W02702-4W

Quanterra
Environmental Services

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
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0061451

CASE NARRATIVE

APR 1999 RECEIVED Data Log In

Bechtel Hanford Incorporated
3350 George Washington Way
Richland, Washington 99352

April 9, 1999

Attention: Joan Kessner

AUG 1999 RECEIVED EDMC

Project Number	:	550.230
SDG	:	W02702
Number of Samples	:	One (1)
Sample Matrix	:	Water
Data Deliverable	:	Summary
Date SDG Closed	:	February 18, 1999

II. Introduction

On February 18, 1999, one (1) "water" sample was received by Quanterra, Richland and transferred to Quanterra, St. Louis for chemical analysis. There were no comments or nonconformances associated with the shipping and receiving of the samples in this sample delivery group. Upon receipt, the samples were given the following laboratory ID numbers to correspond with the specific client ID:

St. Louis ID	BHI ID	SAF ID	Matrix	Date of Receipt
20742-001	B0TVT3	B99-018	WATER	18-FEB-99

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits.

Analyses requested:	Arsenic - 7060 -(GFAA) ICP Metals - 6010 (TAL) Acrylamide - 8316 Chlorine (Total residual) - 330.3 pH -150.1 Sulfate - 375.4 TDS - 160.1 TSS - 160.2 Volatiles - 8260A (TCL) Volatiles - 8240 (append IX)
Deviation from Request:	No Deviation from requested methods.

IV. Definitions

The following codes are used to denote laboratory quality control samples and can be found in the data summary section of this report:

QCBLK- Quality Control Blank, Method Blank
QCLCS- Quality Control Laboratory Control Sample, Blank Spike
DUP- Laboratory Duplicate
MS- Matrix Spike
MSD- Matrix Spike Duplicate.

V. Comments

General: There were no general comments noted.

Volatiles: A Laboratory Control Sample, Method Blank, Matrix Spike and Matrix Spike Duplicate were analyzed with each preparation batch per the protocol for this analysis.

There were no comments for this parameter.

Metals: The Aluminum, Barium, Iron, Magnesium, and Sodium data are flagged with an "E" qualifier due to serial dilution results with a greater than 10% difference.

The recovery of the Aluminum matrix spike duplicate (158.9%) was greater than 125% therefore all associated data was flagged with a "N". The recovery of the Aluminum matrix spike (105.9%) met criteria.

The percent differences for the serial dilution for the following list of elements were greater than 10 which was indicated on the form ones by the "E" flag.

Aluminum	24.0
Barium	16.1
Iron	20.4
Magnesium	23.2
Sodium	37.7

Wet Chemistry: A Laboratory Control Sample, Method Blank, Matrix Spike and Laboratory Duplicate were analyzed with each preparation batch per the protocol for this analysis. TSS, TDS, pH, and Total Residual Chlorine require a duplicate as matrix QC.

There were no comments for this parameter.

Acrylamide: A Laboratory Control Sample, Method Blank, Matrix Spike and Laboratory Duplicate were analyzed with each preparation batch per the protocol for this analysis

There were no comments for this parameter.

I certify that this Summary Package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Reviewed and approved:

Shiela Louvier

Shiela M. Louvier
St. Louis Project Manager

SC023

Quanterra February 18, 1999 02:15 pm
Account: 10722 Project: 550.230 Quanterra-Richland QAS No. 550.23 Rev. 2
Master Sample Login: 20742

Project Manager: S. Louvier

Reviewed by and Date: Sheila Louvier 2-26-99

Sample Header Template:

Sample No. / Comments	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
20742-001	B0TVT3	Water	17-FEB-99 10:24	18-FEB-99 08:20	19-MAR-99	AIRBORNE	1	Screening not Required
SAF B99-018								

#	Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)
3	VI - Vial-40ml	HPLC/8316/Q4	S	COLD	12-MAR-99	19-FEB-99	109H1	(430074:100 430075:99 430076:98)
3		VOA/8240APPIX/Q4	S	COLD	12-MAR-99	03-MAR-99	109H1	(430080:94 430081:93 430082:92)
3		VOA/8260/Q4	S	COLD	12-MAR-99	03-MAR-99	109H1	(430077:97 430078:96 430079:95)
1	PN - Plastic-1L	RCL/330.3/Q4	S	COLD	12-MAR-99	18-FEB-99	T8E	(430073:99)
1	PN - Plastic-500ml	AS/7060/Q4	S	HNO3	12-MAR-99	16-AUG-99	T8E	(430071:98)
1		ICAP/6010/Q4	S	HNO3	12-MAR-99	16-AUG-99	T8E	(430072:97)
1		TDS/160.1/Q4	S	COLD	12-MAR-99	24-FEB-99	T8E	(430069:100)
1		TSS/160.2/Q4	S	COLD	12-MAR-99	24-FEB-99	T8E	(430070:99)
1	PN - Plastic-250ml	SO4/375.4/Q4	S	COLD	12-MAR-99	17-MAR-99	T8E	(430068:100)
1	PN - Plastic-120ml	PH/150.1/Q4	S	COLD	12-MAR-99	18-FEB-99	T8E	(430067:100)

Sample No. / Comments	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
20742-001DUP	B0TVT3	Water	17-FEB-99 10:24	18-FEB-99 08:20	19-MAR-99	AIRBORNE	1	Screening not Required
SAF B99-018								

