

Project C7869.41

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**CHEMICAL QUALITY ASSURANCE REPORT FOR
PLUM BROOK ORDNANCE WORKS
GROUNDWATER INVESTIGATION
SAMPLE DELIVERY GROUP PB026**

Submitted to:

International Technology Corporation
312 Directors Drive
Knoxville, Tennessee 37923-4799

Submitted by:

3D/International, Inc.
Environmental Group
781 Neeb Road
Cincinnati, Ohio 45233

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Section 1.0: Introduction and Executive Summary

This Chemical Quality Assurance Report (CQAR) has been prepared for quality control and quality assurance samples collected during groundwater investigation at the Plum Brook Ordnance Works in Sandusky, Ohio. This report has been prepared in accordance with U.S. Army Corps of Engineers policy EM 200-1-6, **Chemical Quality Assurance for HTRW Projects**, dated 10 October 1997.

The samples included in this report consist of pairs of field duplicates and field split samples that were analyzed by Quanterra, Inc., Knoxville, Tennessee and Curtis & Tompkins, Ltd., Berkeley, California. Quanterra, Inc. served as the primary laboratory for this project, while Curtis & Tompkins served as the quality assurance laboratory.

The sample pairs addressed in this report are identified in Table 1. In this table, samples analyzed by Quanterra (the primary laboratory) are identified as QC samples, while those analyzed by Curtis & Tompkins are identified as QA samples. Table 2 identifies the analytical parameters for each sample.

Table 1. Sample Delivery Group PB026 Samples in Chemical Quality Assurance Report

Sample Pair	Sample Type		Sample Collection	
	QC	QA	Date	Time
9021	X		5/28/98	11:00 A.M.
9022		X	5/28/98	11:00 A.M.
5556	X		5/28/98	1:00 P.M.
5557		X	5/28/98	1:00 P.M.
5616	X		5/29/98	9:45 A.M.
5617		X	5/29/98	9:45 A.M.
9023	X		5/28/98	11:00 A.M.
9024		X	5/28/98	11:00 A.M.

Table 2. Sample Analytical Parameters

Analytical Parameter	SW846 Method*	QC and QA Sample Set			
		9021	5556	5616	9023
		9022	5557	5617	9024
Volatile Organic Compounds	8260A	X	X	X	X
Semivolatile Organic Compounds	8270B		X	X	
Polychlorinated Biphenyls	8081		X	X	
Dissolved Metals	6010A/ 7470A		X	X	
Total Metals	6010A/ 7470A		X	X	
Nitroaromatics and Nitramine	8330		X	X	

Section 2.0: Laboratory Quality Control Data Evaluation

2.1 PRIMARY LABORATORY

This section focuses on QC data generated by Quanterra, Inc., the primary laboratory for this effort. All samples were analyzed by Quanterra within recommended holding times.

All samples were received by Quanterra intact, with proper chain-of-custody documentation present and custody seals intact.

2.1.1 Volatile Organic Analyses

Samples 9021, 5556, 5616, and 9023 were analyzed for volatile organic compounds. A review of QC data for these samples revealed the following.

- Surrogate spike recoveries for all method blanks, laboratory control samples, matrix spike / matrix spike duplicates (MS/MSD), and samples were within recovery limits.
- Analyte recoveries and relative percent differences (RPDs) were within QC limits for all MS/MSD and laboratory control samples.
- 2 method blanks were analyzed with these samples. Each contained estimated concentrations of methylene chloride (0.73 ug/l and 0.82 ug/l) below the reporting limit of 1 ug/l. The second blank also contained an estimated concentration of 0.18 ug/l toluene. Methylene chloride was detected in all samples, and toluene in two samples; each of these detections may be attributed at least in part to laboratory contamination.

2.1.2 Semivolatile Organic Compounds

Samples 5556 and 5616 were analyzed for semivolatile organic compounds. Review of QC data for these analyses revealed the following.

- Surrogate spike recoveries for all method blanks, laboratory control samples, matrix spike / matrix spike duplicates (MS/MSD), and samples were within recovery limits.

- Analyte recoveries and relative percent differences (RPDs) were within QC limits for all MS/MSD and laboratory control samples.
- All method blanks were free of contamination.

2.1.3 Polychlorinated Biphenyls

Samples 5556 and 5616 were analyzed for PCBs with the following QC data results.

- Surrogate spike recoveries for all method blanks, laboratory control samples, matrix spike / matrix spike duplicates (MS/MSD), and samples were within recovery limits.
- Analyte recoveries and relative percent differences (RPDs) were within QC limits for all MS/MSD and laboratory control samples.
- All method blanks were free of contamination.

2.1.4 Metals

Samples 5556 and 5616 were analyzed for total metals and dissolved metals. The following QC data was generated with these analyses.

- All MS/MSD recoveries and RPDs were within limits.
- Laboratory control sample recoveries were within recovery limits.
- All method blanks were free of contamination.

2.1.5 Nitroaromatics and Nitramines

Samples 5556 and 5616 were analyzed for nitroaromatics and nitramines. The following QC data was generated with these analyses.

- Surrogate spike recoveries for all method blanks, laboratory control samples, matrix spike / matrix spike duplicates (MS/MSD), and samples were within recovery limits.
- Analyte recoveries and relative percent differences (RPDs) were within QC limits for all MS/MSD and laboratory control samples.
- All method blanks were free of contamination.

2.2 QA LABORATORY

Samples 9022, 5557, 5617, and 9024 were received intact by Curtis & Tompkins, the quality assurance laboratory for this effort. Chain-of-custody documentation was present and custody seals intact. Sample temperatures ranged from 2 to 5.75°C. The pH of all samples for volatile and total metals analysis was less than 2 standard units.

During the analysis of samples 5617 and 5557 for semivolatiles, the blank spike for this sample batch was broken. These samples were relogged as samples 5617 RE and 5557 RE, respectively, and reanalyzed. However, reanalysis occurred after expiration of the holding time. All other analytical holding times were met.

2.2.1 Volatile Organic Analyses

Samples 9022, 5557, 5617, and 9024 were analyzed for volatile organic compounds. A review of QC data for these samples revealed the following.

- Surrogate spike recoveries for all method blanks, laboratory control samples, blank spike / blank spike duplicates (BS/BSD), laboratory control samples, and samples were within recovery limits.
- Analyte recoveries and relative percent differences (RPDs) were within QC limits for all BS/BSD and laboratory control samples, with the exception of toluene and chlorobenzene in one BS/BSD sample. Recoveries of these analytes in this compound were high; however, these compounds were not detected in the samples.
- The method blank associated with the analytical batch in which sample 9024 was analyzed contained 7 ug/l methylene chloride. This compound was not detected in sample 9024. All other method blanks were free of contamination.

2.2.2 Semivolatile Organic Compounds

Samples 5557 (as 5557RE), 5617 (as 5617RE), RE6, 5557, 5616, and 5617 were analyzed for semivolatile organic compounds. Review of QC data for these analyses revealed the following.

- Surrogate spike recoveries for all method blanks, laboratory control samples, blank spike / blank spike duplicates (BS/BSD), and samples were within recovery limits.
- Analyte recoveries and relative percent differences (RPDs) were within QC limits for all BS/BSD and laboratory control samples.
- All method blanks were free of contamination.
- Analysis of semivolatiles was performed after expiration of the sample holding time because the breakage of a blank spike necessitated reextraction and reanalysis.

2.2.3 Polychlorinated Biphenyls

Samples 5557 and 5617 were analyzed for PCBs with the following QC data results.

- Surrogate spike recoveries for all method blanks, laboratory control samples, blank spike / blank spike duplicates (BS/BSD), and samples were within recovery limits.
- Analyte recoveries and relative percent differences (RPDs) were within QC limits for all BS/BMSD and laboratory control samples.
- All method blanks were free of contamination.

2.2.4 Metals

Samples 5556 and 5616 were analyzed for total metals and dissolved metals. The following QC data was generated with these analyses.

- All BS/BSD recoveries and RPDs were within limits.
- Laboratory control sample recoveries were within recovery limits.
- RPDs for a sample duplicate analysis performed by the laboratory were within control limits with the exception of aluminum, arsenic, molybdenum, and selenium.
- Sample spike recoveries were within limits with the exception of calcium, sodium, and nickel. The calcium and sodium spike recoveries were classified as not meaningful by the laboratory because the sample concentrations exceeded the spike amounts by a factor of more than four.
- All prep (method) blanks were free of contamination.

2.2.5 Nitroaromatics and Nitramines

Samples 5557 and 5617 were analyzed for nitroaromatics and nitramines by Quanterra, West Sacramento, California under contract from Curtis & Tompkins. The following QC data was generated with these analyses.

- Surrogate spike recoveries for all method blanks, laboratory control samples and laboratory control sample duplicates, and samples were within recovery limits.
- Analyte recoveries and RPDs were within control limits for all laboratory control samples and laboratory control sample duplicates.
- All method blanks were free of contamination.

Section 3.0: Primary and QA Laboratory Sample Data Comparison

The following sections provide a comparison between sample data generated by Quanterra, Inc. and Curtis & Tompkins. The definitions of agreement, minor disagreement, and major disagreement used in this discussion are those presented in Table 4-1 (Criteria for Comparing QC and QA Sample Data) of U.S. Army Corps of Engineers policy EM-200-1-6, **Chemical Quality Assurance for HTRW Projects**.

3.1 VOLATILE ORGANIC COMPOUNDS

Results for samples 9021 (analyzed by Quanterra) and 9022 (analyzed by Curtis & Tompkins) were in agreement. Sample 9021 contained methylene chloride and toluene at concentrations less than the reporting limit; the methylene chloride is attributable at least in part to laboratory contamination. Results for samples 5556 and 5557 were in agreement for all parameters. The only potential disagreement is for methylene chloride; however, this compound is attributable to laboratory contamination in sample 5556. Results for samples 5616 and 5617 were in agreement. Results for samples 9023 and 9024 were in agreement.

3.2 SEMIVOLATILE ORGANIC COMPOUNDS

Results for sample sets 5556 and 5557 (as 5557RE), and 5616 and 5617 (as 5617 RE) were in agreement. No semivolatiles were detected in any of these samples.

3.3 POLYCHLORINATED BIPHENYLS

Results for sample sets 5556 and 5557, as well as 5616 and 5617, were in agreement. No PCBs were detected in any of these samples.

3.4 DISSOLVED METALS

Results for samples 5556 and 5557 were in agreement for all metals except zinc. Zinc results were in minor disagreement. Additionally, sample 5556 was analyzed for thallium while 5557 was not; sample 5557 was analyzed for molybdenum while 5556 was not. Results for samples 5616 and 5617 were in agreement; however, sample 5616 was analyzed for thallium and not for molybdenum, while sample 5617 was analyzed for molybdenum and not for thallium. Curtis & Tompkins utilized lower reporting limits than

Quanterra for most metals, leading to several detections at concentrations below the reporting limits utilized by Quanterra.

3.5 TOTAL METALS

Analytical results for samples 5616 and 5617 were in agreement for all parameters with the exception of chromium and magnesium. Results for these parameters were in major disagreement (greater than 3 times difference). Results for samples 5556 and 5557 were in minor disagreement (> 5 times difference when one result is less than reporting limit) for copper and vanadium. These results were in major disagreement (>3 times difference when both sets have reportable quantity) for aluminum, arsenic, potassium, and zinc.

3.6 NITROAROMATICS AND NITRAMINES

Results for sample sets 5556 and 5557, as well as 5616 and 5617, were in agreement. No nitroaromatics or nitramines were detected in any of these samples.

Appendix 1
Data Comparison Tables

Volatile Organic Compounds

QC Sample No. 9021	QA Sample No. 9022
Date Sampled 5/28/98	Date Sampled 5/28/98
Date Received 5/29/98	Date Received 5/29/98
Date Extracted 06/08/98	Date Extracted 06/08/98
Date Analyzed 06/08/98	Date Analyzed 06/08/98
Method No. SW846-8260A	Method No. SW846-8260A
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Chloromethane	ND	ND
Bromomethane	ND	ND
Vinyl chloride	ND	ND
Chloroethane	ND	ND
Methylene chloride	0.49 J,B	ND
Acetone	ND	ND
Carbon disulfide	ND	ND
1,1-Dichloroethene	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethene (total)	ND	ND
Chloroform	ND	ND
1,2-Dichloroethane	ND	ND
2-Butanone	ND	ND
1,1,1-Trichloroethane	ND	ND
Carbon tetrachloride	ND	ND
Bromodichloromethane	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
Trichloroethene	ND	ND
Dibromochloromethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Benzene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Bromoform	ND	ND
4-Methyl-2-pentanone	ND	ND
2-Hexanone	ND	ND
Tetrachloroethene	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
Toluene	0.22 J	ND
Chlorobenzene	ND	ND
Ethylbenzene	ND	ND
Styrene	ND	ND
Xylenes (total)	ND	ND

J – Estimated concentration below the reporting limit. B – Analyte detected in method blank.

Volatile Organic Compounds

QC Sample No. 5556	QA Sample No. 5557
Date Sampled 5/28/98	Date Sampled 5/28/98
Date Received 5/29/98	Date Received 5/29/98
Date Extracted 6/04/98	Date Extracted 6/08/98
Date Analyzed 6/04/98	Date Analyzed 6/08/98
Method No. SW846-8260A	Method No. SW846-8260A
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Chloromethane	ND	ND
Bromomethane	ND	ND
Vinyl chloride	ND	ND
Chloroethane	ND	ND
Methylene chloride	2.9	ND
Acetone	70	6.7
Carbon disulfide	ND	ND
1,1-Dichloroethene	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethene (total)	ND	ND
Chloroform	ND	ND
1,2-Dichloroethane	ND	ND
2-Butanone	ND	ND
1,1,1-Trichloroethane	ND	ND
Carbon Tetrachloride	ND	ND
Bromodichloromethane	ND	ND
1,2-Dichloropropane	ND	ND
Cis-1,3-Dichloropropene	ND	ND
Trichloroethene	ND	ND
Dibromochloromethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Benzene	0.48 J	ND
Trans-1,3-Dichloropropene	ND	ND
Bromoform	ND	ND
4-Methyl-2-Pentanone	ND	ND
2-Hexanone	ND	ND
Tetrachloroethene	ND	ND
1,1,2,2,-Tetrachloroethane	ND	ND
Toluene	0.39 J,B	ND
Chlorobenzene	ND	ND
Ethylbenzene	ND	ND
Styrene	ND	ND
Xylenes (total)	ND	ND

J – Estimated concentration below the reporting limit. B – Analyte detected in method blank.

