W01897

0048873

Quanterra Environmental Services

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
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CASE NARRATIVE

APR 1998
RECEIVED
EDMC

OCT 1997
RECEIVED
Data
Log In

Bechtel Hanford Incorporated
3350 George Washington Way
Richland, Washington 99352

October 18, 1997

Attention: Joan Kessner

Project number	:	550.230
Date Received by Lab	:	September 4, 1997
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W01897
Data Deliverable	:	Summary

I. Introduction

On September 4, 1997, one (1) water sample was received by Quanterra, Richland and was transferred to Quanterra, St. Louis for chemical analysis. Upon receipt, the sample was given the following laboratory ID number to correspond with the specific client ID:

St. Louis ID	BHI ID	Richland ID	Matrix	Date of Receipt
15784-001	B0L3Y5	70907001	Water	09/04/97

II. 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: Volatiles by EPA 8260. Total Residual Chlorine by EPA Method 330.1. Sulfate by EPA Method 375.4. pH by EPA Method 150.1.

III. Quality Control

A Laboratory Control Sample and Method Blank were analyzed with each preparation batch. Matrix Spike and Matrix Spike Duplicate or Sample Duplicate were performed per the protocol for each analyte in this SDG. Total Residual Chlorine and pH require only a Sample Duplicate for matrix QC.

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

V. Comments

Shipping and Receiving
There were no variances associated with sample receipt.

Volatiles-8260
Sample 15784-001 was analyzed outside of holding time. The sample and the Matrix Spike were run 3 days outside holdtime. The Matrix Spike Duplicate was run 6 days outside holdtime. See NCM #3718.

Wet Chemistry
The matrix spike recovery for sulfate in sample 15784-001 was 71% and outside the acceptable range of 75-125%.

I certify that this data 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:

Wade H. Price
Project Manager
e:\\price$\hanford\hanw1897.nar

LOG #: 3718

LABORATORY NONCONFORMANCE MEMO (NCM)

W01897

Quanterra Incorporated

Project ID/Client: 550.230 / Quanterra Richland

NCM Initiated by/Date: LMurphy 092597 Project Manager: Wade Price

Sample Numbers/QC batch or lot numbers: 15784-001, -001 MSD

Tests: VOA / 8260 / Q4

Analytical Area (check appropriate area):

- ☐ Sample control
- ☐ Organic preparation
- ☐ Inorganic preparation
- ☐ GC
- ☐ HPLC
- ☑ GC/MS
- ☐ Wet chemistry
- ☐ Metals
- ☐ Reporting
- ☐ Data review
- ☐ Radiochemistry
- ☐ _____

Nonconformance (check appropriate area): *To be completed by analyst*

Holding Time Violations (exceeded by 3 days)

Category I: Laboratory Independent

- ☐ 1. Holding time expired in transit
- ☐ 2. Sample rec'd > 48 hrs after sampling. or ½ holding time has expired
- ☐ 3. Test added by client after expiration

Category II: Laboratory Dependent

- ☐ 4. Instrument failure
- ☐ 5. Analyst error
- ☐ 6. Log-in error
- ☐ 7. Miscommunication
- ☑ 8. Other (explanation required) sample load

Category III: Analysis Reruns (QA/QC)

- ☐ 9. Surrogates
- ☐ 10. Internal standards
- ☐ 11. Spike recoveries
- ☐ 12. Blank contamination

Category IV: Analysis Reruns (Confirmation)

- ☐ 13. Second column
- ☐ 14. Contamination check
- ☐ 15. Confirmation of matrix effects
- ☐ 16. Other (explanation required) _____

Category V: Analysis Reruns (Dilution)

- ☐ 17. Over calibration
- ☐ 18. Under calibration
- ☐ 19. Other (explanation required) _____

Quality Assurance/Quality Control

- ☐ 20. QC data reported outside of controls
- ☐ 21. Incorrect procedure used
- ☐ 22. SOP intentionally modified with QA and tech approval
- ☐ 23. Invalid instrument calibration
- ☐ 24. Received insufficient sample for proper analysis

Incorrect or Incomplete Client Deliverable

- ☐ 25. Hardcopy deliverable error
- ☐ 26. Electronic deliverable error

Reported Detection Limits Elevated Due to:

- ☐ 27. Sample matrix: Does not include high analyte content
- ☐ 28. Insufficient sample volume
- ☐ 29. Other (explanation required)

Miscellaneous

- ☐ 30. Instrument/equipment Tag-out
- ☐ 31. Other (explanation required) _____

Notification (check appropriate area): ☑ Required ☐ Not Required *To be completed by project manager*

Client notified by (name and date): [illegible]

- ☑ In writing narrative
- ☐ By telephone
- ☐ By facsimile
- ☐ Other (explain)

Client's name and response: _____

- ☐ Process "as is"
- ☐ Re-sample
- ☐ On hold until _____
- ☐ Other (explain)

Project manager (signature and date): [illegible] 10/8/97

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QUANTERRA LABORATORY NONCONFORMANCE MEMO

LOG #: 3718

Corrective Action: *To be completed and reviewed by all associates involved*

Problem Description/Root Cause Author's initials and date: JOM 092597

Due to sample load, contaminated samples and sample dilutions, 15784 was run 3 days out of hold.

