gmp
Arsenic (As) 200 GFAA AQ	EPA 200 furnace, 200mod	0.049	mg/L	05/02/1995	5727cw	217	mwt
Beryllium (Be) 200 ICP AQ	EPA 200 ICP, 200.7mod.	<0.0050	mg/L	04/27/1995		351	gmp
Cadmium (Cd) 200 ICP AQ	EPA 200 ICP, 200.7mod.	0.0081	mg/L	04/27/1995		523	gmp
Chromium (Cr) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	0.13	mg/L	04/27/1995		502	gmp
Copper (Cu) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	0.92	mg/L	04/27/1995		529	gmp
Lead (Pb) 200 GFAA AQ	EPA 200 furnace, 200 mo	0.038	mg/L	05/01/1995		232	mwt
Mercury (Hg) 200 CVAA AQ	EPA 200 cold vapor, 245	<0.00020	mg/L	05/03/1995	5727cw	494	drm
Nickel (Ni) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	0.27	mg/L	04/27/1995		478	gmp
Selenium (Se) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.0050	mg/L	05/03/1995	5727cw	160	mwt
Silver (Ag) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	<0.010	mg/L	04/27/1995		478	gmp
Thallium (Tl) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.010	mg/L	05/02/1995	5727cw	129	mwt
Zinc (Zn) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	0.42	mg/L	04/27/1995		530	gmp

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-5

NET Sample No: 122303

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Volatiles by GC/MS 524.2 AQ						
Benzene	<0.2	ug/L	05/05/1995		240	bel
Bromobenzene	<0.4	ug/L				
Bromochloromethane	<0.3	ug/L				
Bromodichloromethane	<0.4	ug/L				
Bromoform	<0.3	ug/L				
Bromomethane	<0.3	ug/L				
n-Butylbenzene	<0.4	ug/L				
sec-Butylbenzene	<0.2	ug/L				
tert-Butylbenzene	<0.3	ug/L				
Carbon Tetrachloride	<0.6	ug/L				
Chlorobenzene	<0.2	ug/L				
Chloroethane	<0.4	ug/L				
Chloroform	<0.7	ug/L				
Chloromethane	<0.5	ug/L				
2-Chlorotoluene	<0.4	ug/L				
4-Chlorotoluene	<0.3	ug/L				
1,2-Dibromo-3-chloropropane	<0.8	ug/L				
Dibromochloromethane	<0.3	ug/L				
1,2-Dibromoethane (EDB)	<0.3	ug/L				
Dibromomethane	<0.3	ug/L				
1,2-Dichlorobenzene	<0.4	ug/L				
1,3-Dichlorobenzene	<0.2	ug/L				
1,4-Dichlorobenzene	<0.5	ug/L				
Dichlorodifluoromethane	<1.5	ug/L				
1,1-Dichloroethane	<0.3	ug/L				
1,2-Dichloroethane	<0.7	ug/L				
1,1-Dichloroethene	<1.3	ug/L				
cis-1,2-Dichloroethene	2	ug/L				
trans-1,2-Dichloroethene	<0.2	ug/L				
1,2-Dichloropropane	<0.3	ug/L				
1,3-Dichloropropane	<0.3	ug/L				
2,2-Dichloropropane	<0.6	ug/L				
1,1-Dichloropropene	<0.3	ug/L				
cis -1,3-Dichloropropene	<0.4	ug/L				
trans-1,3-Dichloropropene	<0.4	ug/L				
Ethylbenzene	<0.3	ug/L				
Hexachlorobutadiene	<0.6	ug/L				
Isopropylbenzene	<0.4	ug/L				
4-Isopropyltoluene	<0.4	ug/L				
Methylene Chloride	<1.0	ug/L				
Naphthalene	<2.8	ug/L				
n-Propylbenzene	<0.4	ug/L				
Styrene	<0.4	ug/L				
1,1,1,2-Tetrachloroethane	<0.5	ug/L				
1,1,2,2-Tetrachloroethane	<0.3	ug/L				
Tetrachloroethene	4	ug/L				

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-5

NET Sample No: 122303

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
1,2,3-Trichlorobenzene	<0.9	ug/L				
1,2,4-Trichlorobenzene	<0.7	ug/L	05/05/1995		240	bel
1,1,1-Trichloroethane	<0.5	ug/L				
1,1,2-Trichloroethane	<0.2	ug/L				
Trichloroethene	5	ug/L				
Trichlorofluoromethane	<0.6	ug/L				
1,2,4-Trimethylbenzene	<0.4	ug/L				
1,3,5-Trimethylbenzene	<0.4	ug/L				
1,2,3-Trichloropropane	<0.6	ug/L				
Vinyl Chloride	<0.4	ug/L				
m-Xylene	<0.4	ug/L				
o-Xylene	<0.7	ug/L				
p-Xylene	<0.7	ug/L				

Note on volatiles analysis: This sample was previously analyzed on 5/3/95, within holding time. However, results reflect carryover from a previous analysis. Sample was re-analyzed 5/5, two days out of holding time, to confirm results of initial analysis.