Volatile Organic Compounds

QC Sample No. 5616	QA Sample No. 5716
Date Sampled 5/29/98	Date Sampled 5/29/98
Date Received 5/30/98	Date Received 5/30/98
Date Extracted 6/08/98	Date Extracted 6/09/98
Date Analyzed 6/08/98	Date Analyzed 6/09/98
Method No. SW846-8260A	Method No. SW846-8260A
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Chloromethane	ND	ND
Bromomethane	ND	ND
Vinyl chloride	ND	ND
Chloroethane	ND	ND
Methylene chloride	0.44	ND
Acetone	5.6 J	ND
Carbon disulfide	ND	ND
1,1-Dichloroethene	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethene (total)	ND	ND
Chloroform	ND	ND
1,2-Dichloroethane	ND	ND
2-Butanone	ND	ND
1,1,1-Trichloroethane	ND	ND
Carbon Tetrachloride	ND	ND
Bromodichloromethane	ND	ND
1,2-Dichloropropane	ND	ND
Cis-1,3-Dichloropropene	ND	ND
Trichloroethene	ND	ND
Dibromochloromethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Benzene	ND	ND
Trans-1,3-Dichloropropene	ND	ND
Bromoform	ND	ND
4-Methyl-2-Pentanone	ND	ND
2-Hexanone	ND	ND
Tetrachloroethene	ND	ND
1,1,2,2,-Tetrachloroethane	ND	ND
Toluene	ND	ND
Chlorobenzene	ND	ND
Ethylbenzene	ND	ND
Styrene	ND	ND
Xylenes (total)	ND	ND

J – Estimated concentration below the reporting limit.

Volatile Organic Compounds

QC Sample No. 9023	QA Sample No. 9024
Date Sampled 5/29/98	Date Sampled 5/29/98
Date Received 5/30/98	Date Received 5/30/98
Date Extracted 6/04/98	Date Extracted 6/05/98
Date Analyzed 6/04/98	Date Analyzed 6/05/98
Method No. SW846-8260A	Method No. SW846-8260A
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Chloromethane	ND	ND
Bromomethane	ND	ND
Vinyl chloride	ND	ND
Chloroethane	ND	ND
Methylene chloride	11 B	ND
Acetone	ND	ND
Carbon disulfide	ND	ND
1,1-Dichloroethene	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethene (total)	ND	ND
Chloroform	ND	ND
1,2-Dichloroethane	ND	ND
2-Butanone	ND	ND
1,1,1-Trichloroethane	ND	ND
Carbon Tetrachloride	ND	ND
Bromodichloromethane	ND	ND
1,2-Dichloropropane	ND	ND
Cis-1,3-Dichloropropene	ND	ND
Trichloroethene	ND	ND
Dibromochloromethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Benzene	ND	ND
Trans-1,3-Dichloropropene	ND	ND
Bromoform	ND	ND
4-Methyl-2-Pentanone	ND	ND
2-Hexanone	ND	ND
Tetrachloroethene	ND	ND
1,1,2,2,-Tetrachloroethane	ND	ND
Toluene	0.25 J,B	ND
Chlorobenzene	ND	ND
Ethylbenzene	ND	ND
Styrene	ND	ND
Xylenes (total)	ND	ND

J – Estimated concentration below the reporting limit. B – Analyte detected in method blank

Semivolatile Organic Compounds

QC Sample No. 5617	QA Sample No. 5617 RE
Date Sampled 5/29/98	Date Sampled 5/29/98
Date Received 5/30/98	Date Received 5/30/98
Date Extracted 6/02/98	Date Extracted 6/10/98
Date Analyzed 6/09/98	Date Analyzed 6/12/98
Method No. SW846-8270B	Method No. SW846-8270B
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Phenol	ND	ND
bis (2-Chloroethyl) ether	ND	ND
2-Chlorophenol	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
2-Methylphenol	ND	ND
2-2'-oxybis (1-Chloropopane)	ND	ND
4-Methylphenol	ND	ND
N-Nitrosodi-n-propylamine	ND	ND
Hexachloroethane	ND	ND
Nitrobenzene	ND	ND
Isophorone	ND	ND
2-Nitrophenol	ND	ND
2,4-Dimethylphenol	ND	ND
bis (2-Chloroethoxy) methane	ND	ND
2,4-Dichlorophenol	ND	ND
1,2,4-Trichlorobenzene	ND	ND
Naphthalene	ND	ND
4-Chloroaniline	ND	ND
Hexachlorobutadiene	ND	ND
4-Chloro-3-methylphenol	ND	ND
2-Methylnaphthalene	ND	ND
Hexachlorocyclopentadiene	ND	ND
2,4,6-Trichlorophenol	ND	ND
2,4,5-Trichlorophenol	ND	ND
2-Chloronaphthalene	ND	ND
2-Nitroaniline	ND	ND
Dimethylphthalate	ND	ND
Acenaphthylene	ND	ND
2,6-Dinitrotoluene	ND	ND
3-Nitroaniline	ND	ND
Acenaphthene	ND	ND
2,4-Dinitrophenol	ND	ND
4-Nitrophenol	ND	ND
Dibenzofuran	ND	ND

2,4-Dinitrotoluene	ND	ND
Diethylphthalate	ND	ND
4-Chlorophenyl-phenylether	ND	ND
Fluorene	ND	ND
4- Nitroaniline	ND	ND
4,6-Dinitro-2-methylphenol	ND	ND
N-Nitrosodiphenylamine	ND	ND
4-Bromophenyl-phenylether	ND	ND
Hexachlorobenzene	ND	ND
Pentachlorophenol	ND	ND
Phenanthrene	ND	ND
Anthracene	ND	ND
Carbazole	ND	ND
Di-n-butylphthalate	ND	ND
Fluoranthene	ND	ND
Pyrene	ND	ND
Butylbenzylphthalate	ND	ND
3,3'-Dichlorobenzidine	ND	ND
Benzo(a)anthracene	ND	ND
Chrysene	ND	ND
bis(2-Ehtylhexyl)phthalate	ND	ND
Di-n-octylphthalate	ND	ND
Benzo(b)fluoranthene	ND	ND
Benzo(k)fluoranthene	ND	ND
Benzo(a)pyrene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Dibenz(a,h)anthracene	ND	ND
Benzo(g,h,i)perylene	ND	ND

Semivolatile Organic Compounds

QC Sample No. 5616	QA Sample No. 5617
Date Sampled 5/29/98	Date Sampled 5/29/98
Date Received 5/30/98	Date Received 5/30/98
Date Extracted 6/04/98	Date Extracted 6/02/98
Date Analyzed 6/10/98	Date Analyzed 6/09/98
Method No. SW846-8270B	Method No. SW846-8270B
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Phenol	ND	ND
bis (2-Chloroethyl) ether	ND	ND
2-Chlorophenol	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
2-Methylphenol	ND	ND
2-2'-oxybis (1-Chloropopane)	ND	ND
4-Methylphenol	ND	ND
N-Nitrosodi-n-propylamine	ND	ND
Hexachloroethane	ND	ND
Nitrobenzene	ND	ND
Isophorone	ND	ND
2-Nitrophenol	ND	ND
2,4-Dimethylphenol	ND	ND
bis (2-Chloroethoxy) methane	ND	ND
2,4-Dichlorophenol	ND	ND
1,2,4-Trichlorobenzene	ND	ND
Naphthalene	ND	ND
4-Chloroaniline	ND	ND
Hexachlorobutadiene	ND	ND
4-Chloro-3-methylphenol	ND	ND
2-Methylnaphthalene	ND	ND
Hexachlorocyclopentadiene	ND	ND
2,4,6-Trichlorophenol	ND	ND
2,4,5-Trichlorophenol	ND	ND
2-Chloronaphthalene	ND	ND
2-Nitroaniline	ND	ND
Dimethylphthalate	ND	ND
Acenaphthylene	ND	ND
2,6-Dinitrotoluene	ND	ND
3-Nitroaniline	ND	ND
Acenaphthene	ND	ND
2,4-Dinitrophenol	ND	ND
4-Nitrophenol	ND	ND
Dibenzofuran	ND	ND

2,4-Dinitrotoluene	ND	ND
Diethylphthalate	ND	ND
4-Chlorophenyl-phenylether	ND	ND
Fluorene	ND	ND
4- Nitroaniline	ND	ND
4,6-Dinitro-2-methylphenol	ND	ND
N-Nitrosodiphenylamine	ND	ND
4-Bromophenyl-phenylether	ND	ND
Hexachlorobenzene	ND	ND
Pentachlorophenol	ND	ND
Phenanthrene	ND	ND
Anthracene	ND	ND
Carbazole	ND	ND
Di-n-butylphthalate	ND	ND
Fluoranthene	ND	ND
Pyrene	ND	ND
Butylbenzylphthalate	ND	ND
3,3'-Dichlorobenzidine	ND	ND
Benzo(a)anthracene	ND	ND
Chrysene	ND	ND
bis(2-Ehtylhexyl)phthalate	ND	ND
Di-n-octylphthalate	ND	ND
Benzo(b)fluoranthene	ND	ND
Benzo(k)fluoranthene	ND	ND
Benzo(a)pyrene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Dibenz(a,h)anthracene	ND	ND
Benzo(g,h,i)perylene	ND	ND

Semivolatile Organic Compounds

QC Sample No. 5556	QA Sample No. 5557
Date Sampled 5/28/98	Date Sampled 5/28/98
Date Received 5/29/98	Date Received 5/29/98
Date Extracted 5/30/98	Date Extracted 6/02/98
Date Analyzed 6/09/98	Date Analyzed 6/09/98
Method No. SW846-8270B	Method No. SW846-8270B
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Phenol	ND	ND
bis (2-Chloroethyl) ether	ND	ND
2-Chlorophenol	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
2-Methylphenol	ND	ND
2-2'-oxybis (1-Chloropopane)	ND	ND
4-Methylphenol	ND	ND
N-Nitrosodi-n-propylamine	ND	ND
Hexachloroethane	ND	ND
Nitrobenzene	ND	ND
Isophorone	ND	ND
2-Nitrophenol	ND	ND
2,4-Dimethylphenol	ND	ND
bis (2-Chloroethoxy) methane	ND	ND
2,4-Dichlorophenol	ND	ND
1,2,4-Trichlorobenzene	ND	ND
Naphthalene	ND	ND
4-Chloroaniline	ND	ND
Hexachlorobutadiene	ND	ND
4-Chloro-3-methylphenol	ND	ND
2-Methylnaphthalene	ND	ND
Hexachlorocyclopentadiene	ND	ND
2,4,6-Trichlorophenol	ND	ND
2,4,5-Trichlorophenol	ND	ND
2-Chloronaphthalene	ND	ND
2-Nitroaniline	ND	ND
Dimethylphthalate	ND	ND
Acenaphthylene	ND	ND
2,6-Dinitrotoluene	ND	ND
3-Nitroaniline	ND	ND
Acenaphthene	ND	ND
2,4-Dinitrophenol	ND	ND
4-Nitrophenol	ND	ND
Dibenzofuran	ND	ND
2,4-Dinitrotoluene	ND	ND

Diethylphthalate	ND	ND
4-Chlorophenyl-phenylether	ND	ND
Fluorene	ND	ND
4- Nitroaniline	ND	ND
4,6-Dinitro-2-methylphenol	ND	ND
N-Nitrosodiphenylamine	ND	ND
4-Bromophenyl-phenylether	ND	ND
Hexachlorobenzene	ND	ND
Pentachlorophenol	ND	ND
Phenanthrene	ND	ND
Anthracene	ND	ND
Carbazole	ND	ND
Di-n-butylphthalate	ND	ND
Fluoranthene	ND	ND
Pyrene	ND	ND
Butylbenzylphthalate	ND	ND
3,3'-Dichlorobenzidine	ND	ND
Benzo(a)anthracene	ND	ND
Chrysene	ND	ND
bis(2-Ethylhexyl)phthalate	ND	ND
Di-n-octylphthalate	ND	ND
Benzo(b)fluoranthene	ND	ND
Benzo(k)fluoranthene	ND	ND
Benzo(a)pyrene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Dibenz(a,h)anthracene	ND	ND
Benzo(g,h,i)perylene	ND	ND

Semivolatile Organic Compounds

QC Sample No. 5557	QA Sample No. 5557 RE
Date Sampled 5/28/98	Date Sampled 5/28/98
Date Received 5/29/98	Date Received 5/30/98
Date Extracted 6/02/98	Date Extracted 6/10/98
Date Analyzed 6/09/98	Date Analyzed 6/12/98
Method No. SW846-8270B	Method No. SW846-8270B
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Phenol	ND	ND
bis (2-Chloroethyl) ether	ND	ND
2-Chlorophenol	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
2-Methylphenol	ND	ND
2-2'-oxybis (1-Chloropopane)	ND	ND
4-Methylphenol	ND	ND
N-Nitrosodi-n-propylamine	ND	ND
Hexachloroethane	ND	ND
Nitrobenzene	ND	ND
Isophorone	ND	ND
2-Nitrophenol	ND	ND
2,4-Dimethylphenol	ND	ND
bis (2-Chloroethoxy) methane	ND	ND
2,4-Dichlorophenol	ND	ND
1,2,4-Trichlorobenzene	ND	ND
Naphthalene	ND	ND
4-Chloroaniline	ND	ND
Hexachlorobutadiene	ND	ND
4-Chloro-3-methylphenol	ND	ND
2-Methylnaphthalene	ND	ND
Hexachlorocyclopentadiene	ND	ND
2,4,6-Trichlorophenol	ND	ND
2,4,5-Trichlorophenol	ND	ND
2-Chloronaphthalene	ND	ND
2-Nitroaniline	ND	ND
Dimethylphthalate	ND	ND
Acenaphthylene	ND	ND
2,6-Dinitrotoluene	ND	ND
3-Nitroaniline	ND	ND
Acenaphthene	ND	ND
2,4-Dinitrophenol	ND	ND
4-Nitrophenol	ND	ND
Dibenzofuran	ND	ND

2,4-Dinitrotoluene	ND	ND
Diethylphthalate	ND	ND
4-Chlorophenyl-phenylether	ND	ND
Fluorene	ND	ND
4- Nitroaniline	ND	ND
4,6-Dinitro-2-methylphenol	ND	ND
N-Nitrosodiphenylamine	ND	ND
4-Bromophenyl-phenylether	ND	ND
Hexachlorobenzene	ND	ND
Pentachlorophenol	ND	ND
Phenanthrene	ND	ND
Anthracene	ND	ND
Carbazole	ND	ND
Di-n-butylphthalate	ND	ND
Fluoranthene	ND	ND
Pyrene	ND	ND
Butylbenzylphthalate	ND	ND
3,3'-Dichlorobenzidine	ND	ND
Benzo(a)anthracene	ND	ND
Chrysene	ND	ND
bis(2-Ethylhexyl)phthalate	ND	ND
Di-n-octylphthalate	ND	ND
Benzo(b)fluoranthene	ND	ND
Benzo(k)fluoranthene	ND	ND
Benzo(a)pyrene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Dibenz(a,h)anthracene	ND	ND
Benzo(g,h,i)perylene	ND	ND