#	Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)
1	PN - Plastic-1L	RCL/330.3/Q4	S	COLD	12-MAR-99	18-FEB-99	T8E	(430073:99)
1	PN - Plastic-500ml	TDS/160.1/Q4	S	COLD	12-MAR-99	24-FEB-99	T8E	(430069:100)
1		TSS/160.2/Q4	S	COLD	12-MAR-99	24-FEB-99	T8E	(430070:99)
1	PN - Plastic-250ml	SO4/375.4/Q4	S	COLD	12-MAR-99	17-MAR-99	T8E	(430068:100)
1	PN - Plastic-120ml	PH/150.1/Q4	S	COLD	12-MAR-99	18-FEB-99	T8E	(430067:100)

Sample No. / Comments	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
20742-001MS	B0TVT3	Water	17-FEB-99 10:24	18-FEB-99 08:20	19-MAR-99	AIRBORNE	1	Screening not Required
SAF B99-018								

#	Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)
3	VI - Vial-40ml	HPLC/8316/Q4	S	COLD	12-MAR-99	19-FEB-99	109H1	(430074:100 430075:99 430076:98)
3		VOA/8240APPIX/Q4	S	COLD	12-MAR-99	03-MAR-99	109H1	(430077:97 430078:96 430079:95)
3		VOA/8260/Q4	S	COLD	12-MAR-99	03-MAR-99	109H1	(430080:94 430081:93 430082:92)
1	PN - Plastic-500ml	AS/7060/Q4	S	HNO3	12-MAR-99	16-AUG-99	T8E	(430071:98)
1		ICAP/6010/Q4	S	HNO3	12-MAR-99	16-AUG-99	T8E	(430072:97)
1	PN - Plastic-250ml	SO4/375.4/Q4	S	COLD	12-MAR-99	17-MAR-99	T8E	(430068:100)

Sample No. / Comments	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
20742-001MSD	B0TVT3	Water	17-FEB-99 10:24	18-FEB-99 08:20	19-MAR-99	AIRBORNE	1	Screening not Required
SAF B99-018								

#	Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)
3	VI - Vial-40ml	HPLC/8316/Q4	S	COLD	12-MAR-99	19-FEB-99	109H1	(430074:100 430075:99 430076:98)
3		VOA/8240APPIX/Q4	S	COLD	12-MAR-99	03-MAR-99	109H1	(430077:97 430078:96 430079:95)
3		VOA/8260/Q4	S	COLD	12-MAR-99	03-MAR-99	109H1	(430080:94 430081:93 430082:92)
1	PN - Plastic-500ml	AS/7060/Q4	S	HNO3	12-MAR-99	16-AUG-99	T8E	(430071:98)
1		ICAP/6010/Q4	S	HNO3	12-MAR-99	16-AUG-99	T8E	(430072:97)

3*=Sample has not been rad screened.

000003

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-018-08	Page 1 of 2

Collector Renee Nielson	**Company Contact** Roger Stafford	**Telephone No.** 373-1667	**Project Coordinator** TRENT, SJ	**Price Code**	**Data Turnaround** 45 Days
Project Designation 183N Backwash Discharge Pond -- Permit Monitoring 1999	**Sampling Location** 183N		**SAF No.** B99-018		
Ice Chest No. 844	**Field Logbook No.** EL-1381-1		**Method of Shipment** Hand deliver- Govt vehicle		
Shipped To Quanterra Incorporated	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** N/A		
SL023			**COA**		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage Cool 4C

Preservation	None	None	Cool 4C	Cool 4C	Cool 4C	HNO3 to pH <2	HNO3 to pH <2	None	Cool 4C	HCl to pH <2 Cool 4C
Type of Container	P	P	P	P	P	P	P	P	aGs*	aGs*
No. of Container(s)	1	1	1	1	1	1	1	1	3	3
Volume	20mL	125mL	250mL	500mL	500mL	500mL	500mL	1000mL	40mL	40mL
SAMPLE ANALYSIS	Activity Scan didn't need	pH - 150.1 100% fuel	Sulfate -- 375.4	TDS - 160.1	TSS - 160.2	Arsenic - 7060 - (GFAA)	ICP Metals - 6010A (TAL)	Chlorine (Total residual) - 330.3	Acrylamide - 8316	VOA - 8240A (Append IX)

Sample No.	Matrix *	Sample Date	Sample Time										
B0TVT3	Water	2/17/99	1024	X	X	X	X	X	X	X	X	X	X

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By	Date/Time	Received By	Date/Time
R Nielson	2/17/99 1330		1330 2-17-99
Relinquished By	Date/Time	Received By	Date/Time
			2-18-99 0820
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS
** Close SDG upon receipt of samples.

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

000000

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-018-08	Page 2 of 2

Collector Renee Nielson	**Company Contact** Roger Stafford	**Telephone No.** 373-1667	**Project Coordinator** TRENT, SJ	**Price Code**	**Data Turnaround** 45 Days
Project Designation 183N Backwash Discharge Pond -- Permit Monitoring 1999	**Sampling Location** 183N		**SAF No.** B99-018		
Ice Chest No. 814	**Field Logbook No.** EL-1381-1		**Method of Shipment** Hand deliver- Govt vehicle		
Shipped To Quanterra Incorporated	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** N/A		
SL023			**COA**		

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage
Cool 4C

Preservation	HCl to pH <2 Cool 4C											
Type of Container	aGs*											
No. of Container(s)	3											
Volume	40mL											
SAMPLE ANALYSIS	VOA - 8260A (TCL) 100% fuel											
Sample No.	Matrix *	Sample Date	Sample Time									
B0TVT3	Water	2/17/99	1024	X								

CHAIN OF POSSESSION

Relinquished By	Date/Time	Received By	Date/Time
Renee Nielson / R. Nielson	2/17/99 1330	[illegible signature]	2-17-99 1330
		[illegible signature]	2-18-99 0820

Sign/Print Names

SPECIAL INSTRUCTIONS
** Close SDG upon receipt of samples.

