W02935-QES

Quanterra

Environmental Services

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
314 298-8757 Fax

CASE NARRATIVE

0052758

JAN 2000
RECEIVED
Data
Log In

Bechtel Hanford Incorporated
3350 George Washington Way
Richland, Washington 99352

December 30, 1999

Attention: Joan Kessner

Project Number	: 550.267
SDG	: W02935
Number of Samples	: Four (4)
Sample Matrix	: Soil
Data Deliverable	: Summary
Date SDG Closed	: November 04, 1999

RECEIVED
MAR 20 2000
EDMC

II. Introduction

Between October 21, 1999 and November 02, 1999, four (4) "soil" samples were received by Quanterra, Richland and transferred to Quanterra, St. Louis for chemical analysis. The samples were received within temperature criteria with the exception of sample B0WMM4 (22514-001) which was received at a temperature of 1°C. The sample was not frozen. Upon receipt, the samples were given Laboratory IDs to correspond with specific Client IDs. Please refer to the sample table attached to this case narrative.

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:

ICP Metals - 6010 (Supertrace) {AS,BA,CD,CR,PB,SE,AG}
ICP Metals - 6010 (Supertrace add-on){BE,CU,NI,V,ZN}
Mercury - 7471-(CV)
Chromium Hex - 7196
VOA - 8260 (TCL)
VOA-8260 (add-on){1-Propanol, Ethanol}
pH (Soil) - 9045
NO2/NO3 - 353.1
IC Anions - 300.0 {CL,FL,NO3,NO2,PHOS,SO4}
Sulfides - 9030
Ammonia - 350.1
Total Cyanide - 9010
Semi-VOA-8270 (TCL)
TPH-Diesel Range - WTPH-D
PCBs - 8082

Quanterra

Bechtel Hanford Incorporated
December 30, 1999
Project Number: 550.267
SDG: W02935

Deviation from Request: The add-on compounds for the Volatile analysis (1-Propanol and Ethanol) can not be seen on the GC/MS as a TIC due to the fact that the major ions for these compounds are below the scan range of the instrument. No results for these compounds are reported.

IV. Definitions

A listing of the abbreviations and data qualifiers used with the laboratory data is attached to this case narrative.

V. Comments

General

The following SAFs are associated with this SDG:

SAF Number	St. Louis ID
B99-078	22449
B99-078	22456
B99-078	22502
B99-078	22514

The term "Detection Limit" used in the analytical data reports refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

Please refer to the attached cross-reference table for the standard preparation methods used at Quanterra, St. Louis.

Metals

Lead results for samples PBS210724, LCSS210724, B0WMM2, B0WMM2MS, B0WMM2MSD, and B0WMM6 were reported from the first sample analysis (11/17/99 @ 01:26). The CCB (3.3 UG/L) was outside the acceptable control limits. However, the reported sample results were significantly higher than the CCB result or below the IDL. The results were confirmed by a second sample analysis (11/17/99 @ 11:56) that is not included in the report..

The Nickel MS and serial dilution results were not within the QC limits. The data was flagged.

Wet Chemistry

The Hexavalent Chromium data for samples B0WMM8 and B0WMM4 were analyzed in a run that had high recovery of the CCV (120%) and the LCS (125%). The data is reported because the samples had no target compounds detected. See NCM 6093.

Volatiles

The batch QC for the analysis of B0WMM4 consisted of a LCS and LCS duplicate instead of a MS and MSD.

Quanterra

Bechtel Hanford Incorporated
December 30, 1999
Project Number: 550.267
SDG: W02935

PCB

The RPD for the MS and MSD was not within the QC limits. The percent recoveries were acceptable for all compounds in the LCS, MS and MSD.

Semivolatile

There were no comments or non-conformances associated with the BNA analysis.

TPH

There were no comments or non-conformances associated with the TPH analysis.