Corrective Actions (Short Term) Author's initials and date: JOM 092597

As is.

Corrective Actions to Prevent Reoccurrence (Long Term)

Additional instrumentation is being brought on line.

Corrective Action approved by (Supervisor/Group Leader) and date:

Additional Comments:

Corrective Action to be completed by (if other than Supervisor/Group Leader):

Date Corrective Action is to be completed:

Quality Assurance Review *To be completed by a QA associate*

☐ Anomaly ☒ Deficiency ☐ Notified Ops/Sys Manager (Initials)

☐ Further action required:

Further action assigned to:

QA signature: Date: 10/16/97

Corrective Action Verification: *To be completed by a QA associate*

☐ Verification not required or requested

☐ Verified / CA completed on: by

☐ Cannot verify (specify reason)

Verified by: Date:

Nonconformance Memo Closure:

QA signature: Date:

The Office of Quality Assurance maintains a copy of this NCM indicating its final status.

000004A

Quanterra September 19, 1997 04:41 pm
Account: 10722 Project: 550.230 Quanterra-Richland QAS No. 550.23 Rev. 0
Master Sample Login: 15784

Project Manager: W. Price

Draft: Final: Entered and Reviewed by: PM Review:

Sample Header Template:

Sample No. / # Container Type	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
15784-001	B0L3Y5	Water	04-SEP-97 07:17	04-SEP-97 14:17	04-OCT-97	AIR BORNE	1	Screening not Required
RICHLAND I.D. 70907001								

#	Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)
3	VI - Vial-40ml	VOA/8260/Q4	S	HCL	27-SEP-97	18-SEP-97	1091	(330555:100 330556:99 330557:98)
1	PN - Plastic-1L	CL/330.3/Q4	S	COLD	27-SEP-97	06-SEP-97	T12A	(330554:100)
1	PN - Plastic-250ml	SO4/375.4/Q4	S	COLD	27-SEP-97	02-OCT-97	T12A	(330558:97)
1	PN - Plastic-120ml	PH/150.1/Q4	S	COLD	27-SEP-97	05-SEP-97	T12A	(330553:100)

15784-001DUP	B0L3Y5	Water	04-SEP-97 07:17	04-SEP-97 14:17	04-OCT-97	AIR BORNE	1	Screening not Required
RICHLAND I.D. 70907001								

1	PN - Plastic-1L	CL/330.3/Q4	S	COLD	27-SEP-97	06-SEP-97	T12A	(330554:100)
1	PN - Plastic-250ml	SO4/375.4/Q4	S	COLD	27-SEP-97	02-OCT-97	T12A	(330558:97)
1	PN - Plastic-120ml	PH/150.1/Q4	S	COLD	27-SEP-97	05-SEP-97	T12A	(330553:100)

15784-001MS	B0L3Y5	Water	04-SEP-97 07:17	04-SEP-97 14:17	04-OCT-97	AIR BORNE	1	Screening not Required
RICHLAND I.D. 70907001								

3	VI - Vial-40ml	VOA/8260/Q4	S	HCL	27-SEP-97	18-SEP-97	1091	(330555:100 330556:99 330557:98)
1	PN - Plastic-1L	CL/330.3/Q4	S	COLD	27-SEP-97	06-SEP-97	T12A	(330554:100)
1	PN - Plastic-250ml	SO4/375.4/Q4	S	COLD	27-SEP-97	02-OCT-97	T12A	(330558:97)

15784-001MSD	B0L3Y5	Water	04-SEP-97 07:17	04-SEP-97 14:17	04-OCT-97	AIR BORNE	1	Screening not Required
RICHLAND I.D. 70907001								

3	VI - Vial-40ml	VOA/8260/Q4	S	HCL	27-SEP-97	18-SEP-97	1091	(330579:100 330580:99 330581:98)

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3*=Sample has not been rad screened.