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

FROM THE DESK OF: ALLEN NELLESEN
ERC TEAM RAD-CON SUPPORT
373-1925/X0-23

TO: R.T.Fahlberg N1-28 DATE: August 15, 1996

SUBJECT: WATER SAMPLES FROM 183N POTABLE WATER PLANT

Water samples are routinely collected and sent off-site for analysis to assure compliance with Washington State Department of Health drinking water requirements. The history of 183-N which provides treated water to support the operation of the N-Reactor shows that a radiological survey of the water samples is not warranted.

If you need further help or have any questions, please call me at the phone number displayed above.

cc: D. D. Blankenship X7-75
T. A. Edwards X0-23
J. E. Parsons X0-23
R. K. Stafford X1-86
J. P. Zoric X5-57

Figure 1

SAMPLE CHECK-IN LIST

Date/Time Received: 2-17-99 1330 SG#: _____

Work Order Number: _____ SAF #: 399-018

Shipping Container ID: 844 Chain of Custody # F99-018-08

1. Custody Seals on shipping container intact? Yes [X] No [ ]
2. Custody Seals dated and signed? Yes [X] No [ ]
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature 2°C
5. Vermiculite/packing materials is Wet [X] Dry [ ]
6. Number of samples in shipping container: 17
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:
   - X tape
   - X custody seals
   - X hazard labels
   - X appropriate sample labels

9. Samples are:
   - X in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles

10. Where any anomalies identified in sample receipt? Yes [ ] No [X]

11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: [signature] Date: 2-17-99

Telephoned To: _____ On _____ By _____

Quanterra
Environmental Services

017769

Login No.: 20742
SL023

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Richland
Project No: 550.230
Shipper/No: Airborne

Date: 2-18-99 Time: 0820
Initiated by: [illegible]
RFA/COC Numbers: all C-O-C

Condition/Variance (Check all that apply):

1. ☐ Sample received broken/leaking.
2. ☐ Sample received without proper preservative.
   - ☐ Cooler temperature not within 4-C ± 2-C
     Record temperature: _____
   - ☐ pH _____
   - ☐ other: _____
3. ☐ Sample received in improper container.
4. ☐ Sample received without proper paperwork. Explain: _____
5. ☐ Paperwork received without sample.
6. ☐ No sample ID on sample container.
7. ☐ Custody tape disturbed/broken/missing.
8. ☐ Sample ID on container does not match sample ID on paperwork. Explain: _____
9. ☐ All coolers on airbill not received with shipment.
10. ☐ Other (explain below): _____

☐ **No variances were noted during sample receipt.** **Cooler Temperature Upon Receipt:** 3°

Temperature Variance Does Not Affect the Following Analyses: _____

Notes: C-O-C not relinquished.

Corrective Action:

☐ Client's Name: _____ Informed verbally on: _____ By: _____

☐ Client's Name: _____ Informed in writing on: _____ By: _____

☐ Sample(s) processed "as is".

Comments:

☐ Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor Review: (or designate) [illegible] Date: 2-18-99