Polychlorinated Biphenyls

QC Sample No. 5556	QA Sample No. 5557
Date Sampled 5/28/98	Date Sampled 5/28/98
Date Received 5/29/98	Date Received 5/29/98
Date Extracted 6/01/98	Date Extracted 6/02/98
Date Analyzed 6/18/98	Date Analyzed 6/05/98
Method No. SW846-8081	Method No. SW846-8081
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Aroclor 1016	ND	ND
Aroclor 1221	ND	ND
Aroclor 1232	ND	ND
Aroclor 1242	ND	ND
Aroclor 1248	ND	ND
Aroclor 1254	ND	ND
Aroclor 1260	ND	ND

Polychlorinated Biphenyls

QC Sample No. 5616	QA Sample No. 5617
Date Sampled 5/29/98	Date Sampled 5/29/98
Date Received 5/30/98	Date Received 5/30/98
Date Extracted 6/01/98	Date Extracted 6/02/98
Date Analyzed 6/22/98	Date Analyzed 6/05/98
Method No. SW846-8081	Method No. SW846-8081
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Aroclor 1016	ND	ND
Aroclor 1221	ND	ND
Aroclor 1232	ND	ND
Aroclor 1242	ND	ND
Aroclor 1248	ND	ND
Aroclor 1254	ND	ND
Aroclor 1260	ND	ND

Dissolved Metals

QC Sample No. 5556	QA Sample No. 5557
Date Sampled 5/28/98	Date Sampled 5/28/98
Date Received 5/29/98	Date Received 5/29/98
Method No. SW846-6010A, SW846-7470A (Hg only)	Method No. SW846-6010A, SW846-7470A (Hg only)
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Aluminum	ND	180
Antimony	ND	ND
Arsenic	ND	12
Barium	ND	180
Beryllium	ND	2.3
Cadmium	ND	ND
Calcium	118000	91000
Chromium (total)	ND	ND
Cobalt	ND	ND
Copper	ND	ND
Iron	374	430
Lead	ND	ND
Magnesium	39500	35000
Manganese	262	200
Mercury	ND	ND
Molybdenum		47
Nickel	ND	ND
Potassium	ND	1900
Selenium	ND	5.3
Silver	ND	ND
Sodium	23800	19000
Thallium	ND	ND
Vanadium	ND	ND
Zinc	51.4	ND

Total Metals

QC Sample No. 5616	QA Sample No. 5617
Date Sampled 5/29/98	Date Sampled 5/29/98
Date Received 5/30/98	Date Received 5/30/98
Method No. SW846-6010A, SW846-7470 (Hg only)	Method No. SW846-6010A, SW846-7470 (Hg only)
Matrix: Water	Units: µg/L

Total Metals

PARAMETER	QC RESULT	QA RESULT
Aluminum	ND	140
Antimony	ND	ND
Arsenic	ND	7.1
Barium	ND	170
Beryllium	ND	ND
Cadmium	ND	ND
Calcium	145000	120000
Chromium (total)	ND	ND
Cobalt	ND	ND
Copper	ND	ND
Iron	10700	8400
Lead	ND	ND
Magnesium	52900	48000
Manganese	1370	1200
Mercury	ND	ND
Molybdenum		ND
Nickel	ND	ND
Potassium	8770	6700
Selenium	ND	7.8
Silver	ND	ND
Sodium	65900	56000
Thallium	ND	
Vanadium	ND	ND
Zinc	36.9	ND

Total Metals

QC Sample No. 5616	QA Sample No. 5617
Date Sampled 5/29/98	Date Sampled 5/29/98
Date Received 5/30/98	Date Received 5/30/98
Method No. SW846-6010A, SW846-7470A (Hg only)	Method No. SW846-6010A, SW846-7470 (Hg only)
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Aluminum	16500	22000
Antimony	ND	ND
Arsenic	31.9	36
Barium	ND	180
Beryllium	ND	ND
Cadmium	ND	ND
Calcium	252000	220000
Chromium (total)	455	38
Cobalt	ND	41
Copper	40.4	40
Iron	55900	59000
Lead	27.3	29
Magnesium	616000	64000
Manganese	1540	1400
Mercury	.24	ND
Molybdenum		ND
Nickel	60.6	97
Potassium	13000	14000
Selenium	ND	ND
Silver	ND	ND
Sodium	68100	76000
Thallium	ND	ND
Vanadium	55.1	36
Zinc	138	130

Total Metals

QC Sample No. 5556	QA Sample No. 5557
Date Sampled 5/28/98	Date Sampled 5/28/98
Date Received 5/29/98	Date Received 5/29/98
Method No. SW846-6010A, SW846-7470A (Hg only)	Method No. SW846-6010A, SW846-7470 (Hg only)
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
Aluminum	27500	3900
Antimony	ND	ND
Arsenic	2512	11
Barium	361	250
Beryllium	ND	ND
Cadmium	ND	ND
Calcium	191000	120000
Chromium (total)	42.6	ND
Cobalt	ND	ND
Copper	53.2	ND
Iron	49100	6700
Lead	18.1	11
Magnesium	56700	42000
Manganese	1030	370
Mercury	ND	ND
Molybdenum		25
Nickel	59.6	ND
Potassium	1000	3500
Selenium	ND	ND
Silver	ND	ND
Sodium	21100	21000
Thallium	ND	ND
Vanadium	66.1	ND
Zinc	157	28

Nitroaromatics and Nitramines

QC Sample No.5616	QC Sample No. 5617
Date Sampled 2/29/98	Date Sampled: 5/29/98
Date Received 5/30/98	Date Received: 6/02/98
Date Extracted 6/01/98	Date Extracted: 6/03/98
Date Analyzed 6/16/98	Date Analyzed: 6/03/98
Method No. SW846-8330	Method No. SW846-8330
Matrix: Water	Units: µg/L

PARAMETER	QC RESULT	QA RESULT
4-Amino-2,6-dinitrotoluene	ND	ND
1,3-Dinitrobenzene	ND	ND
2,4-Dinitrotoluene	ND	ND
2,6-Dinitrotoluene	ND	ND
HMX	ND	ND
Nitrobenzene	ND	ND
2-Nitrotoluene	ND	ND
3-Nitrotoluene	ND	ND
RDX	ND	ND
Tetryl	ND	ND
1,3,5-Trinitrobenzene	ND	ND
2,4,6-Trinitrotoluene	ND	ND

Nitroaromatics and Nitramines

QC Sample No.5556	QA Sample No.5557
Date Sampled 5/28/98	Date Sampled 5/28/98
Date Received 5/29/98	Date Received 6/02/98
Date Extracted 6/01/98	Date Extracted 6/03/98
Date Analyzed 6/17/98	Date Analyzed 6/04/98
Method No. SW846-8330	Method No. SW846-8330
Matrix WATER	CONCENTRATION UNITS: µg/L

PARAMETER	QC RESULT	QA RESULT
4-Amino-2,6-dinitrotoluene	ND	ND
1,3-Dinitrobenzene	ND	ND
2,4-Dinitrotoluene	ND	ND
2,6-Dinitrotoluene	ND	ND
HMX	ND	ND
Nitrobenzene	ND	ND
2-Nitrotoluene	ND	ND
3-Nitrotoluene	ND	ND
RDX	ND	ND
Tetryl	ND	ND
1,3,5-Trinitrobenzene	ND	ND
2,4,6-Trinitrotoluene	ND	ND

Appendix 2
Analytical Results and Chain of Custody Documents



Volatile Organics by GC/MS

Client: IT Corporation
Project#: 773206
Location: Plumbrook Ordinance Wor

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: 5557
Lab ID: 133860-001
Matrix: Water
Batch#: 41337
Units: ug/L
Diln Fac: 1

Sampled: 05/28/98
Received: 05/29/98
Extracted: 06/08/98
Analyzed: 06/08/98

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Acetone	67	20
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	5.0
Carbon Disulfide	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	20
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
4-Methyl-2-Pentanone	ND	20
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	20
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0

Surrogate	%Recovery	Recovery Limits
Dibromofluoromethane	105	76-128
1,2-Dichloroethane-d4	103	85-121
Toluene-d8	102	92-110
Bromofluorobenzene	109	84-115

Volatile Organics by GC/MS

 Client: IT Corporation
 Project#: 773206
 Location: Plumbrook Ordinance Wor

 Analysis Method: EPA 8260
 Prep Method: EPA 5030

 Field ID: 9022
 Lab ID: 133860-002
 Matrix: Water
 Batch#: 41337
 Units: ug/L
 Diln Fac: 1

 Sampled: 05/28/98
 Received: 05/29/98
 Extracted: 06/08/98
 Analyzed: 06/08/98

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Acetone	ND	20
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	5.0
Carbon Disulfide	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	20
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
4-Methyl-2-Pentanone	ND	20
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	20
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Surrogate	%Recovery	Recovery Limits
Dibromofluoromethane	106	76-128
1,2-Dichloroethane-d4	101	85-121
Toluene-d8	103	92-110
Bromofluorobenzene	110	84-115



Semivolatile Organics by GC/MS

Client: IT Corporation
Project#: 773206
Location: Plumbrook Ordinance Wor

Analysis Method: EPA 8270B
Prep Method: EPA 3520

Field ID: 5557
Lab ID: 133860-001
Matrix: Water
Batch#: 41248
Units: ug/L
Diln Fac: 1

Sampled: 05/28/98
Received: 05/29/98
Extracted: 06/02/98
Analyzed: 06/09/98

Analyte	Result	Reporting Limit
Phenol	ND	10
2-Chlorophenol	ND	10
Benzyl alcohol	ND	10
2-Methylphenol	ND	10
3,4-Methylphenol	ND	10
2-Nitrophenol	ND	52
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	52
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	52
4-Nitrophenol	ND	52
4,6-Dinitro-2-methylphenol	ND	52
Pentachlorophenol	ND	10
N-Nitrosodimethylamine	ND	10
Aniline	ND	10
bis(2-Chloroethyl) ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-Chloroisopropyl) ether	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
bis(2-Chloroethoxy) methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	52
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	52
Dimethylphthalate	ND	10
Acenaphthylene	ND	10



Semivolatile Organics by GC/MS

Field ID: 5557	Sampled: 05/28/98
Lab ID: 133860-001	Received: 05/29/98
Matrix: Water	Extracted: 06/02/98
Batch#: 41248	Analyzed: 06/09/98
Units: ug/L	
Diln Fac: 1	

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	52
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	52
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	52
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b,k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	94	17-107
Phenol-d5	97	18-115
2,4,6-Tribromophenol	100	14-121
Nitrobenzene-d5	105	36-115
2-Fluorobiphenyl	95	36-113
Terphenyl-d14	58	17-115

Semivolatile Organics by GC/MS

Client: IT Corporation	Analysis Method: EPA 8270B
Project#: 773206	Prep Method: EPA 3520
Location: Plumbrook Ordinance Wor	

Field ID: 5557 RE	Sampled: 05/28/98
Lab ID: 133860-003	Received: 05/29/98
Matrix: Water	Extracted: 06/10/98
Batch#: 41398	Analyzed: 06/12/98
Units: ug/L	
Diln Fac: 1	

Analyte	Result	Reporting Limit
Phenol	ND	10
2-Chlorophenol	ND	10
Benzyl alcohol	ND	10
2-Methylphenol	ND	10
3,4-Methylphenol	ND	10
2-Nitrophenol	ND	52
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	52
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	52
4-Nitrophenol	ND	52
4,6-Dinitro-2-methylphenol	ND	52
Pentachlorophenol	ND	10
N-Nitrosodimethylamine	ND	10
Aniline	ND	10
bis(2-Chloroethyl) ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-Chloroisopropyl) ether	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
bis(2-Chloroethoxy) methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	52
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	52
Dimethylphthalate	ND	10
Acenaphthylene	ND	10



Semivolatile Organics by GC/MS

Field ID: 5557 RE	Sampled: 05/28/98
Lab ID: 133860-003	Received: 05/29/98
Matrix: Water	Extracted: 06/10/98
Batch#: 41398	Analyzed: 06/12/98
Units: ug/L	
Diln Fac: 1	

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	52
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	52
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	52
Benzo (a) anthracene	ND	10
Chrysene	ND	10
bis (2-Ethylhexyl) phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo (b,k) fluoranthene	ND	10
Benzo (a) pyrene	ND	10
Indeno (1,2,3-cd) pyrene	ND	10
Dibenz (a,h) anthracene	ND	10
Benzo (g,h,i) perylene	ND	10

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	74	17-107
Phenol-d5	76	18-115
2,4,6-Tribromophenol	70	14-121
Nitrobenzene-d5	77	36-115
2-Fluorobiphenyl	77	36-113
Terphenyl-d14	51	17-115

PCBs

Client: IT Corporation
 Project#: 773206
 Location: Plumbrook Ordinance Wor

Analysis Method: PCB
 Prep Method: EPA 3520

Field ID: 5557
 Lab ID: 133860-001
 Matrix: Water
 Batch#: 41250
 Units: ug/L
 Diln Fac: 1

Sampled: 05/28/98
 Received: 05/29/98
 Extracted: 06/02/98
 Analyzed: 06/05/98

Analyte	Result	Reporting Limit
Aroclor-1016	ND	0.52
Aroclor-1221	ND	1.0
Aroclor-1232	ND	0.52
Aroclor-1242	ND	0.52
Aroclor-1248	ND	0.52
Aroclor-1254	ND	0.52
Aroclor-1260	ND	0.52

Surrogate	%Recovery	Recovery Limits
TCMX	71	19-130
Decachlorobiphenyl	50	22-110

SAMPLE ID: 5557
 LAB ID: 133860-001
 CLIENT: IT Corporation
 PROJECT ID: 773206
 LOCATION: Plumbrook Ordinance Wor
 MATRIX: Filtrate

DATE SAMPLED: 05/28/98
 DATE RECEIVED: 05/29/98
 DATE REPORTED: 06/10/98

TARGET ANALYTE LIST

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Aluminum	180	100	1	41355	EPA 6010A	06/09/98
Antimony	ND	60	1	41355	EPA 6010A	06/09/98
Arsenic	12	5.0	1	41355	EPA 6010A	06/09/98
Barium	180	10	1	41355	EPA 6010A	06/09/98
Beryllium	ND	2.0	1	41355	EPA 6010A	06/09/98
Cadmium	ND	5.0	1	41355	EPA 6010A	06/09/98
Calcium	91000	500	1	41355	EPA 6010A	06/09/98
Chromium (total)	ND	10	1	41355	EPA 6010A	06/09/98
Cobalt	ND	20	1	41355	EPA 6010A	06/09/98
Copper	ND	10	1	41355	EPA 6010A	06/09/98
Iron	430	100	1	41355	EPA 6010A	06/09/98
Lead	ND	3.0	1	41355	EPA 6010A	06/09/98
Magnesium	35000	500	1	41355	EPA 6010A	06/09/98
Manganese	200	10	1	41355	EPA 6010A	06/09/98
Mercury	ND	0.20	1	41241	EPA 7470	06/03/98
Molybdenum	47	20	1	41355	EPA 6010A	06/09/98
Nickel	ND	20	1	41355	EPA 6010A	06/09/98
Potassium	1900	500	1	41355	EPA 6010A	06/09/98
Selenium	5.3	5.0	1	41355	EPA 6010A	06/09/98
Silver	ND	5.0	1	41355	EPA 6010A	06/09/98
Sodium	19000	500	1	41355	EPA 6010A	06/09/98
Thallium	ND	5.0	1	41355	EPA 6010A	06/09/98
Vanadium	ND	10	1	41355	EPA 6010A	06/09/98
Zinc	ND	20	1	41355	EPA 6010A	06/09/98