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B97-108-08	Page 1 of 1

Collector: Mike Stankovich	Company Contact: Joe Zoric	Telephone No.: 373-4315	Project Coordinator: Koerner, CC
Project Designation: 183N Backwash Discharge Pond -- Permit Monitoring	Sampling Location: 100N		SAF No.: B97-108
Ice Chest No.: Shipping van 96-006	Field Logbook No.: EL-~~1309~~ 1159		Method of Shipment: Hand delivered
Shipped To: Quanterra Incorporated	Offsite Property No.: NA		Bill of Lading/Air Bill No.: NA

Data Turnaround: **45 Days**

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage: Cool 4C

SAMPLE ANALYSIS											
Preservation	None	None	Cool 4C	None	HCl ~~or HNO3~~ to pH <2 Con						
Type of Container	P	P	P	P	aGs*						
No. of Container(s)	1	1	1	1	3						
Volume	20ml	125ml	250ml	1000ml	40ml						
	Activity Scan	pH - 150.1	Sulfate -- 375.4	Chlorine (Total residual) - 330.3 (Chlorine)	VOA - 8260A (TCL)						
		7080	7001								
Sample No.	Matrix *	Sample Date	Sample Time								
B0L3Y5	Water	9/4/97	0717	X	X	X	X	X			
					100	100	100	3x100 9-6-97			

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By: Stankovich	Date/Time: 9/4/97 1417	Received By:	Date/Time: 9-4-97 1417
Relinquished By:	Date/Time: 1420	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

SPECIAL INSTRUCTIONS
**EPA330.3 - The ERC Contractor acknowledges the specified holding time is not likely achievable
** Close SDG upon receipt of samples

SDGW01197

Matrix *
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
T - Tissue
WI - Wipe
L - Liquid
V - Vegetation
X - Other

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

000000

T12A Temp 3'c Cuxt 12724 + 12758
TO: St. Louis

Chain of Custody Record

Quanterra Environmental Services

QUA-4124-1

Client: BHI	Project Manager: Jodie Curnes	Date: 9-5-97	Chain Of Custody Number: 64830
Address:	Telephone Number (Area Code)/Fax Number:	Lab Number:	Page 1 of 1
City: / State: / Zip Code:	Site Contact:	Lab Contact:	
Project Name: SAF B97-108	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.:			

Analysis (Attach list if more space is needed): See COC.

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH
B02395 - 70907001	Chemical Sampler											

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☒ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☒ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other _____

QC Requirements (Specify): SDG WQ1897

1. Relinquished By: Karen Schitenberg	Date: 9-5-97	Time: 1600	1. Received By: [signature]	Date: 9-6-97	Time: 1105
2. Relinquished By:	Date:	Time:	2. Received By:	Date:	Time:
3. Relinquished By:	Date:	Time:	3. Received By:	Date:	Time:

Comments:

Figure 1

SAMPLE CHECK-IN LIST

Date/Time Received 9-4-97 1400 Client Name BNI

Project/Client # B97-108 Batch or Case # _____

Cooler ID (if noted on outside of cooler) 96-006

1. Condition of shipping container? OK
2. Custody Seals on cooler intact? Yes [✓] No [ ]
3. Custody Seals dated and signed? Yes [✓] No [ ]
4. Chain of Custody record is taped on inside of cooler lid? Yes [ ] No [✓]
5. Vermiculite/packing material is: Wet [ ] Dry [ ] N/A
6. Each sample is in a plastic bag? Yes [✓] No [ ]
7. Number of sample containers in cooler: 7
8. Samples have: ✓ tape; ✓ custody seals; ___ hazard labels; ___ appropriate sample labels
9. Samples are: ✓ in good condition; ___ broken; ___ other; ___ leaking; ___ have air bubbles
10. Coolant Present? Yes [✓] No [ ] Sample Temperature 3°C
11. The following paperwork should be accounted for (N/A if not applicable):
    Chain of Custody #(s) B97-108-08
    Request for Analysis #(s) N/A
    Airbill # N/A Carrier Courier
12. Have any anomalies been identified above? Yes [ ] No [✓]
13. Memos have been initiated for all anomalies identified above: Yes [ ]

Printed Name/Signature [illegible] Date/Time 9-4-97

Quanterra Environmental Services

B.W + W.P.

012758

Login No.: _____

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: _____ Date: 9-5-97 Time: 8:30

Project No: _____ Initiated by: JIMMIE JACKSON

Shipper/No: BEE BONE 5999326916 RFA/COC Numbers: _____

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: 4°C

Notes: TEDF0904971 3X40ml Glass For Purg, 1X40ml Glass Activity SCAN 9-4-97 water

Corrective Action:

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

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

☐ Sample(s) processed "as is".