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co. NET Job No: 95.01442

Project: JAMECO Monitoring Date Rec'd: 04/20/1995

Sample ID: MW-7

NET Sample No: 122304

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Volatiles by GC/MS 524.2 AQ						
Benzene	<0.2	ug/L	05/03/1995		241	bel
Bromobenzene	<0.4	ug/L				
Bromochloromethane	<0.3	ug/L				
Bromodichloromethane	0.5	ug/L				
Bromoform	<0.3	ug/L				
Bromomethane	<0.3	ug/L				
n-Butylbenzene	<0.4	ug/L				
sec-Butylbenzene	<0.2	ug/L				
tert-Butylbenzene	<0.3	ug/L				
Carbon Tetrachloride	<0.6	ug/L				
Chlorobenzene	<0.2	ug/L				
Chloroethane	<0.4	ug/L				
Chloroform	0.8	ug/L				
Chloromethane	<0.5	ug/L				
2-Chlorotoluene	<0.4	ug/L				
4-Chlorotoluene	<0.3	ug/L				
1,2-Dibromo-3-chloropropane	<0.8	ug/L				
Dibromochloromethane	0.5	ug/L				
1,2-Dibromoethane (EDB)	<0.3	ug/L				
Dibromomethane	<0.3	ug/L				
1,2-Dichlorobenzene	<0.4	ug/L				
1,3-Dichlorobenzene	<0.2	ug/L				
1,4-Dichlorobenzene	<0.5	ug/L				
Dichlorodifluoromethane	<1.5	ug/L				
1,1-Dichloroethane	<0.3	ug/L				
1,2-Dichloroethane	<0.7	ug/L				
1,1-Dichloroethene	<1.3	ug/L				
cis-1,2-Dichloroethene	2	ug/L				
trans-1,2-Dichloroethene	<0.2	ug/L				
1,2-Dichloropropane	<0.3	ug/L				
1,3-Dichloropropane	<0.3	ug/L				
2,2-Dichloropropane	<0.6	ug/L				
1,1-Dichloropropene	<0.3	ug/L				
cis -1,3-Dichloropropene	<0.4	ug/L				
trans-1,3-Dichloropropene	<0.4	ug/L				
Ethylbenzene	<0.3	ug/L				
Hexachlorobutadiene	<0.6	ug/L				
Isopropylbenzene	<0.4	ug/L				
4-Isopropyltoluene	<0.4	ug/L				
Methylene Chloride	<1.0	ug/L				
Naphthalene	<2.8	ug/L				
n-Propylbenzene	<0.4	ug/L				
Styrene	<0.4	ug/L				
1,1,1,2-Tetrachloroethane	<0.5	ug/L				
1,1,2,2-Tetrachloroethane	<0.3	ug/L				
Tetrachloroethene	15	ug/L				
Toluene	<0.2	ug/L				

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-7

NET Sample No: 122304

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
1,2,3-Trichlorobenzene	<0.9	ug/L				
1,2,4-Trichlorobenzene	<0.7	ug/L	05/03/1995		241	bel
1,1,1-Trichloroethane	<0.5	ug/L				
1,1,2-Trichloroethane	<0.2	ug/L				
Trichloroethene	0.6	ug/L				
Trichlorofluoromethane	<0.6	ug/L				
1,2,4-Trimethylbenzene	<0.4	ug/L				
1,3,5-Trimethylbenzene	<0.4	ug/L				
1,2,3-Trichloropropane	<0.6	ug/L				
Vinyl Chloride	<0.4	ug/L				
m-Xylene	<0.4	ug/L				
o-Xylene	<0.7	ug/L				
p-Xylene	<0.7	ug/L				

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-9

NET Sample No: 122305

Parameter	Method	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Colorimet. Hexaval. ChromiumAQ	APHA 307B (14th Ed., 19	<0.015	mg/L	04/20/1995	1015HC	390	gmp
Metal Priority Pollutants, AQ	EPA 200 series	COMPLETE		04/23/1995		125	ecw
Aqueous Digestion EPA200 AQ	EPA 200 mod	04/26/1995	date	04/26/1995	5727cw		gsw
Aqueous Digestion GFAA EPA AQ	EPA 200 mod	04/26/1995		04/26/1995	5727cw		gsw
Antimony (Sb) 200 ICP AQ	EPA 200 ICP, 200.7	<0.10	mg/L	05/02/1995	5727cw	361	gmp
Arsenic (As) 200 GFAA AQ	EPA 200 furnace, 200mod	<0.010	mg/L	05/02/1995	5727cw	217	mwt
Beryllium (Be) 200 ICP AQ	EPA 200 ICP, 200.7mod.	<0.0050	mg/L	04/27/1995		351	gmp
Cadmium (Cd) 200 ICP AQ	EPA 200 ICP, 200.7mod.	<0.0050	mg/L	04/27/1995		523	gmp
Chromium (Cr) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	<0.010	mg/L	04/27/1995		502	gmp
Copper (Cu) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	<0.010	mg/L	04/27/1995		529	gmp
Lead (Pb) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.010	mg/L	05/01/1995		232	mwt
Mercury (Hg) 200 CVAA AQ	EPA 200 cold vapor, 245	<0.00020	mg/L	05/03/1995	5727cw	494	drm
Nickel (Ni) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	<0.040	mg/L	04/27/1995		478	gmp
Selenium (Se) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.0050	mg/L	05/03/1995	5727cw	160	mwt
Silver (Ag) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	<0.010	mg/L	04/27/1995		478	gmp
Thallium (Tl) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.010	mg/L	05/02/1995	5727cw	129	mwt
Zinc (Zn) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	0.025	mg/L	04/27/1995		530	gmp

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co. NET Job No: 95.01442

Project: JAMECO Monitoring Date Rec'd: 04/20/1995

Sample ID: MW-9

NET Sample No: 122305

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Volatiles by GC/MS 524.2 AQ						
Benzene	<0.2	ug/L	05/03/1995		241	bel
Bromobenzene	<0.4	ug/L				
Bromochloromethane	<0.3	ug/L				
Bromodichloromethane	1	ug/L				
Bromoform	<0.3	ug/L				
Bromomethane	<0.3	ug/L				
n-Butylbenzene	<0.4	ug/L				
sec-Butylbenzene	<0.2	ug/L				
tert-Butylbenzene	<0.3	ug/L				
Carbon Tetrachloride	<0.6	ug/L				
Chlorobenzene	<0.2	ug/L				
Chloroethane	<0.4	ug/L				
Chloroform	34	ug/L				
Chloromethane	<0.5	ug/L				
2-Chlorotoluene	<0.4	ug/L				
4-Chlorotoluene	<0.3	ug/L				
1,2-Dibromo-3-chloropropane	<0.8	ug/L				
Dibromochloromethane	<0.3	ug/L				
1,2-Dibromoethane (EDB)	<0.3	ug/L				
Dibromomethane	<0.3	ug/L				
1,2-Dichlorobenzene	<0.4	ug/L				
1,3-Dichlorobenzene	<0.2	ug/L				
1,4-Dichlorobenzene	<0.5	ug/L				
Dichlorodifluoromethane	<1.5	ug/L				
1,1-Dichloroethane	<0.3	ug/L				
1,2-Dichloroethane	<0.7	ug/L				
1,1-Dichloroethene	<1.3	ug/L				
cis-1,2-Dichloroethene	<0.4	ug/L				
trans-1,2-Dichloroethene	<0.2	ug/L				
1,2-Dichloropropane	<0.3	ug/L				
1,3-Dichloropropane	<0.3	ug/L				
2,2-Dichloropropane	<0.6	ug/L				
1,1-Dichloropropene	<0.3	ug/L				
cis -1,3-Dichloropropene	<0.4	ug/L				
trans-1,3-Dichloropropene	<0.4	ug/L				
Ethylbenzene	<0.3	ug/L				
Hexachlorobutadiene	<0.6	ug/L				
Isopropylbenzene	<0.4	ug/L				
4-Isopropyltoluene	<0.4	ug/L				
Methylene Chloride	<1.0	ug/L				
Naphthalene	<2.8	ug/L				
n-Propylbenzene	<0.4	ug/L				
Styrene	<0.4	ug/L				
1,1,1,2-Tetrachloroethane	<0.5	ug/L				
1,1,2,2-Tetrachloroethane	<0.3	ug/L				
Tetrachloroethene	<0.4	ug/L				
Toluene	<0.2	ug/L				