I certify that this Summary 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:

Marti Ward

Marti Ward
St. Louis Project Manager

LOG #: 6093

LABORATORY NONCONFORMANCE MEMO (NCM)

Quanterra Incorporated

Project ID/Client: 550.267 / HANFORD

NCM Initiated by/Date: Tibbles / 12-17-99 Project Manager: M. Ward

Sample Numbers/QC batch or lot numbers: 22502-001, 22514-001, 22598-001, F9L070147

Tests: CR6 / 7196 / 04

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 _____ 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)_____

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): Mward 12/30/99

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

Client's name and response: _____

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

Project manager (signature and date): Mward 12/30/99

000003B

QUANTERRA LABORATORY NONCONFORMANCE MEMO

LOG #: 6093

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

Problem Description/Root Cause Author's initials and date: TLK 12-17-99

CCUS at 120% Foutside QC limits of +/- 15%

LCS at 125% Foutside QC Limits of +/- 20%

Corrective Actions (Short Term) Author's initials and date: TLK 12-17-99

Talked to Supervisor and decided to report data on the basis that sample concentrations are non-detect. and based on QC data, data biased high.

Corrective Actions to Prevent Reoccurrence (Long Term)

Watch instrument for possible drifting from baseline. ~~TLK~~ TLK 12-17-99

TLK 12-17-99

Corrective Action approved by (Supervisor/Group Leader) and date: [signature] 12/20/99

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: [signature] Date: 12-30-99

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.

000004

Quanterra

Quanterra ID	Client ID	Matrix	Date Collected	Date Received
22449-001	B0WMM2	Solid	20-Oct-99	21-Oct-99
22449-001DUP	B0WMM2	Solid	20-Oct-99	21-Oct-99
22449-001MS	B0WMM2	Solid	20-Oct-99	21-Oct-99
22449-001MSD	B0WMM2	Solid	20-Oct-99	21-Oct-99
22456-001	B0WMM6	Solid	21-Oct-99	22-Oct-99
22502-001	B0WMM8	Solid	27-Oct-99	28-Oct-99
22514-001	B0WMM4	Solid	28-Oct-99	2-Nov-99

Please note that although the certificate of analysis lists Detection Limit, this is actually the laboratory reporting limit. This is not a method detection limit (MDL).

Abbreviations and Data Qualifiers

NC	No criteria at this time
NA	Not applicable
ND	Non - detect
PCI/L	Picocuries per liter
PCI/G	Picocuries per gram
MG/L	Milligrams per liter
UG/L	Micrograms per liter
MG/KG	Milligrams per kilogram
UG/G	Micrograms per gram
%REC	Percent Recovery
QCBLK	Method Blank
QCEXTBLK	TCLP Extraction Blank
QCLCS	Laboratory Control Sample
CRDL	Customer Required Detection Limit
RPD	Relative Percent Difference
*	Value outside of the established QC limits
DL	PQL
J	Estimated Value (Organics only)
D	Diluted
U	Non - Detect
B	Value greater than IDL but less than CRDL (Metals only)
B	Analyte found in the blank (Organics only)
E	Exceeds calibration
E	FOUND IN FULL CLP TYPE DATA PACKAGE METALS ONLY: Serial dilution result for samples with concentrations greater than 50 times the IDL are not within 10% of the original sample result.
N	FOUND IN FULL CLP TYPE DATA PACKAGE METALS ONLY: Matrix Spike or matrix spike duplicate is outside expected recovery limits.
IDL	Instrument detection limit
MDL	Method detection limit
MDA	Minimal detectable activity

Quanterra

Quanterra St. Louis

Sample Preparation Methods

"Quanterra Standard" Preparation Method Used Unless Otherwise Noted

Organic Preparation Methods	**Matrix**	**Analysis**	**SW846 Reference**
Separatory Funnel Liquid-Liquid ***(Quanterra Standard)***	Liquid	Pesticides, PCBs, Semivolatiles, TPH (Diesel Range Organics), Herbicides, TCLP (Semivolatiles, Pesticides, Herbicides), Phenols, PAHs,	3510C
Continuous Liquid-Liquid	Liquid	Pesticides, Semivolatiles	3520C
Ultrasonic ***(Quanterra Standard)***	Solid	Pesticides, PCBs, Semivolatiles, Herbicides, PAHs	3550B
Pressurized Fluid Extraction	Solid	Pesticides, PCBs, Semivolatiles, PAHs	3545
Waste Dilution ***(Quanterra Standard)***	Solvent/Oil	Pesticides, PCBs, Semivolatiles, TPH, Herbicides, TCLP (Semivolatiles, Pesticides, Herbicides)	3580A
Purge and Trap ***(Quanterra Standard)***	All	Volatiles, Gasoline Range Organics	5030B
Toxicity Characteristic Leaching Procedure ***(Quanterra Standard)***	All	Pesticides, Semivolatiles, Herbicides, Volatiles, Metals	1311
Inorganic Preparation Methods	**Matrix**	**Analysis**	**SW846 Reference**
Acid Digestion ***(Quanterra Standard)***	Liquid	ICP or FLAA Metals	3010A
Acid Digestion – Total Recoverable	Liquid	ICP or FLAA Metals	3005A
Acid Digestion ***(Quanterra Standard)***	Liquid	GFAA Metals	3020A
Acid Digestion ***(Quanterra Standard)***	Solid	ICP, FLAA, or GFAA Metals	3050B