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

Sample Control Supervisor Review: (or delegate) [signature] Date: 9-5-97

Project Management Review: [signature] Date: 9/17/97

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

SL-ADMIN-0004, Revised 11/24/95

Quanterra Environmental Services

BWSWP

012724

Login No.: 15784

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: _____

Date: 9-6-97 Time: 11:05

Project No: 550.230

Initiated by: [illegible]

Shipper/No: A/B 599 9624 116 - 3°C
599 9826 716 - 4°C

RFA/COC Numbers: 64830

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°/4°C

Notes: _____

Corrective Action:

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

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

☐ Sample(s) processed "as is". _____

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

Sample Control Supervisor Review: (or designee) [illegible] Date: 9-8-97

Project Management Review: [illegible] Date: 9/17/97

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

SL-ADMIN-0004, Revised 11/24/95

000010

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0L3Y5

Lab Name: QUANTERRA MO Contract: 550-230

Lab Code: ITMO Case No.: V78401 SAS No.: SDG No.: W01897

Matrix: (soil/water) WATER Lab Sample ID: 15784-001

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: G9008

Level: (low/med) LOW Date Received: 09/04/97

% Moisture: not dec. Date Analyzed: 09/21/97

GC Column: RTX-502.2 ID: 0.530 (mm) Dilution Factor: 5.0

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	5	U
67-64-1	Acetone	21	
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	80	
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	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
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Xylene (total)	5	U

1E
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0L3Y5

Lab Name: QUANTERRA MO Contract: 550-230

Lab Code: ITMO Case No.: V78401 SAS No.: SDG No.: W01897

Matrix: (soil/water) WATER Lab Sample ID: 15784-001

Sample wt/vol: 25.00 (g/mL) ML Lab File ID: G9008

Level: (low/med) LOW Date Received: 09/04/97

% Moisture: not dec. Date Analyzed: 09/21/97

GC Column: RTX-502.2 ID: 0.530 (mm) Dilution Factor: 5.0

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q

Bechtel Hanford Incoporated
3350 George Washington Way
Richland, WA 99352

Project: 550.230

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

Sample Date : 09/04/97
Receipt Date : 09/04/97
Report Date : 10/17/97

Client ID: B0L3Y5

Quanterra ID : 15784-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK153501-1	09/21/97	09/21/97	10	UG/L	U	10	5
Bromomethane	74-83-9	QCBLK153501-1	09/21/97	09/21/97	10	UG/L	U	10	5
Vinyl Chloride	75-01-4	QCBLK153501-1	09/21/97	09/21/97	10	UG/L	U	10	5
Chloroethane	75-00-3	QCBLK153501-1	09/21/97	09/21/97	10	UG/L	U	10	5
Methylene Chloride	75-09-2	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Acetone	67-64-1	QCBLK153501-1	09/21/97	09/21/97	21	UG/L		20	5
Carbon Disulfide	75-15-0	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
1,1-Dichloroethene	75-35-4	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
1,1-Dichloroethane	75-34-3	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
1,2-Dichloroethene (total)	540-59-0	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Chloroform	67-66-3	QCBLK153501-1	09/21/97	09/21/97	80	UG/L		5	5
1,2-Dichloroethane	107-06-2	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
2-Butanone (MEK)	78-93-3	QCBLK153501-1	09/21/97	09/21/97	20	UG/L	U	20	5
1,1,1-Trichloroethane	71-55-6	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Carbon Tetrachloride	56-23-5	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Bromodichloromethane	75-27-4	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
1,2-Dichloropropane	78-87-5	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
cis-1,3-Dichloropropene	10061-01-5	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Trichloroethene	79-01-6	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Dibromochloromethane	124-48-1	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
1,1,2-Trichloroethane	79-00-5	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Benzene	71-43-2	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
trans-1,3-Dichloropropene	10061-02-6	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Bromoform	75-25-2	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
4-Methyl-2-Pentanone (MIBK)	108-10-1	QCBLK153501-1	09/21/97	09/21/97	20	UG/L	U	20	5
2-Hexanone	591-78-6	QCBLK153501-1	09/21/97	09/21/97	20	UG/L	U	20	5
Tetrachloroethene	127-18-4	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Toluene	108-88-3	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Chlorobenzene	108-90-7	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
EthylBenzene	100-41-4	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Styrene	100-42-5	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Xylene (total)	1330-20-7	QCBLK153501-1	09/21/97	09/21/97	5	UG/L	U	5	5
Toluene-d8	2037-26-5	QCBLK153501-1	09/21/97	09/21/97	96	%REC			5
Bromofluorobenzene	460-00-4	QCBLK153501-1	09/21/97	09/21/97	87	%REC			5
Dibromofluoromethane	1868-53-7	QCBLK153501-1	09/21/97	09/21/97	100	%REC			5