Project Management Review: Sheila Laurenzi Date: 2-26-99

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

SL-ADMIN-0004, Revised 12/12/98

000010

Bechtel Hanford Incoporated
3350 George Washington Way
Richland, WA 99352

Project: 550.230

Category: Volatiles 8240-Appendix IX
Method: EPA 8240
Matrix: LIQUID

Client ID: B0TVT3

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Quanterra ID : 20742-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK193678-1	02/18/99	02/18/99	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK193678-1	02/18/99	02/18/99	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK193678-1	02/18/99	02/18/99	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK193678-1	02/18/99	02/18/99	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK193678-1	02/18/99	02/18/99	3	UG/L	BJ	5	1
Acetone	67-64-1	QCBLK193678-1	02/18/99	02/18/99	12	UG/L	J	20	1
Carbon Disulfide	75-15-0	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK193678-1	02/18/99	02/18/99	11	UG/L		5	1
1,2-Dichloroethane	107-06-2	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
2-Butanone (MEK)	78-93-3	QCBLK193678-1	02/18/99	02/18/99	20	UG/L	U	20	1
1,1,1-Trichloroethane	71-55-6	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Vinyl Acetate	108-05-4	QCBLK193678-1	02/18/99	02/18/99	10	UG/L	U	10	1
Bromodichloromethane	75-27-4	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
4-Methyl-2-Pentanone (MIBK)	108-10-1	QCBLK193678-1	02/18/99	02/18/99	20	UG/L	U	20	1
2-Hexanone	591-78-6	QCBLK193678-1	02/18/99	02/18/99	20	UG/L	U	20	1
Tetrachloroethene	127-18-4	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Acrolein	107-02-8	QCBLK193678-1	02/18/99	02/18/99	100	UG/L	U	100	1
Acetonitrile	75-05-8	QCBLK193678-1	02/18/99	02/18/99	100	UG/L	U	100	1
Iodomethane	74-88-4	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Allyl chloride	107-05-1	QCBLK193678-1	02/18/99	02/18/99	10	UG/L	U	10	1
2-Chloro-1,3-butadiene	126-99-8	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Propionitrile	107-12-0	QCBLK193678-1	02/18/99	02/18/99	20	UG/L	U	20	1
Methacrylonitrile	126-98-7	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Isobutanol	78-83-1	QCBLK193678-1	02/18/99	02/18/99	200	UG/L	U	200	1
1,4-Dioxane	123-91-1	QCBLK193678-1	02/18/99	02/18/99	500	UG/L	U	500	1
Methyl methacrylate	80-62-6	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Dibromomethane	74-95-3	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
Ethyl methacrylate	97-63-2	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
1,2-Dibromoethane	106-93-4	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
1,1,1,2-Tetrachloroethane	630-20-6	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
trans,1,4-Dichloro-2-butene	110-57-6	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
1,2,3-Trichloropropane	96-18-4	QCBLK193678-1	02/18/99	02/18/99	5	UG/L	U	5	1
1,2-Dibromo-3-chloropropane	96-12-8	QCBLK193678-1	02/18/99	02/18/99	10	UG/L	U	10	1
Dichlorodifluoromethane	75-71-8	QCBLK193678-1	02/18/99	02/18/99	10	UG/L	U	10	1
Trichlorofluoromethane	75-69-4	QCBLK193678-1	02/18/99	02/18/99	10	UG/L	U	10	1
Unknown-1	TIC-32	QCBLK193678-1	02/18/99	02/18/99	9	UG/L	J		1
Bromofluorobenzene	460-00-4	QCBLK193678-1	02/18/99	02/18/99	83	%REC			1
1,2-Dichloroethane-d4	17070-07-0	QCBLK193678-1	02/18/99	02/18/99	96	%REC			1
Toluene-d8	2037-26-5	QCBLK193678-1	02/18/99	02/18/99	100	%REC			1

Bechtel Hanford Incoporated
3350 George Washington Way
Richland, WA 99352

Project: 550.230

Category: Volatiles 8240-Appendix IX
Method: EPA 8240
Matrix: LIQUID

Client ID: B0TVT3

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Quanterra ID : 20742-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK193678-1	02/18/99	02/18/99	92	%REC			1
Trichloroethene	79-01-6	QCBLK193678-1	02/18/99	02/18/99	107	%REC			1
Benzene	71-43-2	QCBLK193678-1	02/18/99	02/18/99	110	%REC			1
Toluene	108-88-3	QCBLK193678-1	02/18/99	02/18/99	98	%REC			1
Chlorobenzene	108-90-7	QCBLK193678-1	02/18/99	02/18/99	95	%REC			1
Bromofluorobenzene	460-00-4	QCBLK193678-1	02/18/99	02/18/99	88	%REC			1
1,2-Dichloroethane-d4	17070-07-0	QCBLK193678-1	02/18/99	02/18/99	103	%REC			1
Toluene-d8	2037-26-5	QCBLK193678-1	02/18/99	02/18/99	108	%REC			1

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Project: 550.230

Category: Volatiles 8240-Appendix IX
Method: EPA 8240
Matrix: LIQUID

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Client ID: B0TVT3

Quanterra ID : 20742-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK193678-1	02/18/99	02/18/99	90	%REC			1
Trichloroethene	79-01-6	QCBLK193678-1	02/18/99	02/18/99	106	%REC			1
Benzene	71-43-2	QCBLK193678-1	02/18/99	02/18/99	108	%REC			1
Toluene	108-88-3	QCBLK193678-1	02/18/99	02/18/99	96	%REC			1
Chlorobenzene	108-90-7	QCBLK193678-1	02/18/99	02/18/99	93	%REC			1
Bromofluorobenzene	460-00-4	QCBLK193678-1	02/18/99	02/18/99	90	%REC			1
1,2-Dichloroethane-d4	17070-07-0	QCBLK193678-1	02/18/99	02/18/99	102	%REC			1
Toluene-d8	2037-26-5	QCBLK193678-1	02/18/99	02/18/99	104	%REC			1

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0TVT3

Lab Name: QUANTERRA MO Contract: 550.230

Lab Code: ITMO Case No.: SAS No.: SDG No.: SL023

Matrix: (soil/water) WATER Lab Sample ID: 20742-001V8240

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: BSMP7076

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. _____ Date Analyzed: 02/18/99

GC Column: RTX-502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	3	JB
67-64-1	Acetone	12	J
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	11	
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	20	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	5	U
108-88-3	Toluene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0TVT3

Lab Name: QUANTERRA MO Contract: 550.230

Lab Code: ITMO Case No.: SAS No.: SDG No.: SL023

Matrix: (soil/water) WATER Lab Sample ID: 20742-001V8240

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: BSMP7076

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. _____ Date Analyzed: 02/18/99