ND = Not detected at or above reporting limit



SAMPLE ID: 5557
LAB ID: 133860-001
CLIENT: IT Corporation
PROJECT ID: 773206
LOCATION: Plumbrook Ordinance Wor
MATRIX: Water

DATE SAMPLED: 05/28/98
DATE RECEIVED: 05/29/98
DATE REPORTED: 06/10/98

TARGET ANALYTE LIST

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Aluminum	3900	100	1	41296	EPA 6010A	06/08/98
Antimony	ND	60	1	41296	EPA 6010A	06/08/98
Arsenic	11	5.0	1	41296	EPA 6010A	06/08/98
Barium	250	10	1	41296	EPA 6010A	06/08/98
Beryllium	ND	2.0	1	41296	EPA 6010A	06/08/98
Cadmium	ND	5.0	1	41296	EPA 6010A	06/08/98
Calcium	120000	500	1	41296	EPA 6010A	06/08/98
Chromium (total)	ND	10	1	41296	EPA 6010A	06/08/98
Cobalt	ND	20	1	41296	EPA 6010A	06/08/98
Copper	ND	10	1	41296	EPA 6010A	06/08/98
Iron	6700	100	1	41296	EPA 6010A	06/08/98
Lead	11	3.0	1	41296	EPA 6010A	06/08/98
Magnesium	42000	500	1	41296	EPA 6010A	06/08/98
Manganese	370	10	1	41296	EPA 6010A	06/08/98
Mercury	ND	0.20	1	41240	EPA 7470	06/02/98
Molybdenum	25	20	1	41296	EPA 6010A	06/08/98
Nickel	ND	20	1	41296	EPA 6010A	06/08/98
Potassium	3500	500	1	41296	EPA 6010A	06/09/98
Selenium	ND	5.0	1	41296	EPA 6010A	06/08/98
Silver	ND	5.0	1	41296	EPA 6010A	06/08/98
Sodium	21000	500	1	41296	EPA 6010A	06/09/98
Thallium	ND	5.0	1	41296	EPA 6010A	06/08/98
Vanadium	ND	10	1	41296	EPA 6010A	06/08/98
Zinc	28	20	1	41296	EPA 6010A	06/08/98

ND = Not detected at or above reporting limit

Nitroaromatics and Nitramines by HPLC
Method 8330

Client Name: Curtis & Tompkins, Ltd.

Client ID: 5557

LAB ID: 099485-0001-SA

Matrix: AQUEOUS

Authorized: 02 JUN 98

Sampled: 28 MAY 98

Prepared: 03 JUN 98

Received: 02 JUN 98

Analyzed: 04 JUN 98

Dilution Factor: 1.0

Parameter	Result	Units	Reporting Limit	Qualifier
HMX	ND	ug/L	1.0	
1,3,5-Trinitrobenzene	ND	ug/L	0.30	
RDX	ND	ug/L	0.80	
1,3-Dinitrobenzene	ND	ug/L	0.10	
Nitrobenzene	ND	ug/L	1.0	
2,4,6-Trinitrotoluene	ND	ug/L	0.10	
Tetryl	ND	ug/L	1.0	
2,4-Dinitrotoluene	ND	ug/L	0.10	
2,6-Dinitrotoluene	ND	ug/L	0.30	
2-Am-DNT	ND	ug/L	0.10	
4-Am-DNT	ND	ug/L	0.10	
2-Nitrotoluene	ND	ug/L	1.0	
4-Nitrotoluene	ND	ug/L	1.0	
3-Nitrotoluene	ND	ug/L	1.0	

Surrogate	Recovery	Acceptable Range
2,4-Dinitrofluorobenzene	93 %	65 - 135

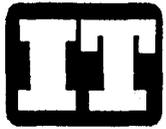
ND = Not Detected

Reported By: Jon Edmondson

Approved By: Emily Uebelhoer

The cover letter is an integral part of this report.

Rev 230787



133860

**ANALYSIS REQUEST AND
CHAIN OF CUSTODY RECORD**

Special Instructions:

Samples Shipment Date:

Possible Hazard Identification:

Non-hazard Flammable Skin Irritant Poison B Unknown

Sample Disposal:

Return to Client Disposal by Lab Archive (mos.)

1. Relinquished By
(Signature/Affiliation)

Date:
Time:

1. Received By
(Signature/Affiliation)

Jose O. [Signature]

Date: 5/21/98
Time: 10

2. Relinquished By
(Signature/Affiliation)

Date:
Time:

2. Received By
(Signature/Affiliation)

Date:
Time:

3. Relinquished By
(Signature/Affiliation)

Date:
Time:

3. Received By
(Signature/Affiliation)

Date:
Time:

Comments:

Sample No	Sample Name	Sample Date	Sample Time	Container	Ctr Qty	Preservative	Requested Testing Program	File CID	Condition On Receipt
5557	PBOW-98-WELLS--IT-MW05-5555	28-MAY-98	13:00	1 L HDPE	2	HNO3 PH<2	TAL Metals by SW-846 6010A/7470 in water	N	
5557	PBOW-98-WELLS--IT-MW05-5555	28-MAY-98	13:00	1 L Amb. Glass	1	None except cool to 4 C	Nitroaromatics by SW-846 8330 in soil	N	
5557	PBOW-98-WELLS--IT-MW05-5555	28-MAY-98	13:00	40 ml GVIAL, SEP	3	HCl<pH 2	TCL Volatiles by SW-846 8260A	N	
5557	PBOW-98-WELLS--IT-MW05-5555	28-MAY-98	13:00	1 L Amb. Glass	2	None except cool to 4 C	TCL Semivolatiles by SW-846 8270B in soil	N	
5557	PBOW-98-WELLS--IT-MW05-5555	28-MAY-98	13:00	1 L Amb. Glass	2	None except cool to 4 C	PCBs by SW8081	N	
9022	PBOW-98-WELLS--IT-MW05-9022	28-MAY-98	11:00	40 ml GVIAL, SEP	3	HCl<pH 2	TCL Volatiles by SW-846 8260A	N	

773206
771481

Plumbhook



Curtis & Tompkins, Ltd

COOLER RECEIPT CHECKLIST

Login#: 133860 Date Received: 5/29 Number of Coolers: 1
Client: IT Project: 773206

A. Preliminary Examination Phase

Date Opened: 5/29 By (print): J. Williams (sign) Jaw

- Did cooler come with a shipping slip (airbill, etc.)? YES NO
If YES, enter carrier name and airbill number: Fedex 800195153776
- Were custody seals on outside of cooler? YES NO
How many and where? 1 front Seal date: 5/28 Seal name: _____
- Were custody seals unbroken and intact at the date and time of arrival? YES NO
- Were custody papers dry and intact when received? YES NO
- Were custody papers filled out properly (ink, signed, etc.)? YES NO
- Did you sign the custody papers in the appropriate place? YES NO
- Was project identifiable from custody papers? YES NO
If YES, enter project name at the top of this form.
- If required, was sufficient ice used? YES NO
Type of ice: cube Temperature: 5.75°C

B. Login Phase

Date Logged In: 5/29 By (print): J. Williams (sign) Jaw

- Describe type of packing in cooler: Vermiculite
- Did all bottles arrive unbroken? YES NO
- Were labels in good condition and complete (ID, date, time, signature, etc.)? YES NO
- Did bottle labels agree with custody papers? YES NO
- Were appropriate containers used for the tests indicated? YES NO
- Were correct preservatives added to samples? YES NO
- Was sufficient amount of sample sent for tests indicated? YES NO
- Were bubbles absent in VOA samples? If NO, list sample Ids below YES NO
- Was the client contacted concerning this sample delivery? YES NO
If YES, give details below.
Who was called? _____ By whom? _____ Date: _____

Additional Comments:





**INTERNATIONAL
TECHNOLOGY
CORPORATION**

133881

**ANALYSIS REQUEST AND
CHAIN OF CUSTODY RECORD**

Reference Document No: PBGW-052998CURT

Page 1 of 1

Project Number: 773206

Samples Shipment Date: 29-MAY-98

Bill To: Accounts Receivable

Project Name: PLUMBROOK ORDNANCE WOR ab Destination: Curtis and Tomkins Lab

312 Directors Drive

Knoxville

TN 37923

Sample Coordinator: Duane Nielsen

Lab Contact: Carol Wortham (PM) or

Report To: Kim Napier

312 Directors Drive

Knoxville

TN 37923

Turnaround Time:

Project Contact: Kim Napier

Carrier/Waybill No.: Fed Ex/800185091307

Special Instructions:

Possible Hazard Identification:

Non-hazard | | Flammable | | Skin Irritant | | Poison B | | Unknown

Sample Disposal:

Return to Client | | Disposal by Lab Archive (mos.)

1. Relinquished By
(Signature/Affiliation)

Date: 5/29/98

Time: 1600

1. Received By
(Signature/Affiliation)

Date:

Time:

2. Relinquished By
(Signature/Affiliation)

Date:

Time:

2. Received By
(Signature/Affiliation)

Date:

Time:

3. Relinquished By
(Signature/Affiliation)

Date:

Time:

3. Received By
(Signature/Affiliation)

Date: 6/1/98

Time:

Comments:

Sample No	Sample Name	Sample Date	Sample Time	Container	Ctr Qty	Preservative	Requested Testing Program	File CID	Condition On Receipt
5617	PBOW-98-GW-T VTAMW10-5617	29-MAY-98	09:45	1 L Amb. Glass	1	None except cool to 4 C	Nitroaromatics by SW-846 8330 in soil	N	
5617	PBOW-98-GW-T VTAMW10-5617	29-MAY-98	09:45	40 ml GVIAL, SEP	3	HCl, pH<2	TCL Volatiles by SW-846 8260A	N	
5617	PBOW-98-GW-T VTAMW10-5617	29-MAY-98	09:45	1 L HDPE	2	HNO3, pH<2	TAL Metals by SW-846 6010A/7470 in water	N	
5617	PBOW-98-GW-T VTAMW10-5617	29-MAY-98	09:45	1 L Amb. Glass	2	None except cool to 4 C	TCL Semivolatiles by SW-846 8270B in soil	N	
5617	PBOW-98-GW-T VTAMW10-5617	29-MAY-98	09:45	1 L Amb. Glass	2	None except cool to 4 C	PCBs by SW8081	N	
9024	PBOW-98-GW-T VTAMW10-9024	29-MAY-98	11:00	40 ml GVIAL, SEP	3	HCl<pH 2	TCL Volatiles by SW-846 8260A	N	

3002

Plumbrock



Curtis & Tompkins, Ltd

COOLER RECEIPT CHECKLIST

Login#: 133881 Date Received: 6/1 Number of Coolers: 1
 Client: IT Project: Plumbrock 773206

A. Preliminary Examination Phase

Date Opened: 6/1 By (print): J. Williams (sign) J. Williams

- Did cooler come with a shipping slip (airbill, etc.)? YES NO
If YES, enter carrier name and airbill number: Fedex 8001 85091307
- Were custody seals on outside of cooler? YES NO
How many and where? (Front) Seal date: 5/29 Seal name: _____
- Were custody seals unbroken and intact at the date and time of arrival? YES NO
- Were custody papers dry and intact when received? YES NO
- Were custody papers filled out properly (ink, signed, etc.)? YES NO
- Did you sign the custody papers in the appropriate place? YES NO
- Was project identifiable from custody papers? YES NO
If YES, enter project name at the top of this form.
- If required, was sufficient ice used? YES NO
Type of ice: cube Temperature: 5.25°C

B. Login Phase

Date Logged In: 6/1 By (print): J. Williams (sign) J. Williams

- Describe type of packing in cooler: Vacu-seal
- Did all bottles arrive unbroken? YES NO
- Were labels in good condition and complete (ID, date, time, signature, etc.)? YES NO
- Did bottle labels agree with custody papers? YES NO
- Were appropriate containers used for the tests indicated? YES NO
- Were correct preservatives added to samples? YES NO
- Was sufficient amount of sample sent for tests indicated? YES NO
- Were bubbles absent in VOA samples? If NO, list sample Ids below YES NO
- Was the client contacted concerning this sample delivery? YES NO
If YES, give details below.
Who was called? _____ By whom? _____ Date: _____

Additional Comments:

CUSTODY SEAL

SIGNATURE: _____
DATE: _____



Volatile Organics by GC/MS

Client: IT Corporation
Project#: 773206
Location: Plumbrook Ordinance Wor

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: 5617
Lab ID: 133881-001
Matrix: Water
Batch#: 41359
Units: ug/L
Diln Fac: 1

Sampled: 05/29/98
Received: 05/30/98
Extracted: 06/09/98
Analyzed: 06/09/98

Analyte	Result	Reporting Limit
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Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Acetone	ND	20
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	5.0
Carbon Disulfide	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	20
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
4-Methyl-2-Pentanone	ND	20
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	20
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0

Surrogate	%Recovery	Recovery Limits
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Dibromofluoromethane	102	76-128
1,2-Dichloroethane-d4	100	85-121
Toluene-d8	101	92-110
Bromofluorobenzene	108	84-115



Volatile Organics by GC/MS		
Client: IT Corporation	Analysis Method: EPA 8260	
Project#: 773206	Prep Method: EPA 5030	
Location: Plumbrook Ordinance Wor		
Field ID: 9024	Sampled: 05/29/98	
Lab ID: 133881-002	Received: 05/30/98	
Matrix: Water	Extracted: 06/05/98	
Batch#: 41311	Analyzed: 06/05/98	
Units: ug/L		
Diln Fac: 1		
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Vinyl Chloride	ND	10
Bromomethane	ND	10
Chloroethane	ND	10
Acetone	ND	20
1,1-Dichloroethene	ND	5.0
Methylene Chloride	ND	5.0
Carbon Disulfide	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
2-Butanone	ND	20
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
1,2-Dichloroethane	ND	5.0
Benzene	ND	5.0
Trichloroethene	ND	5.0
1,2-Dichloropropane	ND	5.0
Bromodichloromethane	ND	5.0
4-Methyl-2-Pentanone	ND	20
cis-1,3-Dichloropropene	ND	5.0
Toluene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
1,1,2-Trichloroethane	ND	5.0
2-Hexanone	ND	20
Tetrachloroethene	ND	5.0
Dibromochloromethane	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Styrene	ND	5.0
Bromoform	ND	5.0
1,1,2,2-Tetrachloroethane	ND	5.0
Surrogate	%Recovery	Recovery Limits
Dibromofluoromethane	104	76-128
1,2-Dichloroethane-d4	108	85-121
Toluene-d8	99	92-110
Bromofluorobenzene	103	84-115