W02935
added OPHOS

Quanterra November 03, 1999 03:39 pm
Account: 10722 Project: 550.267 Quanterra-Richland QAS No. 550.267 Rev. 0
Master Sample Login: 22449

oject Manager: M. Ward

SMA

Reviewed by and Date: Sheila Lamm

mple Header Template:

mple No. / Comments / # / Container Type	Client ID	C-Matrix	Date Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
149-001	B0WMM2	Soil	20-OCT-99 09:07	21-OCT-99 09:00	19-NOV-99	FED X'	3*	R9402-001
B99-078 // VOA = TCL Plus 1 Propanol and Ethanol.//ICAP=SEE SAF FOR LIST								

#	Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)
1	AN - Amber Glass-500ml	BNA/8270C/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467813:99)
1		CL/300.0/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)
1		CN/9010/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467812:100)
1		FL/300.0/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)
1		NH3/350.1/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)
1		NO2/300.0/Q4	S	COLD	12-NOV-99	22-OCT-99	R15C	(467812:100)
1		NO3/300.0/Q4	S	COLD	12-NOV-99	22-OCT-99	R15C	(467812:100)
1		NO3/353.1/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)
1		OPHOS/300.0/Q4	S	COLD	12-NOV-99	22-OCT-99	R15C	(467812:100)
1		PCB/8082/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467813:99)
1		S/9030/Q4	S	COLD	12-NOV-99	27-OCT-99	R15C	(467812:100)
1		SO4/300.0/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)
1		TPH/8015/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467813:99)
1	AN - Amber Glass-60ML	CR6/7196/Q4	S	COLD	12-NOV-99	21-OCT-99	R15C	(467809:100)
1		HG/7471/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467809:100)
1		ICAPT/6010A/Q4	S	COLD	12-NOV-99	17-APR-00	R15C	(467809:100)
1		PH/9045/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467811:98)
1		PM/IT/Q4	S	COLD	12-NOV-99	17-APR-00	R15C	(467809:100)
1		RAD/CSCREEN/Q4	S	COLD	12-NOV-99	18-APR-00	V9	(467810:99)
1		VOA/8260/Q4	S	COLD	12-NOV-99	03-NOV-99	V9	(467810:99)

49-001DUP	B0WMM2	Soil	20-OCT-99 09:07	21-OCT-99 09:00	19-NOV-99	FED X'	3*	R9402-001
B99-078 // VOA = TCL Plus 1 Propanol and Ethanol.IACP=SEE SAF FOR LIST								

#	Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)
1	AN - Amber Glass-500ml	CL/300.0/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)
1		CN/9010/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467812:100)
1		FL/300.0/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)
1		NH3/350.1/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)
1		NO2/300.0/Q4	S	COLD	12-NOV-99	22-OCT-99	R15C	(467812:100)
1		NO3/300.0/Q4	S	COLD	12-NOV-99	22-OCT-99	R15C	(467812:100)
1		NO3/353.1/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)
1		OPHOS/300.0/Q4	S	COLD	12-NOV-99	22-OCT-99	R15C	(467812:100)
1		S/9030/Q4	S	COLD	12-NOV-99	27-OCT-99	R15C	(467812:100)
1		SO4/300.0/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)
1	AN - Amber Glass-60ML	CR6/7196/Q4	S	COLD	12-NOV-99	21-OCT-99	R15C	(467811:98)
1		PH/9045/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467811:98)

19-001MS	B0WMM2	Soil	20-OCT-99 09:07	21-OCT-99 09:00	19-NOV-99	FED X'	3*	R9402-001
B99-078 // VOA = TCL Plus 1 Propanol and Ethanol.// ICAP=SEE SAF FOR LIST								

Sample has not been rad screened.