GC Column: RTX-502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
1330-20-7	Xylenes (total)	5	U
107-02-8	Acrolein	100	U
75-05-8	Acetonitrile	100	U
74-88-4	Iodomethane	5	U
107-05-1	Allyl chloride	10	U
126-99-8	2-Chloro-1,3-butadiene	5	U
107-12-0	Propionitrile	20	U
126-98-7	Methacrylonitrile	5	U
78-83-1	Isobutanol	200	U
123-91-1	1,4-Dioxane	500	U
80-62-6	Methyl methacrylate	5	U
75-95-3	Dibromomethane	5	U
97-63-2	Ethyl methacrylate	5	U
106-93-4	1,2-Dibromoethane	5	U
630-20-6	1,1,1,2-Tetrachloroethane	5	U
110-57-6	trans-1,4-dichloro-2-butene	5	U
96-18-4	1,2,3-Trichloropropane	5	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
75-71-8	Dichlorodifluoromethane	10	U
75-69-4	Trichlorofluoromethane	10	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0TVT3

Lab Name: QUANTERRA MO Contract: 550.230

Lab Code: ITMO Case No.: SAS No.: SDG No.: SL023

Matrix: (soil/water) WATER Lab Sample ID: 20742-001V8240

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: BSMP7076

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. _____ Date Analyzed: 02/18/99

GC Column: RTX-502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	1.73	9.173	J
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Project: 550.230

Category: Volatiles 8260 (TCL)
Method: EPA 8260
Matrix: LIQUID

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Client ID: B0TVT3

Quanterra ID : 20742-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK193850-1	02/22/99	02/22/99	10	UG/L	U	10	1
Bromomethane	74-83-9	QCBLK193850-1	02/22/99	02/22/99	10	UG/L	U	10	1
Vinyl Chloride	75-01-4	QCBLK193850-1	02/22/99	02/22/99	10	UG/L	U	10	1
Chloroethane	75-00-3	QCBLK193850-1	02/22/99	02/22/99	10	UG/L	U	10	1
Methylene Chloride	75-09-2	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Acetone	67-64-1	QCBLK193850-1	02/22/99	02/22/99	18	UG/L	J	20	1
Carbon Disulfide	75-15-0	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Chloroform	67-66-3	QCBLK193850-1	02/22/99	02/22/99	21	UG/L		5	1
1,2-Dichloroethane	107-06-2	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
2-Butanone (MEK)	78-93-3	QCBLK193850-1	02/22/99	02/22/99	20	UG/L	U	20	1
1,1,1-Trichloroethane	71-55-6	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Bromodichloromethane	75-27-4	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Trichloroethene	79-01-6	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Dibromochloromethane	124-48-1	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Benzene	71-43-2	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Bromoform	75-25-2	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
4-Methyl-2-Pentanone (MIBK)	108-10-1	QCBLK193850-1	02/22/99	02/22/99	20	UG/L	U	20	1
2-Hexanone	591-78-6	QCBLK193850-1	02/22/99	02/22/99	20	UG/L	U	20	1
Tetrachloroethene	127-18-4	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Toluene	108-88-3	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Chlorobenzene	108-90-7	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
EthylBenzene	100-41-4	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Styrene	100-42-5	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Xylene (total)	1330-20-7	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	U	5	1
Unknown Hydrocarbon-1	TIC-5001	QCBLK193850-1	02/22/99	02/22/99	5	UG/L	J		1
Unknown Hydrocarbon-2	TIC-5002	QCBLK193850-1	02/22/99	02/22/99	16	UG/L	J		1
Bromofluorobenzene	460-00-4	QCBLK193850-1	02/22/99	02/22/99	94	%REC			1
Dibromofluoromethane	1868-53-7	QCBLK193850-1	02/22/99	02/22/99	116	%REC			1
Toluene-d8	2037-26-5	QCBLK193850-1	02/22/99	02/22/99	108	%REC			1

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Project: 550.230

Category: Volatiles 8260 (TCL)
Method: EPA 8260
Matrix: LIQUID

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Client ID: B0TVT3

Quanterra ID : 20742-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK193850-1	02/22/99	02/22/99	157	%REC			1
Trichloroethene	79-01-6	QCBLK193850-1	02/22/99	02/22/99	132	%REC			1
Benzene	71-43-2	QCBLK193850-1	02/22/99	02/22/99	136	%REC			1
Toluene	108-88-3	QCBLK193850-1	02/22/99	02/22/99	119	%REC			1
Chlorobenzene	108-90-7	QCBLK193850-1	02/22/99	02/22/99	116	%REC			1
Bromofluorobenzene	460-00-4	QCBLK193850-1	02/22/99	02/22/99	96	%REC			1
Dibromofluoromethane	1868-53-7	QCBLK193850-1	02/22/99	02/22/99	113	%REC			1
Toluene-d8	2037-26-5	QCBLK193850-1	02/22/99	02/22/99	109	%REC			1

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Project: 550.230

Category: Volatiles 8260 (TCL)
Method: EPA 8260
Matrix: LIQUID

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Client ID: B0TVT3

Quanterra ID : 20742-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK193850-1	02/22/99	02/22/99	153	%REC			1
Trichloroethene	79-01-6	QCBLK193850-1	02/22/99	02/22/99	128	%REC			1
Benzene	71-43-2	QCBLK193850-1	02/22/99	02/22/99	136	%REC			1
Toluene	108-88-3	QCBLK193850-1	02/22/99	02/22/99	114	%REC			1
Chlorobenzene	108-90-7	QCBLK193850-1	02/22/99	02/22/99	112	%REC			1
Bromofluorobenzene	460-00-4	QCBLK193850-1	02/22/99	02/22/99	97	%REC			1
Dibromofluoromethane	1868-53-7	QCBLK193850-1	02/22/99	02/22/99	106	%REC			1
Toluene-d8	2037-26-5	QCBLK193850-1	02/22/99	02/22/99	110	%REC			1