Semivolatile Organics by GC/MS

Client: IT Corporation
Project#: 773206
Location: Plumbrook Ordinance Wor

Analysis Method: EPA 8270B
Prep Method: EPA 3520

Field ID: 5617
Lab ID: 133881-001
Matrix: Water
Batch#: 41248
Units: ug/L
Diln Fac: 1

Sampled: 05/29/98
Received: 05/30/98
Extracted: 06/02/98
Analyzed: 06/09/98

Analyte	Result	Reporting Limit
Phenol	ND	10
2-Chlorophenol	ND	10
Benzyl alcohol	ND	10
2-Methylphenol	ND	10
3,4-Methylphenol	ND	10
2-Nitrophenol	ND	52
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	52
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	10
2,4-Dinitrophenol	ND	52
4-Nitrophenol	ND	52
4,6-Dinitro-2-methylphenol	ND	52
Pentachlorophenol	ND	10
N-Nitrosodimethylamine	ND	10
Aniline	ND	10
bis(2-Chloroethyl) ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-Chloroisopropyl) ether	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
bis(2-Chloroethoxy) methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	52
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	52
Dimethylphthalate	ND	10
Acenaphthylene	ND	10



Semivolatile Organics by GC/MS

Field ID: 5617	Sampled: 05/29/98
Lab ID: 133881-001	Received: 05/30/98
Matrix: Water	Extracted: 06/02/98
Batch#: 41248	Analyzed: 06/09/98
Units: ug/L	
Diln Fac: 1	

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	52
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	52
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	52
Benzo (a) anthracene	ND	10
Chrysene	ND	10
bis (2-Ethylhexyl) phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo (b,k) fluoranthene	ND	10
Benzo (a) pyrene	ND	10
Indeno (1,2,3-cd) pyrene	ND	10
Dibenz (a,h) anthracene	ND	10
Benzo (g,h,i) perylene	ND	10

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	91	17-107
Phenol-d5	91	18-115
2,4,6-Tribromophenol	97	14-121
Nitrobenzene-d5	95	36-115
2-Fluorobiphenyl	93	36-113
Terphenyl-d14	68	17-115

Semivolatile Organics by GC/MS

 Client: IT Corporation
 Project#: 773206
 Location: Plumbrook Ordinance Wor

 Analysis Method: EPA 8270B
 Prep Method: EPA 3520

 Field ID: 5617 RE
 Lab ID: 133881-003
 Matrix: Water
 Batch#: 41398
 Units: ug/L
 Diln Fac: 1

 Sampled: 05/29/98
 Received: 05/30/98
 Extracted: 06/10/98
 Analyzed: 06/12/98

Analyte	Result	Reporting Limit
Phenol	ND	9.6
2-Chlorophenol	ND	9.6
Benzyl alcohol	ND	9.6
2-Methylphenol	ND	9.6
3,4-Methylphenol	ND	9.6
2-Nitrophenol	ND	48
2,4-Dimethylphenol	ND	9.6
Benzoic acid	ND	48
2,4-Dichlorophenol	ND	9.6
4-Chloro-3-methylphenol	ND	9.6
2,4,6-Trichlorophenol	ND	9.6
2,4,5-Trichlorophenol	ND	9.6
2,4-Dinitrophenol	ND	48
4-Nitrophenol	ND	48
4,6-Dinitro-2-methylphenol	ND	48
Pentachlorophenol	ND	9.6
N-Nitrosodimethylamine	ND	9.6
Aniline	ND	9.6
bis(2-Chloroethyl) ether	ND	9.6
1,3-Dichlorobenzene	ND	9.6
1,4-Dichlorobenzene	ND	9.6
1,2-Dichlorobenzene	ND	9.6
bis(2-Chloroisopropyl) ether	ND	9.6
N-Nitroso-di-n-propylamine	ND	9.6
Hexachloroethane	ND	9.6
Nitrobenzene	ND	9.6
Isophorone	ND	9.6
bis(2-Chloroethoxy) methane	ND	9.6
1,2,4-Trichlorobenzene	ND	9.6
Naphthalene	ND	9.6
4-Chloroaniline	ND	9.6
Hexachlorobutadiene	ND	9.6
2-Methylnaphthalene	ND	9.6
Hexachlorocyclopentadiene	ND	48
2-Chloronaphthalene	ND	9.6
2-Nitroaniline	ND	48
Dimethylphthalate	ND	9.6
Acenaphthylene	ND	9.6



Semivolatile Organics by GC/MS

Field ID: 5617 RE	Sampled: 05/29/98
Lab ID: 133881-003	Received: 05/30/98
Matrix: Water	Extracted: 06/10/98
Batch#: 41398	Analyzed: 06/12/98
Units: ug/L	
Diln Fac: 1	

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.6
3-Nitroaniline	ND	48
Acenaphthene	ND	9.6
Dibenzofuran	ND	9.6
2,4-Dinitrotoluene	ND	9.6
Diethylphthalate	ND	9.6
4-Chlorophenyl-phenylether	ND	9.6
Fluorene	ND	9.6
4-Nitroaniline	ND	48
N-Nitrosodiphenylamine	ND	9.6
Azobenzene	ND	9.6
4-Bromophenyl-phenylether	ND	9.6
Hexachlorobenzene	ND	9.6
Phenanthrene	ND	9.6
Anthracene	ND	9.6
Di-n-butylphthalate	ND	9.6
Fluoranthene	ND	9.6
Pyrene	ND	9.6
Butylbenzylphthalate	ND	9.6
3,3'-Dichlorobenzidine	ND	48
Benzo (a) anthracene	ND	9.6
Chrysene	ND	9.6
bis (2-Ethylhexyl) phthalate	ND	9.6
Di-n-octylphthalate	ND	9.6
Benzo (b, k) fluoranthene	ND	9.6
Benzo (a) pyrene	ND	9.6
Indeno (1, 2, 3-cd) pyrene	ND	9.6
Dibenz (a, h) anthracene	ND	9.6
Benzo (g, h, i) perylene	ND	9.6

Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	76	17-107
Phenol-d5	76	18-115
2,4,6-Tribromophenol	69	14-121
Nitrobenzene-d5	73	36-115
2-Fluorobiphenyl	76	36-113
Terphenyl-d14	47	17-115

PCBs

Client: IT Corporation
 Project#: 773206
 Location: Plumbrook Ordinance Wor

Analysis Method: PCB
 Prep Method: EPA 3520

Field ID: 5617
 Lab ID: 133881-001
 Matrix: Water
 Batch#: 41250
 Units: ug/L
 Diln Fac: 1

Sampled: 05/29/98
 Received: 05/30/98
 Extracted: 06/02/98
 Analyzed: 06/05/98

Analyte	Result	Reporting Limit
Aroclor-1016	ND	0.47
Aroclor-1221	ND	0.94
Aroclor-1232	ND	0.47
Aroclor-1242	ND	0.47
Aroclor-1248	ND	0.47
Aroclor-1254	ND	0.47
Aroclor-1260	ND	0.47
Surrogate	%Recovery	Recovery Limits
TCMX	65	19-130
Decachlorobiphenyl	42	22-110



SAMPLE ID: 5617
 LAB ID: 133881-001
 CLIENT: IT Corporation
 PROJECT ID: 773206
 LOCATION: Plumbrook Ordinance Wor
 MATRIX: Filtrate

DATE SAMPLED: 05/29/98
 DATE RECEIVED: 05/30/98
 DATE REPORTED: 06/12/98

TARGET ANALYTE LIST

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Aluminum	140	100	1	41355	EPA 6010A	06/09/98
Antimony	ND	60	1	41355	EPA 6010A	06/09/98
Arsenic	7.1	5.0	1	41355	EPA 6010A	06/09/98
Barium	170	10	1	41355	EPA 6010A	06/09/98
Beryllium	ND	2.0	1	41355	EPA 6010A	06/09/98
Cadmium	ND	5.0	1	41355	EPA 6010A	06/09/98
Calcium	120000	500	1	41355	EPA 6010A	06/09/98
Chromium (total)	ND	10	1	41355	EPA 6010A	06/09/98
Cobalt	ND	20	1	41355	EPA 6010A	06/09/98
Copper	ND	10	1	41355	EPA 6010A	06/09/98
Iron	8400	100	1	41355	EPA 6010A	06/09/98
Lead	ND	3.0	1	41355	EPA 6010A	06/09/98
Magnesium	48000	500	1	41355	EPA 6010A	06/09/98
Manganese	1200	10	1	41355	EPA 6010A	06/09/98
Mercury	ND	0.20	1	41241	EPA 7470	06/03/98
Molybdenum	ND	20	1	41355	EPA 6010A	06/09/98
Nickel	ND	20	1	41355	EPA 6010A	06/09/98
Potassium	6700	500	1	41355	EPA 6010A	06/09/98
Selenium	7.8	5.0	1	41355	EPA 6010A	06/09/98
Silver	ND	5.0	1	41355	EPA 6010A	06/09/98
Sodium	56000	500	1	41355	EPA 6010A	06/09/98
Thallium	ND	5.0	1	41355	EPA 6010A	06/09/98
Vanadium	ND	10	1	41355	EPA 6010A	06/09/98
Zinc	ND	20	1	41355	EPA 6010A	06/09/98

ND = Not detected at or above reporting limit



SAMPLE ID: 5617
 LAB ID: 133881-001
 CLIENT: IT Corporation
 PROJECT ID: 773206
 LOCATION: Plumbrook Ordinance Wor
 MATRIX: Water

DATE SAMPLED: 05/29/98
 DATE RECEIVED: 05/30/98
 DATE REPORTED: 06/12/98

TARGET ANALYTE LIST

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Aluminum	22000	100	1	41322	EPA 6010A	06/09/98
Antimony	ND	60	1	41322	EPA 6010A	06/09/98
Arsenic	36	5.0	1	41322	EPA 6010A	06/09/98
Barium	180	10	1	41322	EPA 6010A	06/09/98
Beryllium	ND	2.0	1	41322	EPA 6010A	06/09/98
Cadmium	ND	5.0	1	41322	EPA 6010A	06/09/98
Calcium	220000	5000	10	41322	EPA 6010A	06/09/98
Chromium (total)	38	10	1	41322	EPA 6010A	06/09/98
Cobalt	41	20	1	41322	EPA 6010A	06/09/98
Copper	40	10	1	41322	EPA 6010A	06/09/98
Iron	59000	100	1	41322	EPA 6010A	06/09/98
Lead	29	3.0	1	41322	EPA 6010A	06/09/98
Magnesium	64000	500	1	41322	EPA 6010A	06/09/98
Manganese	1400	10	1	41322	EPA 6010A	06/09/98
Mercury	ND	0.20	1	41240	EPA 7470	06/02/98
Molybdenum	ND	20	1	41322	EPA 6010A	06/09/98
Nickel	97	20	1	41322	EPA 6010A	06/09/98
Potassium	14000	5000	10	41322	EPA 6010A	06/09/98
Selenium	ND	5.0	1	41322	EPA 6010A	06/09/98
Silver	ND	5.0	1	41322	EPA 6010A	06/09/98
Sodium	76000	5000	10	41322	EPA 6010A	06/09/98
Thallium	ND	5.0	1	41322	EPA 6010A	06/09/98
Vanadium	36	10	1	41322	EPA 6010A	06/09/98
Zinc	130	20	1	41322	EPA 6010A	06/09/98

ND = Not detected at or above reporting limit

Nitroaromatics and Nitramines by HPLC
Method 8330

Client Name: Curtis & Tompkins, Ltd.
Client ID: 5617
LAB ID: 099484-0001-SA
Matrix: AQUEOUS
Authorized: 02 JUN 98

Sampled: 29 MAY 98
Prepared: 03 JUN 98

Received: 02 JUN 98
Analyzed: 03 JUN 98

Dilution Factor: 1.0

Parameter	Result	Units	Reporting Limit	Qualifier
HMX	ND	ug/L	1.0	
1,3,5-Trinitrobenzene	ND	ug/L	0.30	
RDX	ND	ug/L	0.80	
1,3-Dinitrobenzene	ND	ug/L	0.10	
Nitrobenzene	ND	ug/L	1.0	
2,4,6-Trinitrotoluene	ND	ug/L	0.10	
Tetryl	ND	ug/L	1.0	
2,4-Dinitrotoluene	ND	ug/L	0.10	
2,6-Dinitrotoluene	ND	ug/L	0.30	
2-Am-DNT	ND	ug/L	0.10	
4-Am-DNT	ND	ug/L	0.10	
2-Nitrotoluene	ND	ug/L	1.0	
4-Nitrotoluene	ND	ug/L	1.0	
3-Nitrotoluene	ND	ug/L	1.0	

Surrogate	Recovery	Acceptable Range
2,4-Dinitrofluorobenzene	94 %	65 - 135

ND = Not Detected

Reported By: Jon Edmondson

Approved By: Emily Uebelhoer

The cover letter is an integral part of this report.
Rev 230787

IT CORPORATION - KNOXVILLE

Client Sample ID: 5616

GC/MS Volatiles

Lot-Sample #....: H8E300151-002 Work Order #....: CHKN1101 Matrix.....: WATER
 Date Sampled....: 05/29/98 Date Received...: 05/30/98
 Prep Date.....: 06/08/98 Analysis Date...: 06/08/98
 Prep Batch #....: 8158125
 Dilution Factor: 1 Method.....: SW846 8260A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Chloromethane	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Methylene chloride	0.44 J,B	1.0	ug/L
Acetone	5.6 J	10	ug/L
Carbon disulfide	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
2-Butanone	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
2-Hexanone	ND	5.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Toluene	ND	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
Xylenes (total)	ND	1.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	99	(67 - 128)
1,2-Dichloroethane-d4	92	(67 - 128)
Toluene-d8	96	(71 - 119)
4-Bromofluorobenzene	94	(76 - 111)

(Continued on next page)

IT CORPORATION - KNOXVILLE

Client Sample ID: 5616

GC/MS Volatiles

Lot-Sample #....: H8E300151-002 Work Order #....: CHKN1101 Matrix.....: WATER

NOTE (S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

IT CORPORATION - KNOXVILLE

Client Sample ID: 9023

GC/MS Volatiles

Lot-Sample #....: H8E300151-007 Work Order #....: CHKN6101 Matrix.....: WATER
 Date Sampled....: 05/29/98 Date Received...: 05/30/98
 Prep Date.....: 06/04/98 Analysis Date...: 06/04/98
 Prep Batch #....: 8155133
 Dilution Factor: 1 Method.....: SW846 8260A

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Chloromethane	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Methylene chloride	11 B	1.0	ug/L
Acetone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
2-Butanone	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
2-Hexanone	ND	5.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Toluene	0.25 J,B	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
Xylenes (total)	ND	1.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	98	(67 - 128)
1,2-Dichloroethane-d4	86	(67 - 128)
Toluene-d8	91	(71 - 119)
4-Bromofluorobenzene	79	(76 - 111)

(Continued on next page)

IT CORPORATION - KNOXVILLE

Client Sample ID: 9023

GC/MS Volatiles

Lot-Sample #...: H8E300151-007 Work Order #...: CHKN6101 Matrix.....: WATER

NOTE(S) :

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated result. Result is less than RL.