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3350 George Washington Way
Richland, WA 99352

Project: 550.230

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

Client ID: B0L3Y5

Sample Date : 09/04/97
Receipt Date : 09/04/97
Report Date : 10/16/97

Quanterra ID : 15784-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK153501-1	09/21/97	09/21/97	156	%REC			5
Trichloroethene	79-01-6	QCBLK153501-1	09/21/97	09/21/97	112	%REC			5
Benzene	71-43-2	QCBLK153501-1	09/21/97	09/21/97	109	%REC			5
Toluene	108-88-3	QCBLK153501-1	09/21/97	09/21/97	104	%REC			5
Chlorobenzene	108-90-7	QCBLK153501-1	09/21/97	09/21/97	97	%REC			5
Toluene-d8	2037-26-5	QCBLK153501-1	09/21/97	09/21/97	96	%REC			5
Bromofluorobenzene	460-00-4	QCBLK153501-1	09/21/97	09/21/97	92	%REC			5
Dibromofluoromethane	1868-53-7	QCBLK153501-1	09/21/97	09/21/97	99	%REC			5

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Richland, WA 99352

Project: 550.230

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

Sample Date : 09/04/97
Receipt Date : 09/04/97
Report Date : 10/16/97

Client ID: B0L3Y5

Quanterra ID : 15784-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK153852-1	09/24/97	09/24/97	97	%REC			1
Trichloroethene	79-01-6	QCBLK153852-1	09/24/97	09/24/97	98	%REC			1
Benzene	71-43-2	QCBLK153852-1	09/24/97	09/24/97	100	%REC			1
Toluene	108-88-3	QCBLK153852-1	09/24/97	09/24/97	101	%REC			1
Chlorobenzene	108-90-7	QCBLK153852-1	09/24/97	09/24/97	92	%REC			1
Toluene-d8	2037-26-5	QCBLK153852-1	09/24/97	09/24/97	98	%REC			1
Bromofluorobenzene	460-00-4	QCBLK153852-1	09/24/97	09/24/97	90	%REC			1
Dibromofluoromethane	1868-53-7	QCBLK153852-1	09/24/97	09/24/97	103	%REC			1

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Project: 550.230

Category: Sulfate
Method: EPA 375.4
Matrix: LIQUID

Sample Date : 09/04/97
Receipt Date : 09/04/97
Report Date : 10/16/97

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil
BOL3Y5	15784-001	Sulfate	14808-79-8	QCBLK154754-1	10/02/97	10/02/97	39.0	MG/L		5.00	1
BOL3Y5	15784-001DUP	Sulfate	14808-79-8	QCBLK154754-1	10/02/97	10/02/97	39.9	MG/L		5.00	1
BOL3Y5	15784-001MS	Sulfate	14808-79-8	QCBLK154754-1	10/02/97	10/02/97	71	%REC			1
NA	QCBLK154754-1	Sulfate	14808-79-8	QCBLK154754-1	10/02/97	10/02/97	5.00	MG/L	U	5.00	1
NA	QCLCS154754-1	Sulfate	14808-79-8	QCBLK154754-1	10/02/97	10/02/97	103	%REC			1

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Project: 550.230

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

Sample Date : 09/04/97
Receipt Date : 09/04/97
Report Date : 09/24/97

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil
B0L3Y5	15784-001	pH	PH	QCBLK152493-1	09/11/97	09/11/97	6.56	PH			1
B0L3Y5	15784-001DUP	pH	PH	QCBLK152493-1	09/11/97	09/11/97	6.63	PH			1
NA	QCBLK152493-1	pH	PH	QCBLK152493-1	09/11/97	09/11/97	4.58	PH			1

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Project: 550.230

Category: Total Residual Chlorine
Method: EPA 330.3
Matrix: LIQUID

Sample Date : 09/04/97
Receipt Date : 09/04/97
Report Date : 10/17/97

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil
B0L3Y5	15784-001	Total Chlorine	7782-50-5A	QCBLK152489-1	09/11/97	09/11/97	0.100	MG/L	U	0.100	1
B0L3Y5	15784-001DUP	Total Chlorine	7782-50-5A	QCBLK152489-1	09/11/97	09/11/97	0.100	MG/L	U	0.100	1
NA	QCBLK152489-1	Total Chlorine	7782-50-5A	QCBLK152489-1	09/11/97	09/11/97	0.100	MG/L	U	0.100	1
NA	QCLCS152489-1	Total Chlorine	7782-50-5A	QCBLK152489-1	09/11/97	09/11/97	98	%REC			1