000005

Quanterra November 03, 1999 03:39 pm
Account: 10722 Project: 550.267 Quanterra-Richland QAS No. 550.267 Rev. 0
Master Sample Login: 22449

oject Manager: M. Ward

Reviewed by and Date:

ple Header Template:

ple No. / Comments	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No
Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)	
:a:								
i AN - Amber Glass-500ml	BNA/8270C/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467813:99)	
1	CL/300.0/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)	
1	CN/9010/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467812:100)	
1	FL/300.0/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)	
1	NH3/350.1/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)	
1	NO2/300.0/Q4	S	COLD	12-NOV-99	22-OCT-99	R15C	(467812:100)	
1	NO3/300.0/Q4	S	COLD	12-NOV-99	22-OCT-99	R15C	(467812:100)	
1	NO3/353.1/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)	
1	OPHOS/300.0/Q4	S	COLD	12-NOV-99	22-OCT-99	R15C	(467812:100)	
1	PCB/8082/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467813:99)	
1	S/9030/Q4	S	COLD	12-NOV-99	27-OCT-99	R15C	(467812:100)	
1	SO4/300.0/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)	
1	TPH/8015/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467813:99)	
1 AN - Amber Glass-60ML	CR6/7196/Q4	S	COLD	12-NOV-99	21-OCT-99	R15C	(467809:100)	
1	HG/7471/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467809:100)	
1	ICAPT/6010A/Q4	S	COLD	12-NOV-99	17-APR-00	R15C	(467809:100)	
1	VOA/8260/Q4	S	COLD	12-NOV-99	03-NOV-99	V9	(467810:99)	
49-001MSD B0WMM2	Soil		20-OCT-99 09:07	21-OCT-99 09:00	19-NOV-99	FED X*	3*	R9402-001
B99-078 // VOA = TCL Plus 1 Propanol and Ethanol.//ICAP=SEE SAF FOR LIST								
1 AN - Amber Glass-500ml	BNA/8270C/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467813:99)	
1	HG/7471/Q4	S	COLD	12-NOV-99	17-NOV-99	R15C	(467812:100)	
1	ICAPT/6010A/Q4	S	COLD	12-NOV-99	17-APR-00	R15C	(467812:100)	
1	PCB/8082/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467813:99)	
1	TPH/8015/Q4	S	COLD	12-NOV-99	03-NOV-99	R15C	(467813:99)	
1 AN - Amber Glass-60ML	VOA/8260/Q4	S	COLD	12-NOV-99	03-NOV-99	V9	(467810:99)	

000090

ample has not been rad screened.

Bechtel Hanford Inc. | W02935 | **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** | **B99-078-141** | Page 1 of 1

Collector Bowers/Trice	**Company Contact** Chris Cearlock	**Telephone No.** 372-9574	**Project Coordinator** TRENT, SJ
Price Code 8N	**Data Turnaround** 45 Days		
Project Designation 200 Area Source characterization - 200-CW-1 OU	**Sampling Location** 200 B pond		**SAF No.** B99-078
Ice Chest No. ERC-99-022	**Field Logbook No.** EL-1511		**Method of Shipment** FED EX and Gov Vehicle
Shipped To Quanterra Incorporated -St Louis	**Offsite Property No.** AØØ 0ØØ2		**Bill of Lading/Air Bill No.** 42357953 0911
			COA B20CW167IC

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C	Cool 4C	None	None	Cool 4C	Cool 4C	None			
Type of Container	aG	aG	aG	aG	aG	aG	aG			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	60mL	60mL	60mL	60mL	500mL	500mL	1000mL			
SAMPLE ANALYSIS	See item (1) in Special Instructions ICP metal	VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Propanol, Ethanol)	Isotopic Uranium	pH (Soil) - 9045	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082	See item (3) in Special Instructions			
Sample No.	Matrix *	Sample Date	Sample Time	100% full	100% full	100% full	100% full (100%)			
PM 152 ~~BOWMM4~~ CF 10/20/99 BOWMM2	Soil	10/20/99	0907	x	X	X	X			BOW8C2