IT CORPORATION - KNOXVILLE

Client Sample ID: 9021

GC/MS Volatiles

Lot-Sample #....: H8E290237-007 Work Order #....: CHK3J101 Matrix.....: WATER
 Date Sampled....: 05/28/98 Date Received...: 05/29/98
 Prep Date.....: 06/08/98 Analysis Date...: 06/08/98
 Prep Batch #....: 8158125
 Dilution Factor: 1 Method.....: SW846 8260A

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Chloromethane	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Methylene chloride	0.49 J,B	1.0	ug/L
Acetone	ND	10	ug/L
Carbon disulfide	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethene	ND	1.0	ug/L
(total)			
Chloroform	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
2-Butanone	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Benzene	ND	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
2-Hexanone	ND	5.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Toluene	0.22 J	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
Xylenes (total)	ND	1.0	ug/L

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
Dibromofluoromethane	97	(67 - 128)
1,2-Dichloroethane-d4	87	(67 - 128)
Toluene-d8	96	(71 - 119)
4-Bromofluorobenzene	94	(76 - 111)

(Continued on next page)

IT CORPORATION - KNOXVILLE

Client Sample ID: 9021

GC/MS Volatiles

Lot-Sample #...: H8E290237-007 Work Order #...: CHK3J101 Matrix.....: WATER

NOTE(S) :

J Estimated result. Result is less than RL.

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

IT CORPORATION - KNOXVILLE

Client Sample ID: 5556

GC/MS Volatiles

Lot-Sample #....: H8E290237-003 Work Order #....: CHK1G101 Matrix.....: WATER
 Date Sampled....: 05/28/98 Date Received...: 05/29/98
 Prep Date.....: 06/04/98 Analysis Date...: 06/04/98
 Prep Batch #....: 8155133
 Dilution Factor: 1 Method.....: SW846 8260A

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Chloromethane	ND	2.0	ug/L
Bromomethane	ND	2.0	ug/L
Vinyl chloride	ND	2.0	ug/L
Chloroethane	ND	2.0	ug/L
Methylene chloride	2.9 B	1.0	ug/L
Acetone	70	10	ug/L
Carbon disulfide	ND	1.0	ug/L
1,1-Dichloroethene	ND	1.0	ug/L
1,1-Dichloroethane	ND	1.0	ug/L
1,2-Dichloroethene (total)	ND	1.0	ug/L
Chloroform	ND	1.0	ug/L
1,2-Dichloroethane	ND	1.0	ug/L
2-Butanone	ND	5.0	ug/L
1,1,1-Trichloroethane	ND	1.0	ug/L
Carbon tetrachloride	ND	1.0	ug/L
Bromodichloromethane	ND	1.0	ug/L
1,2-Dichloropropane	ND	1.0	ug/L
cis-1,3-Dichloropropene	ND	1.0	ug/L
Trichloroethene	ND	1.0	ug/L
Dibromochloromethane	ND	1.0	ug/L
1,1,2-Trichloroethane	ND	1.0	ug/L
Benzene	0.48 J	1.0	ug/L
trans-1,3-Dichloropropene	ND	1.0	ug/L
Bromoform	ND	1.0	ug/L
4-Methyl-2-pentanone	ND	5.0	ug/L
2-Hexanone	ND	5.0	ug/L
Tetrachloroethene	ND	1.0	ug/L
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L
Toluene	0.39 J,B	1.0	ug/L
Chlorobenzene	ND	1.0	ug/L
Ethylbenzene	ND	1.0	ug/L
Styrene	ND	1.0	ug/L
Xylenes (total)	ND	1.0	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Dibromofluoromethane	96	(67 - 128)
1,2-Dichloroethane-d4	84	(67 - 128)
Toluene-d8	89	(71 - 119)
4-Bromofluorobenzene	76	(76 - 111)

(Continued on next page)

IT CORPORATION - KNOXVILLE

Client Sample ID: 5556

GC/MS Volatiles

Lot-Sample #...: H8E290237-003 Work Order #...: CHK1G101 Matrix.....: WATER

NOTE(S) :

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

J Estimated result. Result is less than RL.

IT CORPORATION - KNOXVILLE

Client Sample ID: 5556

GC/MS Semivolatiles

Lot-Sample #....: H8E290237-003 Work Order #....: CHK1G102 Matrix.....: WATER
 Date Sampled....: 05/28/98 Date Received...: 05/29/98
 Prep Date.....: 05/30/98 Analysis Date...: 06/09/98
 Prep Batch #....: 8151109
 Dilution Factor: 1 Method.....: SW846 8270B

PARAMETER	RESULT	REPORTING	
		LIMIT	UNITS
Phenol	ND	10	ug/L
bis(2-Chloroethyl) ether	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
2,2'-oxybis(1-Chloro- propane)	ND	10	ug/L
4-Methylphenol	ND	10	ug/L
N-Nitrosodi-n-propylamine	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Nitrobenzene	ND	10	ug/L
Isophorone	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
Naphthalene	ND	10	ug/L
4-Chloroaniline	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
Hexachlorocyclopentadiene	ND	50	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
2-Nitroaniline	ND	50	ug/L
Dimethyl phthalate	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
3-Nitroaniline	ND	50	ug/L
Acenaphthene	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L
4-Nitrophenol	ND	50	ug/L
Dibenzofuran	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L

(Continued on next page)

IT CORPORATION - KNOXVILLE

Client Sample ID: 5556

GC/MS Semivolatiles

Lot-Sample #....: H8E290237-003 Work Order #....: CHK1G102 Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Diethyl phthalate	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Fluorene	ND	10	ug/L
4-Nitroaniline	ND	50	ug/L
4,6-Dinitro- 2-methylphenol	ND	50	ug/L
N-Nitrosodiphenylamine	ND	10	ug/L
4-Bromophenyl phenyl ether	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Pentachlorophenol	ND	50	ug/L
Phenanthrene	ND	10	ug/L
Anthracene	ND	10	ug/L
Carbazole	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Pyrene	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
Benzo (a) anthracene	ND	10	ug/L
Chrysene	ND	10	ug/L
bis (2-Ethylhexyl) phthalate	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
Benzo (b) fluoranthene	ND	10	ug/L
Benzo (k) fluoranthene	ND	10	ug/L
Benzo (a) pyrene	ND	10	ug/L
Indeno (1,2,3-cd) pyrene	ND	10	ug/L
Dibenz (a,h) anthracene	ND	10	ug/L
Benzo (ghi) perylene	ND	10	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	83	(27 - 106)
Phenol-d5	91	(27 - 111)
Nitrobenzene-d5	95	(37 - 115)
2-Fluorobiphenyl	103	(43 - 116)
2,4,6-Tribromophenol	125	(27 - 127)
Terphenyl-d14	51	(33 - 141)

IT CORPORATION - KNOXVILLE

Client Sample ID: 5616

GC/MS Semivolatiles

Lot-Sample #....: H8E300151-002 Work Order #....: CHKN1102 Matrix.....: WATER
 Date Sampled....: 05/29/98 Date Received...: 05/30/98
 Prep Date.....: 06/04/98 Analysis Date...: 06/10/98
 Prep Batch #....: 8155250
 Dilution Factor: 1 Method.....: SW846 8270B

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Phenol	ND	10	ug/L
bis(2-Chloroethyl) ether	ND	10	ug/L
2-Chlorophenol	ND	10	ug/L
1,3-Dichlorobenzene	ND	10	ug/L
1,4-Dichlorobenzene	ND	10	ug/L
1,2-Dichlorobenzene	ND	10	ug/L
2-Methylphenol	ND	10	ug/L
2,2'-oxybis(1-Chloro- propane)	ND	10	ug/L
4-Methylphenol	ND	10	ug/L
N-Nitrosodi-n-propylamine	ND	10	ug/L
Hexachloroethane	ND	10	ug/L
Nitrobenzene	ND	10	ug/L
Isophorone	ND	10	ug/L
2-Nitrophenol	ND	10	ug/L
2,4-Dimethylphenol	ND	10	ug/L
bis(2-Chloroethoxy) methane	ND	10	ug/L
2,4-Dichlorophenol	ND	10	ug/L
1,2,4-Trichlorobenzene	ND	10	ug/L
Naphthalene	ND	10	ug/L
4-Chloroaniline	ND	10	ug/L
Hexachlorobutadiene	ND	10	ug/L
4-Chloro-3-methylphenol	ND	10	ug/L
2-Methylnaphthalene	ND	10	ug/L
Hexachlorocyclopentadiene	ND	50	ug/L
2,4,6-Trichlorophenol	ND	10	ug/L
2,4,5-Trichlorophenol	ND	10	ug/L
2-Chloronaphthalene	ND	10	ug/L
2-Nitroaniline	ND	50	ug/L
Dimethyl phthalate	ND	10	ug/L
Acenaphthylene	ND	10	ug/L
2,6-Dinitrotoluene	ND	10	ug/L
3-Nitroaniline	ND	50	ug/L
Acenaphthene	ND	10	ug/L
2,4-Dinitrophenol	ND	50	ug/L
4-Nitrophenol	ND	50	ug/L
Dibenzofuran	ND	10	ug/L
2,4-Dinitrotoluene	ND	10	ug/L

(Continued on next page)

IT CORPORATION - KNOXVILLE

Client Sample ID: 5616

GC/MS Semivolatiles

Lot-Sample #....: H8E300151-002 Work Order #....: CHKN1102 Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
Diethyl phthalate	ND	10	ug/L
4-Chlorophenyl phenyl ether	ND	10	ug/L
Fluorene	ND	10	ug/L
4-Nitroaniline	ND	50	ug/L
4,6-Dinitro- 2-methylphenol	ND	50	ug/L
N-Nitrosodiphenylamine	ND	10	ug/L
4-Bromophenyl phenyl ether	ND	10	ug/L
Hexachlorobenzene	ND	10	ug/L
Pentachlorophenol	ND	50	ug/L
Phenanthrene	ND	10	ug/L
Anthracene	ND	10	ug/L
Carbazole	ND	10	ug/L
Di-n-butyl phthalate	ND	10	ug/L
Fluoranthene	ND	10	ug/L
Pyrene	ND	10	ug/L
Butyl benzyl phthalate	ND	10	ug/L
3,3'-Dichlorobenzidine	ND	50	ug/L
Benzo (a) anthracene	ND	10	ug/L
Chrysene	ND	10	ug/L
bis (2-Ethylhexyl) phthalate	ND	10	ug/L
Di-n-octyl phthalate	ND	10	ug/L
Benzo (b) fluoranthene	ND	10	ug/L
Benzo (k) fluoranthene	ND	10	ug/L
Benzo (a) pyrene	ND	10	ug/L
Indeno (1,2,3-cd) pyrene	ND	10	ug/L
Dibenz (a,h) anthracene	ND	10	ug/L
Benzo (ghi) perylene	ND	10	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
2-Fluorophenol	61	(27 - 106)
Phenol-d5	73	(27 - 111)
Nitrobenzene-d5	76	(37 - 115)
2-Fluorobiphenyl	82	(43 - 116)
2,4,6-Tribromophenol	113	(27 - 127)
Terphenyl-d14	72	(33 - 141)

IT CORPORATION - KNOXVILLE

Client Sample ID: 5556

HPLC

Lot-Sample #...: H8E290237-003 Work Order #...: CHK1G10V Matrix.....: WATER
 Date Sampled...: 05/28/98 Date Received...: 05/29/98
 Prep Date.....: 06/01/98 Analysis Date...: 06/17/98
 Prep Batch #...: 8152157
 Dilution Factor: 1 Method.....: SW846 8330

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L
1,3-Dinitrobenzene	ND	0.20	ug/L
2,4-Dinitrotoluene	ND	0.20	ug/L
2,6-Dinitrotoluene	ND	0.20	ug/L
HMX	ND	0.50	ug/L
Nitrobenzene	ND	0.20	ug/L
2-Nitrotoluene	ND	0.20	ug/L
3-Nitrotoluene	ND	0.20	ug/L
RDX	ND	0.50	ug/L
Tetryl	ND	0.20	ug/L
1,3,5-Trinitrobenzene	ND	0.20	ug/L
2,4,6-Trinitrotoluene	ND	0.20	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
1-Chloro-3-nitrobenzene	54	(39 - 157)

IT CORPORATION - KNOXVILLE

Client Sample ID: 5616

HPLC

Lot-Sample #...: H8E300151-002 Work Order #...: CHKN110V Matrix.....: WATER
 Date Sampled...: 05/29/98 Date Received...: 05/30/98
 Prep Date.....: 06/01/98 Analysis Date...: 06/16/98
 Prep Batch #...: 8152157
 Dilution Factor: 1 Method.....: SW846 8330

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L
1,3-Dinitrobenzene	ND	0.20	ug/L
2,4-Dinitrotoluene	ND	0.20	ug/L
2,6-Dinitrotoluene	ND	0.20	ug/L
HMX	ND	0.50	ug/L
Nitrobenzene	ND	0.20	ug/L
2-Nitrotoluene	ND	0.20	ug/L
3-Nitrotoluene	ND	0.20	ug/L
RDX	ND	0.50	ug/L
Tetryl	ND	0.20	ug/L
1,3,5-Trinitrobenzene	ND	0.20	ug/L
2,4,6-Trinitrotoluene	ND	0.20	ug/L

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
1-Chloro-3-nitrobenzene	117	(39 - 157)

IT CORPORATION - KNOXVILLE

Client Sample ID: 5616

DISSOLVED Metals

Lot-Sample #...: H8E300151-009
Date Sampled...: 05/29/98

Date Received...: 05/30/98

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 8159197						
Mercury	ND	0.20	ug/L	SW846 7470A	06/11/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 16:15		
Prep Batch #...: 8159273						
Aluminum	ND	200	ug/L	SW846 6010A	06/09-06/18/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 15:55		
Arsenic	ND	10.0	ug/L	SW846 6010A	06/09-06/19/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 17:59		
Lead	ND	3.0	ug/L	SW846 6010A	06/09-06/19/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 17:59		
Antimony	ND	60.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 15:55		
Barium	ND	200	ug/L	SW846 6010A	06/09-06/18/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 15:55		
Selenium	ND	5.0	ug/L	SW846 6010A	06/09-06/19/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 17:59		
Beryllium	ND	5.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 15:55		
Thallium	ND	10.0	ug/L	SW846 6010A	06/09-06/19/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 17:59		
Cadmium	ND	5.0	ug/L	SW846 6010A	06/09-06/19/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 17:59		
Calcium	145000	5000	ug/L	SW846 6010A	06/09-06/18/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 15:55		
Chromium	ND	10.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 15:55		
Cobalt	ND	50.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 15:55		
Copper	ND	25.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN8100
		Dilution Factor: 1		Analysis Time...: 15:55		