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-9

NET Sample No: 122305

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
1,2,3-Trichlorobenzene	<0.9	ug/L				
1,2,4-Trichlorobenzene	<0.7	ug/L	05/03/1995		241	bel
1,1,1-Trichloroethane	<0.5	ug/L				
1,1,2-Trichloroethane	<0.2	ug/L				
Trichloroethene	<0.3	ug/L				
Trichlorofluoromethane	<0.6	ug/L				
1,2,4-Trimethylbenzene	<0.4	ug/L				
1,3,5-Trimethylbenzene	<0.4	ug/L				
1,2,3-Trichloropropane	<0.6	ug/L				
Vinyl Chloride	<0.4	ug/L				
m-Xylene	<0.4	ug/L				
o-Xylene	<0.7	ug/L				
p-Xylene	<0.7	ug/L				

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Sample ID: MW-12

NET Sample No: 122306

Parameter	Method	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Colorimet. Hexaval. ChromiumAQ	APHA 307B (14th Ed., 19	<0.015	mg/L	04/20/1995	1015HC	390	gmp
Metal Priority Pollutants, AQ	EPA 200 series	COMPLETE		04/23/1995		125	ecw
Aqueous Digestion EPA200 AQ	EPA 200 mod	04/26/1995	date	04/26/1995	5727cw		gsw
Aqueous Digestion GFAA EPA AQ	EPA 200 mod	04/26/1995		04/26/1995	5727cw		gsw
Antimony (Sb) 200 ICP AQ	EPA 200 ICP, 200.7	<0.10	mg/L	05/02/1995	5727cw	361	gmp
Arsenic (As) 200 GFAA AQ	EPA 200 furnace, 200mod	0.10	mg/L	05/02/1995	5727cw	217	mwt
Beryllium (Be) 200 ICP AQ	EPA 200 ICP, 200.7mod.	0.015	mg/L	04/27/1995		351	gmp
Cadmium (Cd) 200 ICP AQ	EPA 200 ICP, 200.7mod.	0.059	mg/L	04/27/1995		523	gmp
Chromium (Cr) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	14	mg/L	04/27/1995		502	gmp
Copper (Cu) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	25	mg/L	04/27/1995		529	gmp
Lead (Pb) 200 GFAA AQ	EPA 200 furnace, 200 mo	0.23	mg/L	05/01/1995		232	mwt
Mercury (Hg) 200 CVAA AQ	EPA 200 cold vapor, 245	0.0013	mg/L	05/03/1995	5727cw	494	drm
Nickel (Ni) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	22	mg/L	04/27/1995		478	gmp
Selenium (Se) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.0050	mg/L	05/03/1995	5727cw	160	mwt
Silver (Ag) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	<0.010	mg/L	04/27/1995		478	gmp
Thallium (Tl) 200 GFAA AQ	EPA 200 furnace, 200 mo	<0.010	mg/L	05/02/1995	5727cw	129	mwt
Zinc (Zn) 200 ICP AQ	EPA 200 ICP, 200.7 mod.	4.7	mg/L	04/27/1995		530	gmp

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co. NET Job No: 95.01442

Project: JAMECO Monitoring Date Rec'd: 04/20/1995

Sample ID: MW-12

NET Sample No: 122306

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
Volatiles by GC/MS 524.2 AQ						
Benzene	<10	ug/L	05/06/1995		239	dry
Bromobenzene	<20	ug/L				
Bromochloromethane	<20	ug/L				
Bromodichloromethane	<20	ug/L				
Bromoform	<20	ug/L				
Bromomethane	<20	ug/L				
n-Butylbenzene	<20	ug/L				
sec-Butylbenzene	<10	ug/L				
tert-Butylbenzene	<20	ug/L				
Carbon Tetrachloride	<30	ug/L				
Chlorobenzene	<10	ug/L				
Chloroethane	<20	ug/L				
Chloroform	<40	ug/L				
Chloromethane	<20	ug/L				
2-Chlorotoluene	<20	ug/L				
4-Chlorotoluene	<20	ug/L				
1,2-Dibromo-3-chloropropane	<40	ug/L				
Dibromochloromethane	<20	ug/L				
1,2-Dibromoethane (EDB)	<20	ug/L				
Dibromomethane	<20	ug/L				
1,2-Dichlorobenzene	<20	ug/L				
1,3-Dichlorobenzene	<10	ug/L				
1,4-Dichlorobenzene	<20	ug/L				
Dichlorodifluoromethane	<75.	ug/L				
1,1-Dichloroethane	<20	ug/L				
1,2-Dichloroethane	<40	ug/L				
1,1-Dichloroethene	<65.	ug/L				
cis-1,2-Dichloroethene	650	ug/L				
trans-1,2-Dichloroethene	12	ug/L				
1,2-Dichloropropane	<20	ug/L				
1,3-Dichloropropane	<20	ug/L				
2,2-Dichloropropane	<30	ug/L				
1,1-Dichloropropene	<20	ug/L				
cis -1,3-Dichloropropene	<20	ug/L				
trans-1,3-Dichloropropene	<20	ug/L				
Ethylbenzene	<20	ug/L				
Hexachlorobutadiene	<30	ug/L				
Isopropylbenzene	<20	ug/L				
4-Isopropyltoluene	<20	ug/L				
Methylene Chloride	<50.	ug/L				
Naphthalene	<140	ug/L				
n-Propylbenzene	<20	ug/L				
Styrene	<20	ug/L				
1,1,1,2-Tetrachloroethane	<20	ug/L				
1,1,2,2-Tetrachloroethane	<20	ug/L				
Tetrachloroethene	400	ug/L				
Toluene	<10	ug/L				