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0TVT3

Lab Name: QUANTERRA MO Contract: 550.23

Lab Code: ITMO Case No.: SAS No.: SDG No.: SL023

Matrix: (soil/water) WATER Lab Sample ID: 20742-001

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: BSMP7121

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. _____ Date Analyzed: 02/22/99

GC Column: RTX-502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (ml) Soil Aliquot Volume: _____ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	18	J
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	21	
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	20	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Chlorodibromomethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-pentanone	20	U
591-78-6	2-Hexanone	20	U
127-18-4	Tetrachloroethene	5	U
108-88-3	Toluene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylenes (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0TVT3

Lab Name: QUANTERRA MO Contract: 550.23

Lab Code: ITMO Case No.: SAS No.: SDG No.: SL023

Matrix: (soil/water) WATER Lab Sample ID: 20742-001

Sample wt/vol: 5.000 (g/ml) ML Lab File ID: BSMP7121

Level: (low/med) LOW Date Received: 02/18/99

% Moisture: not dec. _____ Date Analyzed: 02/22/99

GC Column: RTX-502.2 ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (ml) Soil Aliquot Volume: _____ (uL)

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN HYDROCARBON	1.68	5.053	J
2.	UNKNOWN HYDROCARBON	24.52	15.62	J
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Richland, WA 99352

Project: 550.230

Category: Acrylamide
Method: SW-846 8316
Matrix: LIQUID

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0TVT3	20742-001	Acrylamide	79-06-1	QCBLK193522-1	03/16/99	03/16/99	100	UG/L	U	100	1
B0TVT3	20742-001MS	Acrylamide	79-06-1	QCBLK193522-1	03/16/99	03/16/99	111	%REC			1
B0TVT3	20742-001MSD	Acrylamide	79-06-1	QCBLK193522-1	03/16/99	03/16/99	106	%REC			1
NA	QCBLK193522-1	Acrylamide	79-06-1	QCBLK193522-1	03/16/99	03/16/99	100	UG/L	U	100	1
NA	QCLCS193522-1	Acrylamide	79-06-1	QCBLK193522-1	03/16/99	03/16/99	102	%REC			1

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FORM 1
OTHER ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B0TVT3

Lab Name: QUANTERRA Contract: 550.23

Lab Code: QUANTERRA-STL Case No.: SAS No.: SDG No.: W02702

Matrix: (soil/water) WATER Lab Sample ID: 20742-001

Sample wt/vol: _____ (g/mL) ML Lab File ID: K___108

% Moisture: _____ decanted: (Y/N)___ Date Received: 02/18/99

Extraction: (SepF/Cont/Sonc) CONT Date Extracted:

Concentrated Extract Volume:_____(uL) Date Analyzed: 03/16/99

Injection Volume: _____(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
	Acrylamide	100	U

FORM I OTHER

000048C

Bechtel Hanford Incoporated
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Project: 550.230

Category: ICP Metals-6010A (TAL)
Method: EPA 6010
Matrix: LIQUID

Client ID: B0TVT3

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Quanterra ID : 20742-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK195343-1	03/15/99	03/16/99	1240	UG/L	EN	200	1
Antimony	7440-36-0	QCBLK195343-1	03/15/99	03/16/99	45.9	UG/L	U	60.0	1
Barium	7440-39-3	QCBLK195343-1	03/15/99	03/16/99	28.2	UG/L	BE	200	1
Beryllium	7440-41-7	QCBLK195343-1	03/15/99	03/16/99	0.52	UG/L	B	5.0	1
Cadmium	7440-43-9	QCBLK195343-1	03/15/99	03/16/99	4.2	UG/L	U	5.0	1
Calcium	7440-70-2	QCBLK195343-1	03/15/99	03/16/99	23300	UG/L		5000	1
Chromium	7440-47-3	QCBLK195343-1	03/15/99	03/16/99	2.8	UG/L	U	10.0	1
Cobalt	7440-48-4	QCBLK195343-1	03/15/99	03/16/99	3.4	UG/L	U	50.0	1
Copper	7440-50-8	QCBLK195343-1	03/15/99	03/16/99	9.6	UG/L	B	25.0	1
Iron	7439-89-6	QCBLK195343-1	03/15/99	03/16/99	479	UG/L	E	100	1
Magnesium	7439-95-4	QCBLK195343-1	03/15/99	03/16/99	4900	UG/L	BE	5000	1
Manganese	7439-96-5	QCBLK195343-1	03/15/99	03/16/99	18.4	UG/L		15.0	1
Nickel	7440-02-0	QCBLK195343-1	03/15/99	03/16/99	15.8	UG/L	U	40.0	1
Potassium	7440-09-7	QCBLK195343-1	03/15/99	03/16/99	2200	UG/L	U	5000	1
Silver	7440-22-4	QCBLK195343-1	03/15/99	03/16/99	5.5	UG/L	U	10.0	1
Sodium	7440-23-5	QCBLK195343-1	03/15/99	03/16/99	4060	UG/L	BE	5000	1
Vanadium	7440-62-2	QCBLK195343-1	03/15/99	03/16/99	8.8	UG/L	B	50.0	1
Zinc	7440-66-6	QCBLK195343-1	03/15/99	03/16/99	16.6	UG/L	B	20.0	1