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IT CORPORATION - KNOXVILLE

Client Sample ID: 5616

DISSOLVED Metals

Lot-Sample #....: H8E300151-009

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Iron	10700	100	ug/L	SW846 6010A	06/09-06/18/98	CHKN810A
		Dilution Factor: 1		Analysis Time...: 15:55		
Magnesium	52900	5000	ug/L	SW846 6010A	06/09-06/18/98	CHKN810C
		Dilution Factor: 1		Analysis Time...: 15:55		
Manganese	1370	15.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN810I
		Dilution Factor: 1		Analysis Time...: 15:55		
Nickel	ND	40.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN810F
		Dilution Factor: 1		Analysis Time...: 15:55		
Potassium	8770	5000	ug/L	SW846 6010A	06/09-06/18/98	CHKN810J
		Dilution Factor: 1		Analysis Time...: 15:55		
Silver	ND	10.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN810G
		Dilution Factor: 1		Analysis Time...: 15:55		
Sodium	65900	5000	ug/L	SW846 6010A	06/09-06/18/98	CHKN810K
		Dilution Factor: 1		Analysis Time...: 15:55		
Vanadium	ND	50.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN810L
		Dilution Factor: 1		Analysis Time...: 15:55		
Zinc	36.9	20.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN810M
		Dilution Factor: 1		Analysis Time...: 15:55		

IT CORPORATION - KNOXVILLE

Client Sample ID: 5616

TOTAL Metals

Lot-Sample #...: H8E300151-002

Matrix.....: WATER

Date Sampled...: 05/29/98

Date Received...: 05/30/98

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>	<u>PREPARATION-</u>	<u>WORK</u>
		<u>LIMIT</u>	<u>UNITS</u>		<u>ANALYSIS DATE</u>	<u>ORDER #</u>
Prep Batch #...: 8159196						
Mercury	0.24	0.20	ug/L	SW846 7470A	06/11/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 15:07		
Prep Batch #...: 8159266						
Aluminum	16500	200	ug/L	SW846 6010A	06/09-06/18/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 18:05		
Arsenic	31.9	10.0	ug/L	SW846 6010A	06/09-06/19/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 20:26		
Lead	27.3	3.0	ug/L	SW846 6010A	06/09-06/19/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 20:26		
Antimony	ND	60.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 18:05		
Barium	ND	200	ug/L	SW846 6010A	06/09-06/18/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 18:05		
Selenium	ND	5.0	ug/L	SW846 6010A	06/09-06/19/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 20:26		
Beryllium	ND	5.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 18:05		
Thallium	ND	10.0	ug/L	SW846 6010A	06/09-06/19/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 20:26		
Cadmium	ND	5.0	ug/L	SW846 6010A	06/09-06/19/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 20:26		
Calcium	252000	5000	ug/L	SW846 6010A	06/09-06/18/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 18:05		
Chromium	45.5	10.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 18:05		
Cobalt	ND	50.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 18:05		
Copper	40.4	25.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN1100
		Dilution Factor: 1		Analysis Time...: 18:05		

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IT CORPORATION - KNOXVILLE

Client Sample ID: 5616

TOTAL Metals

Lot-Sample #...: H8E300151-002

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Iron	55900	100	ug/L	SW846 6010A	06/09-06/18/98	CHKN110E
		Dilution Factor: 1		Analysis Time...: 18:05		
Magnesium	61600	5000	ug/L	SW846 6010A	06/09-06/18/98	CHKN110F
		Dilution Factor: 1		Analysis Time...: 18:05		
Manganese	1540	15.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN110G
		Dilution Factor: 1		Analysis Time...: 18:05		
Nickel	60.6	40.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN110H
		Dilution Factor: 1		Analysis Time...: 18:05		
Potassium	13000	5000	ug/L	SW846 6010A	06/09-06/18/98	CHKN110J
		Dilution Factor: 1		Analysis Time...: 18:05		
Silver	ND	10.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN110K
		Dilution Factor: 1		Analysis Time...: 18:05		
Sodium	68100	5000	ug/L	SW846 6010A	06/09-06/18/98	CHKN110L
		Dilution Factor: 1		Analysis Time...: 18:05		
Vanadium	55.1	50.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN110M
		Dilution Factor: 1		Analysis Time...: 18:05		
Zinc	138	20.0	ug/L	SW846 6010A	06/09-06/18/98	CHKN110N
		Dilution Factor: 1		Analysis Time...: 18:05		

IT CORPORATION - KNOXVILLE

Client Sample ID: 5556

DISSOLVED Metals

Lot-Sample #...: H8E290237-010

Matrix.....: WATER

Date Sampled...: 05/28/98

Date Received...: 05/29/98

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8159197						
Mercury	ND	0.20	ug/L	SW846 7470A	06/11/98	CHK45100
		Dilution Factor: 1		Analysis Time...: 15:58		
Prep Batch #...: 8159273						
Aluminum	ND	200	ug/L	SW846 6010A	06/09-06/18/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 15:06		
Arsenic	ND	10.0	ug/L	SW846 6010A	06/09-06/19/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 17:02		
Lead	ND	3.0	ug/L	SW846 6010A	06/09-06/19/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 17:02		
Antimony	ND	60.0	ug/L	SW846 6010A	06/09-06/18/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 15:06		
Barium	ND	200	ug/L	SW846 6010A	06/09-06/18/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 15:06		
Selenium	ND	5.0	ug/L	SW846 6010A	06/09-06/19/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 17:02		
Beryllium	ND	5.0	ug/L	SW846 6010A	06/09-06/18/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 15:06		
Thallium	ND	10.0	ug/L	SW846 6010A	06/09-06/19/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 17:02		
Cadmium	ND	5.0	ug/L	SW846 6010A	06/09-06/19/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 17:02		
Calcium	118000	5000	ug/L	SW846 6010A	06/09-06/18/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 15:06		
Chromium	ND	10.0	ug/L	SW846 6010A	06/09-06/18/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 15:06		
Cobalt	ND	50.0	ug/L	SW846 6010A	06/09-06/18/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 15:06		
Copper	ND	25.0	ug/L	SW846 6010A	06/09-06/18/98	CHK45101
		Dilution Factor: 1		Analysis Time...: 15:06		

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IT CORPORATION - KNOXVILLE

Client Sample ID: 5556

DISSOLVED Metals

Lot-Sample #...: H8E290237-010

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Iron	374	100	ug/L	SW846 6010A	06/09-06/18/98	CHK4510A
		Dilution Factor: 1		Analysis Time...: 15:06		
Magnesium	39500	5000	ug/L	SW846 6010A	06/09-06/18/98	CHK4510C
		Dilution Factor: 1		Analysis Time...: 15:06		
Manganese	262	15.0	ug/L	SW846 6010A	06/09-06/18/98	CHK4510E
		Dilution Factor: 1		Analysis Time...: 15:06		
Nickel	ND	40.0	ug/L	SW846 6010A	06/09-06/18/98	CHK4510F
		Dilution Factor: 1		Analysis Time...: 15:06		
Potassium	ND	5000	ug/L	SW846 6010A	06/09-06/18/98	CHK4510I
		Dilution Factor: 1		Analysis Time...: 15:06		
Silver	ND	10.0	ug/L	SW846 6010A	06/09-06/18/98	CHK4510G
		Dilution Factor: 1		Analysis Time...: 15:06		
Sodium	23800	5000	ug/L	SW846 6010A	06/09-06/18/98	CHK4510J
		Dilution Factor: 1		Analysis Time...: 15:06		
Vanadium	ND	50.0	ug/L	SW846 6010A	06/09-06/18/98	CHK4510K
		Dilution Factor: 1		Analysis Time...: 15:06		
Zinc	51.4	20.0	ug/L	SW846 6010A	06/09-06/18/98	CHK4510L
		Dilution Factor: 1		Analysis Time...: 15:06		

IT CORPORATION - KNOXVILLE

Client Sample ID: 5556

TOTAL Metals

Lot-Sample #...: H8E290237-003

Matrix.....: WATER

Date Sampled...: 05/28/98

Date Received...: 05/29/98

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 8159196						
Mercury	ND	0.20	ug/L	SW846 7470A	06/11/98	CHK1G10U
		Dilution Factor: 1		Analysis Time...: 14:46		
Prep Batch #...: 8159266						
Aluminum	27500	200	ug/L	SW846 6010A	06/09-06/18/98	CHK1G104
		Dilution Factor: 1		Analysis Time...: 17:15		
Arsenic	25.2	10.0	ug/L	SW846 6010A	06/09-06/19/98	CHK1G10P
		Dilution Factor: 1		Analysis Time...: 19:41		
Lead	18.1	3.0	ug/L	SW846 6010A	06/09-06/19/98	CHK1G10Q
		Dilution Factor: 1		Analysis Time...: 19:41		
Antimony	ND	60.0	ug/L	SW846 6010A	06/09-06/18/98	CHK1G105
		Dilution Factor: 1		Analysis Time...: 17:15		
Barium	361	200	ug/L	SW846 6010A	06/09-06/18/98	CHK1G106
		Dilution Factor: 1		Analysis Time...: 17:15		
Selenium	ND	5.0	ug/L	SW846 6010A	06/09-06/19/98	CHK1G10R
		Dilution Factor: 1		Analysis Time...: 19:41		
Beryllium	ND	5.0	ug/L	SW846 6010A	06/09-06/18/98	CHK1G107
		Dilution Factor: 1		Analysis Time...: 17:15		
Thallium	ND	10.0	ug/L	SW846 6010A	06/09-06/19/98	CHK1G10T
		Dilution Factor: 1		Analysis Time...: 19:41		
Cadmium	ND	5.0	ug/L	SW846 6010A	06/09-06/19/98	CHK1G108
		Dilution Factor: 1		Analysis Time...: 19:41		
Calcium	191000	5000	ug/L	SW846 6010A	06/09-06/18/98	CHK1G109
		Dilution Factor: 1		Analysis Time...: 17:15		
Chromium	42.6	10.0	ug/L	SW846 6010A	06/09-06/18/98	CHK1G10A
		Dilution Factor: 1		Analysis Time...: 17:15		
Cobalt	ND	50.0	ug/L	SW846 6010A	06/09-06/18/98	CHK1G10C
		Dilution Factor: 1		Analysis Time...: 17:15		
Copper	53.2	25.0	ug/L	SW846 6010A	06/09-06/18/98	CHK1G10D
		Dilution Factor: 1		Analysis Time...: 17:15		

(Continued on next page)

IT CORPORATION - KNOXVILLE

Client Sample ID: 5556

TOTAL Metals

Lot-Sample #...: H8E290237-003

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	WORK
		LIMIT	UNITS		ANALYSIS DATE	ORDER #
Iron	49100	100	ug/L	SW846 6010A	06/09-06/18/98	CHK1G101
		Dilution Factor: 1		Analysis Time...: 17:15		
Magnesium	56700	5000	ug/L	SW846 6010A	06/09-06/18/98	CHK1G101
		Dilution Factor: 1		Analysis Time...: 17:15		
Manganese	1030	15.0	ug/L	SW846 6010A	06/09-06/18/98	CHK1G100
		Dilution Factor: 1		Analysis Time...: 17:15		
Nickel	59.6	40.0	ug/L	SW846 6010A	06/09-06/18/98	CHK1G101
		Dilution Factor: 1		Analysis Time...: 17:15		
Potassium	10000	5000	ug/L	SW846 6010A	06/09-06/18/98	CHK1G100
		Dilution Factor: 1		Analysis Time...: 17:15		
Silver	ND	10.0	ug/L	SW846 6010A	06/09-06/18/98	CHK1G101
		Dilution Factor: 1		Analysis Time...: 17:15		
Sodium	21100	5000	ug/L	SW846 6010A	06/09-06/18/98	CHK1G101
		Dilution Factor: 1		Analysis Time...: 17:15		
Vanadium	66.1	50.0	ug/L	SW846 6010A	06/09-06/18/98	CHK1G101
		Dilution Factor: 1		Analysis Time...: 17:15		
Zinc	157	20.0	ug/L	SW846 6010A	06/09-06/18/98	CHK1G101
		Dilution Factor: 1		Analysis Time...: 17:15		

Quote # 20941

HSE 2801 86



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: PBGW-052798QESK

Page 1 of 1

Project Number: 773206

Samples Shipment Date: 27-MAY-98

Bill To: Accounts Receivable

Project Name: PLUMBROOK ORDNANCE WOR ab Destination: Quanterra - Knoxville

312 Directors Drive

Knoxville

TN 37923

Sample Coordinator: Duane Nielsen

Lab Contact: John Reynolds

Report To: Kim Napier

Turnaround Time:

Project Contact: Kim Napier

312 Directors Drive

Knoxville

TN 37923

Carrier/Waybill No.: Fed Ex/801624849943

Special Instructions:

Possible Hazard Identification:

 Non-hazard Flammable Skin Irritant Poison B Unknown

Sample Disposal:

 Return to Client Disposal by Lab Archive (mos.)
1. Relinquished By
(Signature/Affiliation)

Date: 5/27/98

Time: 1600

1. Received By
(Signature/Affiliation)

Date: 5-28-98

Time: 09:00

2. Relinquished By
(Signature/Affiliation)

Date:

Time:

2. Received By
(Signature/Affiliation)

Date:

Time:

3. Relinquished By
(Signature/Affiliation)

Date:

Time:

3. Received By
(Signature/Affiliation)

Date:

Time:

Comments: 1L TOTAL METALS; 1L FILTERED METALS

Custody seals intact
resealed at 2°C
6/3/98
5-28-98

Sample No	Sample Name	Sample Date	Sample Time	Container	Ctr Qty	Preservative	Requested Testing Program	File CID	Condition On Receipt
5795	PBOW-98-GW-MKMW17-5795	27-MAY-98	10:50	1 L HDPE	2	HNO ₃ , pH<2	TAL Metals by SW-846 6010A/7470 in water ✓	N	pH < 2 pH = 2
5795	PBOW-98-GW-MKMW17-5795	27-MAY-98	10:50	1 L Amb. Glass	1	None except cool to 4 C	Nitroaromatics by SW-846 8330 in soil ✓	N	
5795	PBOW-98-GW-MKMW17-5795	27-MAY-98	10:50	40 ml GVIAL, SEP	3	HCl, pH<2	TCL Volatiles by SW-846 8260A ✓	N	
5795	PBOW-98-GW-MKMW17-5795	27-MAY-98	10:50	1 L Amb. Glass	2	None except cool to 4 C	TCL Semivolatiles by SW-846 8270B in soil ✓	N	
5795	PBOW-98-GW-MKMW17-5795	27-MAY-98	10:50	1 L Amb. Glass	2	None except cool to 4 C	PCBs by SW8081 ✓	N	
5815R	PBOW-98-GW-MKMW20-5815	27-MAY-98	12:30	40 ml GVIAL, SEP	3	HCl-pH 2	TCL Volatiles by SW-846 8260A	N	
9020		27-MAY-98	12:00	40 ml GVIAL, SEP	3	HCl-pH 2	TCL Volatiles by SW-846 8260A	N	

QUANTERRA KNOXVILLE LABORATORY
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Page 1 of 2

CLIENT: IT Corp PROJECT: Plumbrook Lot No.: H8E290237

TO BE COMPLETED BY SAMPLE RECEIPT ASSOCIATE:

- | | | | |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Sample Receipt: | YES | NO | NA |
| a. Do sample container labels match COC? (IDs, Dates, Times) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Is the cooler temperature within acceptance limits? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. Were samples received with correct preservative (excluding Encore)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d. Were custody seals present/intact on cooler and/or containers? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Were all of the samples listed on the COC received? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Were all of the sample containers received intact? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Were containers received for VOAs received without headspace? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| h. Were samples received in the appropriate containers? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Did you check for residual chlorine, if necessary? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| j. Were samples received within 1/2 of the (QAMP) holding time? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| k. Were samples screened for radioactivity? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| l. Were client's sample documents (RFA/COC) received? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| m. Has the RFA/COC been relinquished? (Signed, Dated, Timed) | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| n. Are test/parameters listed for each sample? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| o. Is the matrix of the samples noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| p. Is the date/time of sample collection noted? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| q. Is the client and project name/No. identified? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

SAMPLE RECEIVING ASSOCIATE: Ryan Blumenthal DATE: 5/27/98

TO BE COMPLETED BY PROJECT MANAGER :

- | | | | |
|--|--------------------------|--------------------------|-------------------------------------|
| 1. Project manager "Sample Greet": | YES | NO | NA |
| a. Quote number to be logged-in under <u>20941</u> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. Informed Login associates of special instructions ? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
2. If custody seals were missing/not intact, was client notified?