NET Cambridge Division

ANALYTICAL REPORT

Report Date: 05/11/1995

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Monitoring

Date Rec'd: 04/20/1995

Sample ID: MW-12

NET Sample No: 122306

Parameter	Result	Units	Analysis Date	Prep Batch	Run Batch	Analyst
1,2,3-Trichlorobenzene	<40	ug/L				
1,2,4-Trichlorobenzene	<40	ug/L	05/06/1995		239	dry
1,1,1-Trichloroethane	<20	ug/L				
1,1,2-Trichloroethane	<10	ug/L				
Trichloroethene	1500	ug/L				
Trichlorofluoromethane	<30	ug/L				
1,2,4-Trimethylbenzene	<20	ug/L				
1,3,5-Trimethylbenzene	<20	ug/L				
1,2,3-Trichloropropane	<30	ug/L				
Vinyl Chloride	58	ug/L				
m-Xylene	<20	ug/L				
o-Xylene	<40	ug/L				
p-Xylene	<40	ug/L				

Note on volatiles analysis: This sample was previously analyzed on 5/3/95, within holding time. However, high concentrations of target analytes required re-analysis at 1:5 dilution to confirm results. Sample was re-analyzed 5/5, two days out of holding time, to confirm results of initial analysis.

NET Cambridge Division
BATCH QUALITY CONTROL DATA

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Program: JAMECO Landfill Monitoring

Report Date: 05/11/1995

Parameter	LCS % Recovery	Method Blank	Spike % Recovery	Sample (Run 1)	Duplicate (Run 2)	RPD	Analyst
Colorimet. Hexaval. ChromiumAQ	96.0	<0.015	110.0	<0.015	<0.015	0.0	gmp

Please note that the data reported for the Duplicates and Spikes were analyzed in the same batch, but may not necessarily be that of your sample.

LCS - Laboratory Control Sample. For analyses not requiring sample digestion/preparation, independent control check sample result is reported.

QC SUMMARY FOR INORGANICS REPORT: DUPLICATES

NET-CAMBRIDGE DIVISION
Date of report: 05/08/95

Work ID:
SDG/ Batch: 9501442

Duplicate: 1442-122305(Aqueous)

Element	Sample	Duplicate		%RPD
% solids:				
Ag	< 0.010	< 0.010	mg/L	----
As	< 0.010	< 0.010	mg/L	----
Be	< 0.0050	< 0.0050	mg/L	----
Cd	< 0.0050	< 0.0050	mg/L	----
Cr	< 0.010	< 0.010	mg/L	----
Cu	< 0.010	< 0.010	mg/L	----
Hg	<0.00020	<0.00020	mg/L	----
Ni	< 0.040	< 0.040	mg/L	----
Pb	< 0.010	< 0.010	mg/L	----
Sb	< 0.10	< 0.10	mg/L	----
Se	< 0.0050	< 0.0050	mg/L	----
Tl	< 0.010	< 0.010	mg/L	----
Zn	0.025	0.027	mg/L	8

QC SUMMARY FOR INORGANICS REPORT: PRE-DIGESTION SPIKES

NET-CAMBRIDGE DIVISION
Date of report: 05/08/95

Work ID:
SDG/ Batch: 9501442

Spike: 1442-122304 (Aqueous)

Element	Sample		Spike Added	%Recovery	
Ag	< 0.010	mg/L	0.033	66	*
As	< 0.010	mg/L	0.044	110	
Be	< 0.0050	mg/L	0.050	100	
Cd	< 0.0050	mg/L	0.050	100	
Cr	< 0.010	mg/L	0.19	95	
Cu	< 0.010	mg/L	0.25	100	
Hg	<0.00020	mg/L	0.00089	0.0010	89
Ni	< 0.040	mg/L	0.54	0.500	108
Pb	< 0.010	mg/L	0.026	0.020	130 *
Sb	< 0.10	mg/L	0.50	0.500	100
Se	< 0.0050	mg/L	0.011	0.010	110
Tl	< 0.010	mg/L	0.055	0.050	110
Zn	< 0.020	mg/L	0.50	0.500	100

* Possible matrix interference indicated.

QC SUMMARY FOR INORGANICS REPORT: DIGESTION BLANKS

NET-CAMBRIDGE DIVISION
Date of report: 05/08/95

Work ID:
SDG/ Batch: 9501442

Blank: 5727CW
Found, mg/L

Element	
Ag	< 0.010
As	< 0.010
Be	< 0.0050
Cd	< 0.0050
Cr	< 0.010
Cu	< 0.010
Hg	< 0.00020
Ni	< 0.040
Pb	< 0.010
Sb	< 0.10
Se	< 0.0050
Tl	< 0.010
Zn	< 0.020

QC SUMMARY FOR INORGANICS REPORT: LAB CONTROL STANDARDS

NET-CAMBRIDGE DIVISION
Date of report: 05/08/95

Work ID:
SDG/ Batch: 9501442

Standard:	LCSHCL 5727CW (Liquid)				LCSHG 5727CW (Liquid)			
Element	True	Found	Units	% R	True	Found	Units	% R
Ag	1.0	0.98	mg/L	98				
As	1.0	1.0	mg/L	100				
Be	0.20	0.21	mg/L	105				
Cd	1.00	0.94	mg/L	94				
Cr	1.0	0.93	mg/L	93				
Cu	1.0	0.98	mg/L	98				
Hg					0.0040	0.0033	mg/L	82
Ni	1.0	0.98	mg/L	98				
Pb	1.0	0.92	mg/L	92				
Sb	1.0	0.99	mg/L	99				
Se	1.0	1.1	mg/L	110				
Tl	1.0	1.0	mg/L	100				
Zn	1.0	0.96	mg/L	96				