Bechtel Hanford Incoporated
3350 George Washington Way
Richland, WA 99352

Project: 550.230

Category: ICP Metals-6010A (TAL)
Method: EPA 6010
Matrix: LIQUID

Client ID: B0TVT3

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Quanterra ID : 20742-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK195343-1	03/15/99	03/16/99	106	%REC			1
Antimony	7440-36-0	QCBLK195343-1	03/15/99	03/16/99	88	%REC			1
Barium	7440-39-3	QCBLK195343-1	03/15/99	03/16/99	98	%REC			1
Beryllium	7440-41-7	QCBLK195343-1	03/15/99	03/16/99	102	%REC			1
Cadmium	7440-43-9	QCBLK195343-1	03/15/99	03/16/99	120	%REC			1
Calcium	7440-70-2	QCBLK195343-1	03/15/99	03/16/99	104	%REC			1
Chromium	7440-47-3	QCBLK195343-1	03/15/99	03/16/99	96	%REC			1
Cobalt	7440-48-4	QCBLK195343-1	03/15/99	03/16/99	99	%REC			1
Copper	7440-50-8	QCBLK195343-1	03/15/99	03/16/99	101	%REC			1
Iron	7439-89-6	QCBLK195343-1	03/15/99	03/16/99	103	%REC			1
Magnesium	7439-95-4	QCBLK195343-1	03/15/99	03/16/99	105	%REC			1
Manganese	7439-96-5	QCBLK195343-1	03/15/99	03/16/99	96	%REC			1
Nickel	7440-02-0	QCBLK195343-1	03/15/99	03/16/99	102	%REC			1
Potassium	7440-09-7	QCBLK195343-1	03/15/99	03/16/99	106	%REC			1
Silver	7440-22-4	QCBLK195343-1	03/15/99	03/16/99	95	%REC			1
Sodium	7440-23-5	QCBLK195343-1	03/15/99	03/16/99	103	%REC			1
Vanadium	7440-62-2	QCBLK195343-1	03/15/99	03/16/99	100	%REC			1
Zinc	7440-66-6	QCBLK195343-1	03/15/99	03/16/99	100	%REC			1

Bechtel Hanford Incoporated
3350 George Washington Way
Richland, WA 99352

Project: 550.230

Category: ICP Metals-6010A (TAL)
Method: EPA 6010
Matrix: LIQUID

Client ID: B0TVT3

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Quanterra ID : 20742-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aluminum	7429-90-5	QCBLK195343-1	03/15/99	03/16/99	159	%REC			1
Antimony	7440-36-0	QCBLK195343-1	03/15/99	03/16/99	93	%REC			1
Barium	7440-39-3	QCBLK195343-1	03/15/99	03/16/99	98	%REC			1
Beryllium	7440-41-7	QCBLK195343-1	03/15/99	03/16/99	101	%REC			1
Cadmium	7440-43-9	QCBLK195343-1	03/15/99	03/16/99	118	%REC			1
Calcium	7440-70-2	QCBLK195343-1	03/15/99	03/16/99	102	%REC			1
Chromium	7440-47-3	QCBLK195343-1	03/15/99	03/16/99	95	%REC			1
Cobalt	7440-48-4	QCBLK195343-1	03/15/99	03/16/99	98	%REC			1
Copper	7440-50-8	QCBLK195343-1	03/15/99	03/16/99	98	%REC			1
Iron	7439-89-6	QCBLK195343-1	03/15/99	03/16/99	123	%REC			1
Magnesium	7439-95-4	QCBLK195343-1	03/15/99	03/16/99	104	%REC			1
Manganese	7439-96-5	QCBLK195343-1	03/15/99	03/16/99	96	%REC			1
Nickel	7440-02-0	QCBLK195343-1	03/15/99	03/16/99	100	%REC			1
Potassium	7440-09-7	QCBLK195343-1	03/15/99	03/16/99	101	%REC			1
Silver	7440-22-4	QCBLK195343-1	03/15/99	03/16/99	96	%REC			1
Sodium	7440-23-5	QCBLK195343-1	03/15/99	03/16/99	102	%REC			1
Vanadium	7440-62-2	QCBLK195343-1	03/15/99	03/16/99	98	%REC			1
Zinc	7440-66-6	QCBLK195343-1	03/15/99	03/16/99	102	%REC			1

Bechtel Hanford Incoporated
3350 George Washington Way
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Project: 550.230

Category: Arsenic-7060-(GFAA)
Method: EPA 7000 Series
Matrix: LIQUID

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0TVT3	20742-001	Arsenic	7440-38-2	QCBLK195202-1	03/11/99	03/12/99	0.80	UG/L	U	10.0	1
B0TVT3	20742-001MS	Arsenic	7440-38-2	QCBLK195202-1	03/11/99	03/12/99	112	%REC			1
B0TVT3	20742-001MSD	Arsenic	7440-38-2	QCBLK195202-1	03/11/99	03/12/99	113	%REC			1
NA	QCBLK195202-1	Arsenic	7440-38-2	QCBLK195202-1	03/11/99	03/12/99	0.80	UG/L	U	10.0	1
NA	QCLCS195202-1	Arsenic	7440-38-2	QCBLK195202-1	03/11/99	03/12/99	103	%REC			1

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: QUANTERRA_MO_____ Contract: 550.230___

Lab Code: ITMO__ Case No.: _____ SAS No.: _____ SDG No.: W02702_____

SOW No.: SW846

EPA Sample No.	Lab Sample ID
B0TVT3	20742-001
B0TVT3SD	20742-001SD
B0TVT3S	20742-001S