PROJECT MANAGER : KT DATE: 5/29/98

Client Sample ID	Analysis Requested	Condition (see legend)	Comments/Action
<u>5/27/98</u> <u>565965</u>	<u>VOA, CWA, PCB, ERP, Metal (T+D)</u>	<u>300 2029</u>	<u>*NOCCM received.</u>
<u>5915</u>	<u>Total Metals</u>	<u>4d</u>	<u>Preserved to pH < 2 w/ HNO₃</u>

- Client informed on _____ by _____ . Person contacted: _____
- Noted actions in comments section above.
- No action necessary; process as is.
- Project Manager: KT Date: 6/1/98

+ Ack. letter delivered 6/4/98.
 KT

QUANTERRA KNOXVILLE LABORATORY
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST LEGEND

Item	Condition
Cooler:	1a Not received, COC available 1b Leaking 1c Other: _____
Temperature:	2a Temp Blank = <u>7°C</u> 2b Cooler Temp = _____ (cooler temp should be used only if there is no temp blank)
Container:	3a Leaking 3b Broken 3c Extra 3d No labels 3e Headspace (VOA only) 3f Other: _____
Samples:	4a Samples received but not on COC 4b Samples not received but on COC 4c Holding time expired 4d Sample preservative: <u>pH=6</u> 4e Other: _____
Custody Seals:	5a None 5b Not intact 5c Other: _____
Chain of Custody (COC):	6a Not relinquished by client 6b Incomplete information 6c Other: _____
Container Labels:	7a Doesn't match COC 7b Incomplete information 7c Marking smeared 7d Label torn 7e Other: _____
Other (8):	_____ _____ _____ _____

QUANTERRA KNOXVILLE LABORATORY
SAMPLE LOG-IN (LOT SUMMARY) REVIEW CHECKLIST

CLIENT: H PROJECT: Plumbrook Lot No.: H8E290737

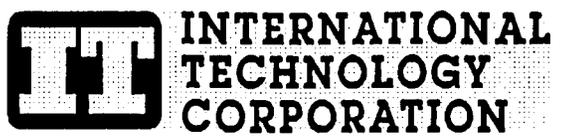
TO BE COMPETED BY PROJECT MANAGER:

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Client Documents (Request for Analysis/Chain of Custody): | YES | NO | NA |
| a. Was QuanTIMS lot number documented on all paperwork? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Was RFA/COC signed upon receipt, including date/time? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Is preservative check (pH) noted on RFA/COC? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Is cooler temperature & custody seal condition noted on COC? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Log-in (Lot Folder) Review: | YES | NO | NA |
| a. Do client IDs on Client Summaries match RFA/COC? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Were tests/parameters assigned correctly? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Were correct analytical and report due dates assigned? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Has the correct fax due date been assigned to the lot? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e. Is the correct report format noted in the lot summary? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| f. Is percent moisture logged for samples requiring this analysis? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g. Are client assigned QC samples properly defined? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Contract/Subcontract Review: | YES | NO | NA |
| a. Is there a contract number or PO for this work? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. If the purchase order number is given, is it noted in Lot header? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c. If samples were subcontracted, was copy of COC in folder? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 4. SDG Review: | YES | NO | NA |
| a. If SDG is required, is SDG form in Lot folder? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Is SDG number noted in Lot header & sample comments? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. If SDG is complete, has the due date been revised & marked closed? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Checklist Review: | YES | NO | NA |
| a. Has Sample Receipt Checklist been filled-out? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Was there a CUR? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Were all issues resolved? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

LOT FOLDER REVIEWED BY: KJ DATE: 6/4/98

Quote # 20941

H8E 290237



ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Reference Document No: PBGW-052898QESK
Page 1 of 3

Project Number: 773206

Samples Shipment Date: 28-MAY-98

Bill To: Accounts Receivable

Project Name: PLUMBROOK ORDNANCE WOR ab Destination: Quanterra - Knoxville

312 Directors Drive
Knoxville TN 37923

Sample Coordinator: Duane Nielsen

Lab Contact: John Reynolds

Report To: Kim Napier

Turnaround Time:

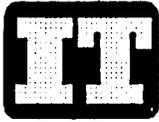
Project Contact: Kim Napier

312 Directors Drive
Knoxville TN 37923

Carrier/Waybill No.: Fed Ex/801624849954

Special Instructions:	
Possible Hazard Identification: Non-hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input checked="" type="checkbox"/>	Sample Disposal: Return to Client <input type="checkbox"/> Disposal by Lab <input checked="" type="checkbox"/> Archive (mos.)
1. Relinquished By (Signature/Affiliation) <i>[Signature]</i> Date: 5/28/98 Time: 1600	1. Received By (Signature/Affiliation) <i>[Signature]</i> Date: 5/29/98 Time: 1015
2. Relinquished By (Signature/Affiliation) Date: Time:	2. Received By (Signature/Affiliation) Date: Time:
3. Relinquished By (Signature/Affiliation) Date: Time:	3. Received By (Signature/Affiliation) Date: Time:
Comments: 1L TOTAL METALS; 1L FILTERED METALS <div style="text-align: right; font-style: italic;"> Rec'd @ 277 °C w/ custody seals Intact OPB 5/29/98 </div>	

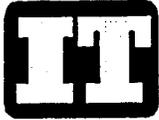
Sample No	Sample Name	Sample Date	Sample Time	Container	Ctr Qty	Preservative	Requested Testing Program	File CID	Condition On Receipt
5445	PBOW-98-GW-MNTA-BEDGW-001-54	28-MAY-98	13:20	1 L HDPE	2	HNO3, pH<2	TAL Metals by SW-846 6010A/7470 in water ✓	N	pH<2
5445	PBOW-98-GW-MNTA-BEDGW-001-54	28-MAY-98	13:20	1 L Amb. Glass	1	None except cool to 4 C	Nitroaromatics by SW-846 8330 in soil ✓	N	pH<2
5445	PBOW-98-GW-MNTA-BEDGW-001-54	28-MAY-98	13:20	40 ml GVIAL, SEP	3	HCl, pH<2	TCL Volatiles by SW-846 8260A ✓	N	
5445	PBOW-98-GW-MNTA-BEDGW-001-54	28-MAY-98	13:20	1 L Amb. Glass	2	None except cool to 4 C	PCBs by SW8081 ✓	N	
5445	PBOW-98-GW-MNTA-BEDGW-001-54	28-MAY-98	13:20	1 L Amb. Glass	2	None except cool to 4 C	TCL Semivolatiles by SW-846 8270B in soil ✓	N	
5555	PBOW-98-WELLS-IT-MW05-5555	28-MAY-98	13:00	1 L HDPE	2	HNO3 PH<2	TAL Metals by SW-846 6010A/7470 in water	N	pH<2
5555	PBOW-98-WELLS-IT-MW05-5555	28-MAY-98	13:00	40 ml GVIAL, SEP	3	HCl-pH 2	TCL Volatiles by SW-846 8260A	N	pH<2



**ANALYSIS REQUEST AND
CHAIN OF CUSTODY RECORD**

H8E 290237

Sample No	Sample Name	Sample Date	Sample Time	Container	Preservative	Requested Testing Program	FI	CID	Condition On Receipt
5555	PBOW-98-WELLS-IT-MW05-5555	28-MAY-98	13:00	1 L Amb. Glass	1 None except cool to 4 C	Nitroaromatics by SW-846 8330 in soil	N		
5555	PBOW-98-WELLS-IT-MW05-5555	28-MAY-98	13:00	1 L Amb. Glass	2 None except cool to 4 C	PCBs by SW8081	N		
5555	PBOW-98-WELLS-IT-MW05-5555	28-MAY-98	13:00	1 L Amb. Glass	2 None except cool to 4 C	TCL Semivolatiles by SW-846 8270B in soil	N		
5556	PBOW-98-WELLS-IT-MW05-5555	28-MAY-98	13:00	1 L Amb. Glass	1 None except cool to 4 C	Nitroaromatics by SW-846 8330 in soil	N		
5556	PBOW-98-WELLS-IT-MW05-5555	28-MAY-98	13:00	1 L HDPE	2 HNO3 PH<2	TAL Metals by SW-846 6010A/7470 in water	N		PH<2 PH<2
5556	PBOW-98-WELLS-IT-MW05-5555	28-MAY-98	13:00	40 ml GVIAL,SEP	3 HCl<pH 2	TCL Volatiles by SW-846 8260A	N		
5556	PBOW-98-WELLS-IT-MW05-5555	28-MAY-98	13:00	1 L Amb. Glass	2 None except cool to 4 C	TCL Semivolatiles by SW-846 8270B in soil	N		
5556	PBOW-98-WELLS-IT-MW05-5555	28-MAY-98	13:00	1 L Amb. Glass	2 None except cool to 4 C	PCBs by SW8081	N		
5565	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L HDPE	2 NONE EXCEPT COOL TO	TAL Metals by SW-846 6010A/7470 in water	N		PH<2 PH<2
5565	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L Amb. Glass	1 None except cool to 4 C	Nitroaromatics by SW-846 8330 in soil	N		
5565	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	40 ml GVIAL,SEP	3 HCl<pH 2	TCL Volatiles by SW-846 8260A	N		
5565	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L Amb. Glass	2 None except cool to 4 C	TCL Semivolatiles by SW-846 8270B in soil	N		
5565	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L Amb. Glass	2 None except cool to 4 C	PCBs by SW8081	N		
5565MS	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L HDPE	2 NONE EXCEPT COOL TO	TAL Metals by SW-846 6010A/7470 in water	N		PH<2 PH<2
5565MS	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L Amb. Glass	2 None except cool to 4 C	PCBs by SW8081	N		
5565MS	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L Amb. Glass	1 None except cool to 4 C	Nitroaromatics by SW-846 8330 in soil	N		
5565MS	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L Amb. Glass	2 None except cool to 4 C	TCL Semivolatiles by SW-846 8270B in soil	N		
5565MS	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	40 ml GVIAL,SEP	3 HCl<pH 2	TCL Volatiles by SW-846 8260A	N		
5565MSD	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L HDPE	2 NONE EXCEPT COOL TO	TAL Metals by SW-846 6010A/7470 in water	N		PH<2 PH<2
5565MSD	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L Amb. Glass	2 None except cool to 4 C	TCL Semivolatiles by SW-846 8270B in soil	N		
5565MSD	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	40 ml GVIAL,SEP	3 HCl<pH 2	TCL Volatiles by SW-846 8260A	N		
5565MSD	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L Amb. Glass	2 None except cool to 4 C	PCBs by SW8081	N		
5565MSD	PBOW-98-WELLS-IT-MW06-5565	28-MAY-98	09:00	1 L Amb. Glass	1 None except cool to 4 C	Nitroaromatics by SW-846 8330 in soil	N		
5915	PBOW-98-GW-BEDMW15-5915	28-MAY-98	07:50	40 ml GVIAL,SEP	3 HCl, pH<2	TCL Volatiles by SW-846 8260A	N		
5915	PBOW-98-GW-BEDMW15-5915	28-MAY-98	07:50	1 L Amb. Glass	1 None except cool to 4 C	TCL Semivolatiles by SW-846 8270B in soil	N		
5915	PBOW-98-GW-BEDMW15-5915	28-MAY-98	07:50	1 L Amb. Glass	1 None except cool to 4 C	Nitroaromatics by SW-846 8330 in soil	N		
5915	PBOW-98-GW-BEDMW15-5915	28-MAY-98	07:50	1 L HDPE	2 HNO3, pH<2	TAL Metals by SW-846 6010A/7470 in water	N		Total = pH=6 Diss. = pH<2
5915	PBOW-98-GW-BEDMW15-5915	28-MAY-98	07:50	1 L Amb. Glass	1 None except cool to 4 C	PCBs by SW8081	N		
5965	PBOW-98-GW-BEDMW20-5965	28-MAY-98	10:00	1 L HDPE	2 HNO3, pH<2	TAL Metals by SW-846 6010A/7470 in water	N	7°C	PH<2 PH<2
5965	PBOW-98-GW-BEDMW20-5965	28-MAY-98	10:00	1 L Amb. Glass	1 None except cool to 4 C	Nitroaromatics by SW-846 8330 in soil	N		
5965	PBOW-98-GW-BEDMW20-5965	28-MAY-98	10:00	40 ml GVIAL,SEP	3 HCl, pH<2	TCL Volatiles by SW-846 8260A	N		



**INTERNATIONAL
TECHNOLOGY
CORPORATION**

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

#E290237

Reference Document No: PBGW-052898QESK

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Sample No	Sample Name	Sample Date	Sample Time	Container	Preservative	Requested Testing Program	Flt	CID	Condition On Receipt
5965	PBOW-98-GW-BEDMV20-5965	28-MAY-98	10:00	1 L Amb. Glass	2 None except cool to 4 C	TCL Semivolatiles by SW-846 8270B in soil	N	704	
5965	PBOW-98-GW-BEDMV20-5965	28-MAY-98	10:00	1 L Amb. Glass	2 None except cool to 4 C	PCBs by SW8081	N	↓	
9021		28-MAY-98	11:00	40 ml GVIAL,SEP	3 HCl<pH 2	TCL Volatiles by SW-846 8260A	N		