Standard:	LCSHNO3 5727CW (Liquid			
Element	True	Found	Units	% R
Ag				
As	0.020	0.021	mg/L	105
Be				
Cd				
Cr				
Cu				
Hg				
Ni				
Pb	0.020	0.021	mg/L	105
Sb				
Se	0.010	0.010	mg/L	100
Tl	0.050	0.053	mg/L	106
Zn				

NET Cambridge Division

QUALITY CONTROL DATA

Client: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Landfill Monitoring

Report Date: 05/11/1995

Surrogate Standard Percent Recovery

Abbreviated Surrogate Standard Names:

SS1	SS2	SS3	SS4	SS5	SS6	SS7	SS8	SS9	SS10	SS11	SS12
1,2-Dic	1,2-Dic										

			Percent Recovery										
Sample ID	NET ID	Matrix	SS1	SS2	SS3	SS4	SS5	SS6	SS7	SS8	SS9	SS10	SS11	SS12
MW-1	122300	GROUND WATER	106	100										
MW-2	122301	GROUND WATER	101	93										
MW-3	122302	GROUND WATER	111	101										
MW-5	122303	GROUND WATER	112	99										
MW-7	122304	GROUND WATER	102	93										
MW-9	122305	GROUND WATER	109	103										
MW-12	122306	GROUND WATER	113	94										

Notes:
NR - This surrogate standard is Not Required. Other versions of this test method may use this surrogate standard.
Dil - This surrogate standard was diluted to below detectable levels due to concentrations of analytes in this sample.

Complete Surrogate Standard Names Listed by Analysis:

Pesticide Surrogate Standards:
Decachl = Decachlorobiphenyl
Dibutyl = Dibutylchlorendate
Tetrach = Tetrachloro-m-xylene

Volatile Surrogate Standards:
Bromofl = Bromofluorobenzene
1,2-Dichl = 1,2-Dichloroethane-d4
Toluene = Toluene-d8

Drinking Water Method 524
1,2-Dichl = 1,2-Dichlorobenzene-d4

Semivolatlile Surrogate Standards:
2-Fluor (1st) = 2-Fluorobiphenyl
2-Fluor (2nd) = 2-Fluorophenol
Phenol- = Phenol-d6
Nitrobe = Nitrobenzene-d5
2,4,6-T = 2,4,6-Tribromophenol
p-Terph = p-Terphenyl

Herbicides Surrogate Standard:
2,4-Dic = 2,4-Dichlorophenyl acetic acid

Petroleum Hydrocarbon Fingerprint Surrogate Standard:
2-Fluor = 2-Fluorobiphenyl
para-Te = para-Terphynyl

NET Cambridge Division
QUALITY CONTROL DATA

Report To: Goldman Env. Const. Co. NET Job No: 95.01442

Project: JAMECO Landfill Monitoring Report Date : 05/11/1995

Method Blank Analysis Data

Test Name	Result	Units	Prep Batch	Run Batch	Run Date	Analyst Initials
Volatiles by GC/MS 524.2 AQ						
1,2-Dichloroethane-d4	111	% recov.		239	05/06/1995	dry
1,2-Dichlorobenzene-d4	94	% recov.		239	05/06/1995	dry
Benzene	<0.2	ug/L		239	05/06/1995	dry
Bromobenzene	<0.4	ug/L		239	05/06/1995	dry
Bromochloromethane	<0.3	ug/L		239	05/06/1995	dry
Bromodichloromethane	<0.4	ug/L		239	05/06/1995	dry
Bromoform	<0.3	ug/L		239	05/06/1995	dry
Bromomethane	<0.3	ug/L		239	05/06/1995	dry
n-Butylbenzene	<0.4	ug/L		239	05/06/1995	dry
sec-Butylbenzene	<0.2	ug/L		239	05/06/1995	dry
tert-Butylbenzene	<0.3	ug/L		239	05/06/1995	dry
Carbon Tetrachloride	<0.6	ug/L		239	05/06/1995	dry
Chlorobenzene	<0.2	ug/L		239	05/06/1995	dry
Chloroethane	<0.4	ug/L		239	05/06/1995	dry
Chloroform	<0.7	ug/L		239	05/06/1995	dry
Chloromethane	<0.5	ug/L		239	05/06/1995	dry
2-Chlorotoluene	<0.4	ug/L		239	05/06/1995	dry
4-Chlorotoluene	<0.3	ug/L		239	05/06/1995	dry
1,2-Dibromo-3-chloropropane	<0.8	ug/L		239	05/06/1995	dry
Dibromochloromethane	<0.3	ug/L		239	05/06/1995	dry
1,2-Dibromoethane (EDB)	<0.3	ug/L		239	05/06/1995	dry
Dibromomethane	<0.3	ug/L		239	05/06/1995	dry
1,2-Dichlorobenzene	<0.4	ug/L		239	05/06/1995	dry
1,3-Dichlorobenzene	<0.2	ug/L		239	05/06/1995	dry
1,4-Dichlorobenzene	<0.5	ug/L		239	05/06/1995	dry
Dichlorodifluoromethane	<1.5	ug/L		239	05/06/1995	dry
1,1-Dichloroethane	<0.3	ug/L		239	05/06/1995	dry
1,2-Dichloroethane	<0.7	ug/L		239	05/06/1995	dry
1,1-Dichloroethene	<1.3	ug/L		239	05/06/1995	dry
cis-1,2-Dichloroethene	<0.4	ug/L		239	05/06/1995	dry
trans-1,2-Dichloroethene	<0.2	ug/L		239	05/06/1995	dry
1,2-Dichloropropane	<0.3	ug/L		239	05/06/1995	dry
1,3-Dichloropropane	<0.3	ug/L		239	05/06/1995	dry
2,2-Dichloropropane	<0.6	ug/L		239	05/06/1995	dry
1,1-Dichloropropene	<0.3	ug/L		239	05/06/1995	dry
cis -1,3-Dichloropropene	<0.4	ug/L		239	05/06/1995	dry
trans-1,3-Dichloropropene	<0.4	ug/L		239	05/06/1995	dry
Ethylbenzene	<0.3	ug/L		239	05/06/1995	dry
Hexachlorobutadiene	<0.6	ug/L		239	05/06/1995	dry
Isopropylbenzene	<0.4	ug/L		239	05/06/1995	dry
4-Isopropyltoluene	<0.4	ug/L		239	05/06/1995	dry
Methylene Chloride	<1.0	ug/L		239	05/06/1995	dry
Naphthalene	<2.8	ug/L		239	05/06/1995	dry
n-Propylbenzene	<0.4	ug/L		239	05/06/1995	dry
Styrene	<0.4	ug/L		239	05/06/1995	dry
1,1,1,2-Tetrachloroethane	<0.5	ug/L		239	05/06/1995	dry
1,1,2,2-Tetrachloroethane	<0.3	ug/L		239	05/06/1995	dry
Tetrachloroethene	<0.4	ug/L		239	05/06/1995	dry
Toluene	<0.2	ug/L		239	05/06/1995	dry
1,2,3-Trichlorobenzene	<0.9	ug/L		239	05/06/1995	dry