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES
If yes - were raw data generated before application of background corrections ? Yes/No NO_

Comments:

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

Signature: _____ Name: _____

Date: _____ Title: _____

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0TVT3

Lab Name: QUANTERRA_MO Contract: 550.230

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02702

Matrix (soil/water): WATER Lab Sample ID: 20742-001

Level (low/med): LOW Date Received: 02/18/99

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	1240		EN	P
7440-36-0	Antimony	45.9	U		P
7440-38-2	Arsenic	0.80	U		F
7440-39-3	Barium	28.2	B	E	P
7440-41-7	Beryllium	0.52	B		P
7440-43-9	Cadmium	4.2	U		P
7440-70-2	Calcium	23300			P
7440-47-3	Chromium	2.8	U		P
7440-48-4	Cobalt	3.4	U		P
7440-50-8	Copper	9.6	B		P
7439-89-6	Iron	479		E	P
7439-95-4	Magnesium	4900	B	E	P
7439-96-5	Manganese	18.4			P
7440-02-0	Nickel	15.8	U		P
7440-09-7	Potassium	2200	U		P
7440-22-4	Silver	5.5	U		P
7440-23-5	Sodium	4060	B	E	P
7440-62-2	Vanadium	8.8	B		P
7440-66-6	Zinc	16.6	B		P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

FORM I - IN

SW-846

Bechtel Hanford Incoporated
3350 George Washington Way
Richland, WA 99352

Project: 550.230

Category: pH EPA 150.1
Method: EPA 150.1
Matrix: LIQUID

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0TVT3	20742-001	pH	PH	QCBLK194357-1	02/27/99	02/27/99	7.09	PH			1
B0TVT3	20742-001DUP	pH	PH	QCBLK194357-1	02/27/99	02/27/99	7.15	PH			1
NA	QCBLK194357-1	pH	PH	QCBLK194357-1	02/27/99	02/27/99	5.42	PH			1

Bechtel Hanford Incoporated
3350 George Washington Way
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Project: 550.230

Category: Residual Chlorine
Method: EPA 330.3
Matrix: LIQUID

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0TVT3	20742-001	Residual Chlori	7782-50-5a	QCBLK194160-1	02/25/99	02/25/99	0.10	MG/L	U	0.10	1
B0TVT3	20742-001DUP	Residual Chlori	7782-50-5a	QCBLK194160-1	02/25/99	02/25/99	0.10	MG/L	U	0.10	1
NA	QCBLK194160-1	Residual Chlori	7782-50-5a	QCBLK194160-1	02/25/99	02/25/99	0.10	MG/L	U	0.10	1
NA	QCLCS194160-1	Residual Chlori	7782-50-5a	QCBLK194160-1	02/25/99	02/25/99	105	%REC			1

Bechtel Hanford Incoporated
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Project: 550.230

Category: Sulfate
Method: EPA 375.4
Matrix: LIQUID

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0TVT3	20742-001	Sulfate	14808-79-8	QCBLK195111-1	03/10/99	03/10/99	48.2	MG/L		5.00	1
B0TVT3	20742-001DUP	Sulfate	14808-79-8	QCBLK195111-1	03/10/99	03/10/99	43.6	MG/L		5.00	1
B0TVT3	20742-001MS	Sulfate	14808-79-8	QCBLK195111-1	03/10/99	03/10/99	114	%REC			2
NA	QCBLK195111-1	Sulfate	14808-79-8	QCBLK195111-1	03/10/99	03/10/99	5.00	MG/L	U	5.00	1
NA	QCLCS195111-1	Sulfate	14808-79-8	QCBLK195111-1	03/10/99	03/10/99	97	%REC			1

Bechtel Hanford Incoporated
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Project: 550.230

Category: TDS-160.1
Method: EPA 160.1
Matrix: LIQUID

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0TVT3	20742-001	Total Dissolved	TDS	QCBLK194021-1	02/23/99	02/23/99	128	MG/L		5.00	1
B0TVT3	20742-001DUP	Total Dissolved	TDS	QCBLK194021-1	02/23/99	02/23/99	124	MG/L		5.00	1
NA	QCBLK194021-1	Total Dissolved	TDS	QCBLK194021-1	02/23/99	02/23/99	5.00	MG/L	U	5.00	1
NA	QCLCS194021-1	Total Dissolved	TDS	QCBLK194021-1	02/23/99	02/23/99	96	%REC			1

Bechtel Hanford Incoporated
3350 George Washington Way
Richland, WA 99352

Project: 550.230

Category: Total Suspended Solids (160.2)
Method: EPA 160.2
Matrix: LIQUID

Sample Date : 02/17/99
Receipt Date : 02/18/99
Report Date : 03/18/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0TVT3	20742-001	Total Suspended	TSS	QCBLK193715-1	02/19/99	02/19/99	12.0	MG/L		1.00	1
B0TVT3	20742-001DUP	Total Suspended	TSS	QCBLK193715-1	02/19/99	02/19/99	10.0	MG/L		1.00	1
NA	QCBLK193715-1	Total Suspended	TSS	QCBLK193715-1	02/19/99	02/19/99	1.00	MG/L	U	1.00	1
NA	QCLCS193715-1	Total Suspended	TSS	QCBLK193715-1	02/19/99	02/19/99	95	%REC			1