NET Cambridge Division
QUALITY CONTROL DATA

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Landfill Monitoring

Report Date : 05/11/1995

Method Blank Analysis Data

Test Name	Result	Units	Prep Batch	Run Batch	Run Date	Analyst Initials
1,2,4-Trichlorobenzene	<0.7	ug/L		239	05/06/1995	dry
1,1,1-Trichloroethane	<0.5	ug/L		239	05/06/1995	dry
1,1,2-Trichloroethane	<0.2	ug/L		239	05/06/1995	dry
Trichloroethene	<0.3	ug/L		239	05/06/1995	dry
Trichlorofluoromethane	<0.6	ug/L		239	05/06/1995	dry
1,2,4-Trimethylbenzene	<0.4	ug/L		239	05/06/1995	dry
1,3,5-Trimethylbenzene	<0.4	ug/L		239	05/06/1995	dry
1,2,3-Trichloropropane	<0.6	ug/L		239	05/06/1995	dry
Vinyl Chloride	<0.4	ug/L		239	05/06/1995	dry
m-Xylene	<0.4	ug/L		239	05/06/1995	dry
o-Xylene	<0.7	ug/L		239	05/06/1995	dry
p-Xylene	<0.7	ug/L		239	05/06/1995	dry

NET Cambridge Division
QUALITY CONTROL DATA

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Landfill Monitoring

Report Date : 05/11/1995

Method Blank Analysis Data

Test Name	Result	Units	Prep Batch	Run Batch	Run Date	Analyst Initials
Volatiles by GC/MS 524.2 AQ						
1,2-Dichloroethane-d4	116	% recov.		240	05/05/1995	bel
1,2-Dichlorobenzene-d4	106	% recov.		240	05/05/1995	bel
Benzene	<0.2	ug/L		240	05/05/1995	bel
Bromobenzene	<0.4	ug/L		240	05/05/1995	bel
Bromochloromethane	<0.3	ug/L		240	05/05/1995	bel
Bromodichloromethane	<0.4	ug/L		240	05/05/1995	bel
Bromoform	<0.3	ug/L		240	05/05/1995	bel
Bromomethane	<0.3	ug/L		240	05/05/1995	bel
n-Butylbenzene	<0.4	ug/L		240	05/05/1995	bel
sec-Butylbenzene	<0.2	ug/L		240	05/05/1995	bel
tert-Butylbenzene	<0.3	ug/L		240	05/05/1995	bel
Carbon Tetrachloride	<0.6	ug/L		240	05/05/1995	bel
Chlorobenzene	<0.2	ug/L		240	05/05/1995	bel
Chloroethane	<0.4	ug/L		240	05/05/1995	bel
Chloroform	<0.7	ug/L		240	05/05/1995	bel
Chloromethane	<0.5	ug/L		240	05/05/1995	bel
2-Chlorotoluene	<0.4	ug/L		240	05/05/1995	bel
4-Chlorotoluene	<0.3	ug/L		240	05/05/1995	bel
1,2-Dibromo-3-chloropropane	<0.8	ug/L		240	05/05/1995	bel
Dibromochloromethane	<0.3	ug/L		240	05/05/1995	bel
1,2-Dibromoethane (EDB)	<0.3	ug/L		240	05/05/1995	bel
Dibromomethane	<0.3	ug/L		240	05/05/1995	bel
1,2-Dichlorobenzene	<0.4	ug/L		240	05/05/1995	bel
1,3-Dichlorobenzene	<0.2	ug/L		240	05/05/1995	bel
1,4-Dichlorobenzene	<0.5	ug/L		240	05/05/1995	bel
Dichlorodifluoromethane	<1.5	ug/L		240	05/05/1995	bel
1,1-Dichloroethane	<0.3	ug/L		240	05/05/1995	bel
1,2-Dichloroethane	<0.7	ug/L		240	05/05/1995	bel
1,1-Dichloroethene	<1.3	ug/L		240	05/05/1995	bel
cis-1,2-Dichloroethene	<0.4	ug/L		240	05/05/1995	bel
trans-1,2-Dichloroethene	<0.2	ug/L		240	05/05/1995	bel
1,2-Dichloropropane	<0.3	ug/L		240	05/05/1995	bel
1,3-Dichloropropane	<0.3	ug/L		240	05/05/1995	bel
2,2-Dichloropropane	<0.6	ug/L		240	05/05/1995	bel
1,1-Dichloropropene	<0.3	ug/L		240	05/05/1995	bel
cis -1,3-Dichloropropene	<0.4	ug/L		240	05/05/1995	bel
trans-1,3-Dichloropropene	<0.4	ug/L		240	05/05/1995	bel
Ethylbenzene	<0.3	ug/L		240	05/05/1995	bel
Hexachlorobutadiene	<0.6	ug/L		240	05/05/1995	bel
Isopropylbenzene	<0.4	ug/L		240	05/05/1995	bel
4-Isopropyltoluene	<0.4	ug/L		240	05/05/1995	bel
Methylene Chloride	<1.0	ug/L		240	05/05/1995	bel
Naphthalene	<2.8	ug/L		240	05/05/1995	bel
n-Propylbenzene	<0.4	ug/L		240	05/05/1995	bel
Styrene	<0.4	ug/L		240	05/05/1995	bel
1,1,1,2-Tetrachloroethane	<0.5	ug/L		240	05/05/1995	bel
1,1,2,2-Tetrachloroethane	<0.3	ug/L		240	05/05/1995	bel
Tetrachloroethene	<0.4	ug/L		240	05/05/1995	bel
Toluene	<0.2	ug/L		240	05/05/1995	bel
1,2,3-Trichlorobenzene	<0.9	ug/L		240	05/05/1995	bel

NET Cambridge Division
QUALITY CONTROL DATA

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Landfill Monitoring

Report Date : 05/11/1995

Method Blank Analysis Data

Test Name	Result	Units	Prep Batch	Run Batch	Run Date	Analyst Initials
1,2,4-Trichlorobenzene	<0.7	ug/L		240	05/05/1995	bel
1,1,1-Trichloroethane	<0.5	ug/L		240	05/05/1995	bel
1,1,2-Trichloroethane	<0.2	ug/L		240	05/05/1995	bel
Trichloroethene	<0.3	ug/L		240	05/05/1995	bel
Trichlorofluoromethane	<0.6	ug/L		240	05/05/1995	bel
1,2,4-Trimethylbenzene	<0.4	ug/L		240	05/05/1995	bel
1,3,5-Trimethylbenzene	<0.4	ug/L		240	05/05/1995	bel
1,2,3-Trichloropropane	<0.6	ug/L		240	05/05/1995	bel
Vinyl Chloride	<0.4	ug/L		240	05/05/1995	bel
m-Xylene	<0.4	ug/L		240	05/05/1995	bel
o-Xylene	<0.7	ug/L		240	05/05/1995	bel
p-Xylene	<0.7	ug/L		240	05/05/1995	bel

NET Cambridge Division
QUALITY CONTROL DATA

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Landfill Monitoring

Report Date : 05/11/1995

Method Blank Analysis Data

Test Name	Result	Units	Prep Batch	Run Batch	Run Date	Analyst Initials
Volatiles by GC/MS 524.2 AQ						
1,2-Dichloroethane-d4	110	% recov.		241	05/03/1995	bel
1,2-Dichlorobenzene-d4	110	% recov.		241	05/03/1995	bel
Benzene	<0.2	ug/L		241	05/03/1995	bel
Bromobenzene	<0.4	ug/L		241	05/03/1995	bel
Bromochloromethane	<0.3	ug/L		241	05/03/1995	bel
Bromodichloromethane	<0.4	ug/L		241	05/03/1995	bel
Bromoform	<0.3	ug/L		241	05/03/1995	bel
Bromomethane	<0.3	ug/L		241	05/03/1995	bel
n-Butylbenzene	<0.4	ug/L		241	05/03/1995	bel
sec-Butylbenzene	<0.2	ug/L		241	05/03/1995	bel
tert-Butylbenzene	<0.3	ug/L		241	05/03/1995	bel
Carbon Tetrachloride	<0.6	ug/L		241	05/03/1995	bel
Chlorobenzene	<0.2	ug/L		241	05/03/1995	bel
Chloroethane	<0.4	ug/L		241	05/03/1995	bel
Chloroform	<0.7	ug/L		241	05/03/1995	bel
Chloromethane	<0.5	ug/L		241	05/03/1995	bel
2-Chlorotoluene	<0.4	ug/L		241	05/03/1995	bel
4-Chlorotoluene	<0.3	ug/L		241	05/03/1995	bel
1,2-Dibromo-3-chloropropane	<0.8	ug/L		241	05/03/1995	bel
Dibromochloromethane	<0.3	ug/L		241	05/03/1995	bel
1,2-Dibromoethane (EDB)	<0.3	ug/L		241	05/03/1995	bel
Dibromomethane	<0.3	ug/L		241	05/03/1995	bel
1,2-Dichlorobenzene	<0.4	ug/L		241	05/03/1995	bel
1,3-Dichlorobenzene	<0.2	ug/L		241	05/03/1995	bel
1,4-Dichlorobenzene	<0.5	ug/L		241	05/03/1995	bel
Dichlorodifluoromethane	<1.5	ug/L		241	05/03/1995	bel
1,1-Dichloroethane	<0.3	ug/L		241	05/03/1995	bel
1,2-Dichloroethane	<0.7	ug/L		241	05/03/1995	bel
1,1-Dichloroethene	<1.3	ug/L		241	05/03/1995	bel
cis-1,2-Dichloroethene	<0.4	ug/L		241	05/03/1995	bel
trans-1,2-Dichloroethene	<0.2	ug/L		241	05/03/1995	bel
1,2-Dichloropropane	<0.3	ug/L		241	05/03/1995	bel
1,3-Dichloropropane	<0.3	ug/L		241	05/03/1995	bel
2,2-Dichloropropane	<0.6	ug/L		241	05/03/1995	bel
1,1-Dichloropropene	<0.3	ug/L		241	05/03/1995	bel
cis -1,3-Dichloropropene	<0.4	ug/L		241	05/03/1995	bel
trans-1,3-Dichloropropene	<0.4	ug/L		241	05/03/1995	bel
Ethylbenzene	<0.3	ug/L		241	05/03/1995	bel
Hexachlorobutadiene	<0.6	ug/L		241	05/03/1995	bel
Isopropylbenzene	<0.4	ug/L		241	05/03/1995	bel
4-Isopropyltoluene	<0.4	ug/L		241	05/03/1995	bel
Methylene Chloride	1	ug/L		241	05/03/1995	bel
Naphthalene	<2.8	ug/L		241	05/03/1995	bel
n-Propylbenzene	<0.4	ug/L		241	05/03/1995	bel
Styrene	<0.4	ug/L		241	05/03/1995	bel
1,1,1,2-Tetrachloroethane	<0.5	ug/L		241	05/03/1995	bel
1,1,2,2-Tetrachloroethane	0.3	ug/L		241	05/03/1995	bel
Tetrachloroethene	<0.4	ug/L		241	05/03/1995	bel
Toluene	<0.2	ug/L		241	05/03/1995	bel
1,2,3-Trichlorobenzene	<0.9	ug/L		241	05/03/1995	bel

NET Cambridge Division
QUALITY CONTROL DATA

Report To: Goldman Env. Const. Co.

NET Job No: 95.01442

Project: JAMECO Landfill Monitoring

Report Date : 05/11/1995

Method Blank Analysis Data

Test Name	Result	Units	Prep Batch	Run Batch	Run Date	Analyst Initials
1,2,4-Trichlorobenzene	<0.7	ug/L		241	05/03/1995	bel
1,1,1-Trichloroethane	<0.5	ug/L		241	05/03/1995	bel
1,1,2-Trichloroethane	<0.2	ug/L		241	05/03/1995	bel
Trichloroethene	<0.3	ug/L		241	05/03/1995	bel
Trichlorofluoromethane	<0.6	ug/L		241	05/03/1995	bel
1,2,4-Trimethylbenzene	<0.4	ug/L		241	05/03/1995	bel
1,3,5-Trimethylbenzene	<0.4	ug/L		241	05/03/1995	bel
1,2,3-Trichloropropane	<0.6	ug/L		241	05/03/1995	bel
Vinyl Chloride	<0.4	ug/L		241	05/03/1995	bel
m-Xylene	<0.4	ug/L		241	05/03/1995	bel
o-Xylene	<0.7	ug/L		241	05/03/1995	bel
p-Xylene	<0.7	ug/L		241	05/03/1995	bel

5-06-9T G

DW

NET Cambridge

Water Volatile Matrix Spike/Matrix Spike Duplicate Recovery

Job Number:_____ Sample Number: DW BLANK

NET

COMPOUNDS	Spike Added (ug/L)	Sample Concentration (ug/L)	MS Concentration (ug/L)	MS % Recovery	QC Limits Rec.
1,1-Dichloroethene.	10.0	0	9.14	91.4	61-145
Trichloroethene....			10.51	105.1	71-120
Benzene.....			10.21	102.1	76-127
Toluene.....			10.67	106.7	76-125
Chlorobenzene.....			10.19	101.9	75-130

COMPOUNDS	Spike Added (ug/L)	MSD Concentration (ug/L)	MSD % Recovery (ug/L)	% RPD	QC Limits RPD	QC Limits Rec.
1,1-Dichloroethene.	10.0	9.58	95.8	5	25	61-145
Trichloroethene....		10.13	101.3	5	25	71-120
Benzene.....		10.54	105.4	3	25	76-127
Toluene.....		10.3	103.3	3	25	76-125
Chlorobenzene.....		9.28	92.8	9	25	75-130

Values Outside of QC Limits

RPD : 0 out of 5 outside limits

Spike Recovery : 0 out of 10 outside limits

Comments: MS/MSD DONE ON DW BLANK DUE to LACK of Sample.

The MS/MSD QC limits for recovery are the QC limits from the CLP guidelines. Method 524 for volatiles does not specify that MS/MSD analyses are required. Therefore, there are no limits to take into consideration.

NET® NATIONAL ENVIRONMENTAL TESTING, INC.

CHAIN OF CUSTODY RECORD

95-3147Z

COMPANY Goldman Environmental Consultants
ADDRESS 15 Pineville Pk Dr., Randolph, MA 02368
PHONE 617-961-1200 FAX 617-961-6546
PROJECT NAME/LOCATION Wyandanch, NY
PROJECT NUMBER 444-026-94
PROJECT MANAGER Sam Butcher

REPORT TO: Sam Butcher
INVOICE TO: Same
P.O. NO. 444-026-94
NET QUOTE NO.

SAMPLED BY
J. Daley (PRINT NAME) SIGNATURE
J. Deady (PRINT NAME) SIGNATURE

TIME	SAMPLE ID/DESCRIPTION	MATRIX	GRAB	COMP	# and Type of Containers	ANALYSES: 524.2	Total metals	Hex. Chromium	COMMENTS
11:45	MW-1	AQ	✓			✓	✓	✓	4 VOAs and 3 Plastic Bottles for each Sample.
1:30	MW-2		✓			✓	✓	✓	
1:30	MW-3		✓			✓	✓	✓	
1:00	MW-5		✓			✓	✓	✓	DO NOT ANALYZE BOTTLES MARKED FOR DISSOLVED METALS. THE EXTRA SAMPLES ARE INCLUDED SOLELY TO PROVIDE ADDITIONAL VOLUME FOR THE Cr6+ ANALYSIS. DO NOT PERFORM DISSOLVED METALS ANALYSIS
1:00	MW-7		✓			✓	✓	✓	
1:00	MW-9		✓			✓	✓	✓	
2:30	MW-12		✓			✓	✓	✓	Thanks,

CONDITION OF SAMPLE: BOTTLES INTACT? YES / NO
FIELD FILTERED? YES / NO
COC SEALS PRESENT AND INTACT? YES / NO
VOLATILES FREE OF HEADSPACE? YES / NO
TEMPERATURE UPON RECEIPT:
Bottles supplied by NET? YES / NO

SAMPLE REMAINDER DISPOSAL: RETURN SAMPLE REMAINDER TO CLIENT VIA
I REQUEST NET TO DISPOSE OF ALL SAMPLE REMAINDERS
DATE 4/19/95

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	RELINQUISHED BY:	DATE/TIME	RECEIVED FOR NET BY:
James Daley	4/19/95 3:45p	Airborne #2933212940	Airborne #2933212940	4/20 | 11:30	C. Baker

METHOD OF SHIPMENT: Airborne Express

REMARKS:

PT 1 - ORIGINAL - WHITE PT 2 - NET PROJECT MANAGER - YELLOW PT 3 - CUSTOMER COPY - PINK