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By: Catherine Sico	Date/Time: 10/20/99 1230	Received By: Ref 3A	Date/Time: 10/20/99 1230
Relinquished By: Ref 3A	Date/Time: 10/21/99 0900	Received By: R Thoren/Rikki Thoren	Date/Time: 10.21.99 0900
Relinquished By: R Thoren/Rikki Thoren	Date/Time: 10.21.99 1430	Received By: FEDEX	Date/Time:
Relinquished By: Fed Ex	Date/Time: 10-22-99 10-25-99	Received By: Linda C. Carlock	Date/Time: 10-22-99 850A

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); ICP Metals - 6010A (Supertrace Add-On) (Beryllium, Copper, Nickel, Vanadium, Zinc); Mercury - 7471 - (CV); Chromium Hex - 7196

(2) NO2/NO3 - 353.1; IC Anions - 300.0 (Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate); Sulfides - 9030; Ammonia - 350.1; Total Cyanide - 9010

(3) Gamma Spectroscopy (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155); Strontium-89,90 -- Total Sr; Total Uranium (Uranium); Isotopic Plutonium; Isotopic Thorium (Thorium-232); Americium-241

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

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

ERC Radiological Counting Facility Analysis Report

W029935

RCF Number RCF6593

Sample Date & Time 10/6/99 0840

Project ID: 200CW-1 SAF Number: B99-078 Date Analyzed 10/6/99 14:12

Sample ID: B0W8C2

Gamma Energy Analysis

Nuclide	Activity (pCi/g)	Error (pCi/g)	MDA (pCi/g)
Not Requested			

BOWMM2

Total GEA (pCi/g)	N/A	+/-	N/A

COPY

	Activity (pCi/g)		Error (pCi/g)
Gross Alpha**	2.1E+01	+/-	3.8E-00
Gross Beta	3.5E+02	+/-	1.2E+01

Alpha MDA (pCi/g)
8.2E+00
Beta MDA (pCi/g)
1.9E+02

Definitions:

All errors reported at 2 standard deviations.
N/R = no result or analysis not requested.
<MDA = Less than detection limit.

For soils and natural samples, the following applies:

**The gross alpha results are not corrected for mass absorbtion

FIELD SAMPLE COPY

Analysist T. J. Snider 10/6/99

Report To Dave St. John

Fax 372-9487

Report Printed: Wednesday, October 06, 1999

Quanterra
Environmental Services

020010

Login No.: 22449
N02935

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Bechtel Hanford Inc.
Date: 10-22-99 Time: 8:50 A
Project No: 550.267
Initiated by: Linda A. Custodio
Shipper/No: Fed Ex 4235 7953 911
RFA/COC Numbers: B99-078-141
~~B99-018-25~~ JRS 10-25-9

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/not tamper evident type (circle all that apply).
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: 2°C

Temperature Variance Does Not Affect the Following Analyses: _____

Notes: _____

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) [signature] Date: 10/22/99

Project Management Review: Jennifer Smith Date: 10-25-99

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

SL-ADMIN-0004, Revised 6/29/99

added QAS.

W02935

Quanterra November 03, 1999 03:34 pm

Account: 10722 Project: 550.267 Quanterra-Richland QAS No. 550.267 Rev. 0

Master Sample Login: 22456

Project Manager: M. Ward

Reviewed by and Date: Sheila Laurie 11-3-99

Sample Header Template:

Sample No.	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
22456-001	B0WMM6	Soil	21-OCT-99 10:12	22-OCT-99 11:00	19-NOV-99	FED-EX	3*	R9397-001

Comments

SAF B99-078//ICAP= See SAF for List//VOA= Report 8260 List + 1-propanol & ethanol

Data:

#	Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)
1	GN - Glass Jar-500ML	BNA/8270C/Q4	S	COLD	12-NOV-99	04-NOV-99	R4F	(467995:98)
1		CL/300.0/Q4	S	COLD	12-NOV-99	18-NOV-99	R4F	(467994:99)
1		CN/9010/Q4	S	COLD	12-NOV-99	04-NOV-99	R4F	(467994:99)
1		FL/300.0/Q4	S	COLD	12-NOV-99	18-NOV-99	R4F	(467994:99)
1		NH3/350.1/Q4	S	COLD	12-NOV-99	18-NOV-99	R4F	(467994:99)
1		NO2/300.0/Q4	S	COLD	12-NOV-99	23-OCT-99	R4F	(467994:99)
1		NO3/300.0/Q4	S	COLD	12-NOV-99	23-OCT-99	R4F	(467994:99)
1		NO3/353.1/Q4	S	COLD	12-NOV-99	18-NOV-99	R4F	(467994:99)
1		OPHOS/300.0/Q4	S	COLD	12-NOV-99	23-OCT-99	R4F	(467994:99)
1		PCB/8082/Q4	S	COLD	12-NOV-99	04-NOV-99	R4F	(467995:98)
1		PM/IT/Q4	S	COLD	12-NOV-99	18-APR-00	R4F	(467994:99)
1		RAD/CSCREEN/Q4	S	COLD	12-NOV-99	19-APR-00	R4F	(467994:99)
1		S/9030/Q4	S	COLD	12-NOV-99	28-OCT-99	R4F	(467994:99)
1		SO4/300.0/Q4	S	COLD	12-NOV-99	18-NOV-99	R4F	(467994:99)
1		TPH/8015/Q4	S	COLD	12-NOV-99	04-NOV-99	R4F	(467995:98)
1	GN - Glass Jar-60ML	CR6/7196/Q4	S	COLD	12-NOV-99	22-OCT-99	R4F	(467996:99)
1		HG/7471/Q4	S	COLD	12-NOV-99	18-NOV-99	R4F	(467996:99)
1		ICAPT/6010A/Q4	S	COLD	12-NOV-99	18-APR-00	R4F	(467996:99)
1		PH/9045/Q4	S	COLD	12-NOV-99	04-NOV-99	R4F	(468001:98)
1		VOA/8260/Q4	S	COLD	12-NOV-99	04-NOV-99	V9	(467997:97)

010000

*=Sample has not been rad screened.

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-078-142	Page 1 of 1

Collector: Bowers/Trice	Company Contact: Chris Cearlock	Telephone No.: 372-9574	Project Coordinator: TRENT, SJ
Price Code: 8N	Data Turnaround: 45 Days		
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: 200 B pond	SAF No.: B99-078	
Ice Chest No.: SML 455 ~~ERD 99-002~~ 10/22/99	Field Logbook No.: EL-1511	Method of Shipment: FED EX and Gov Vehicle	
Shipped To: Quanterra Incorporated St Louis	Offsite Property No.: NA	Bill of Lading/Air Bill No.: NA	
		COA: B20CW1 671C	

POSSIBLE SAMPLE HAZARDS/REMARKS												
	Preservation	Cool 4C	Cool 4C	None	None	Cool 4C	Cool 4C	None				
	Type of Container	aG	aG	aG	aG	aG	aG	aG				
Special Handling and/or Storage	No. of Container(s)	1	1	1	1	1	1	1				
	Volume	60mL	60mL	60mL	60mL	500mL	500mL	1000mL				
SAMPLE ANALYSIS		See item (1) in Special Instructions.	VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Propanol, Ethanol}	Isotopic Uranium	pH (Soil) - 9045	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082	See item (3) in Special Instructions.				
Sample No.	Matrix *	Sample Date	Sample Time									
B0WMM6	Soil	10-21-99	1012	X	X		X	X	X	all 100% full	Bowers	

2 pm
ok

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By: Doug Bowers (Doug Bowers) Date/Time: 10-21-99/1400	Received By: Ref 3C Date/Time: 10-21-99/1400	
Relinquished By: Ref 3C Date/Time: 10.22.99 1100	Received By: R. Fahlberg / R. Fahlberg Date/Time: 1100 10-22-99	
Relinquished By: R. Fahlberg / R. Fahlberg Date/Time: 1330 10-22-99	Received By: Fed Ex Date/Time:	
Relinquished By: Fed Ex Date/Time: 10-23-99 JKS 10-25-99	Received By: [illegible] Date/Time: 10-23-99 845	
LABORATORY SECTION	Received By	Title / Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By / Date/Time

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; ICP Metals - 6010A (Supertrace Add-On) {Beryllium, Copper, Nickel, Vanadium, Zinc}; Mercury - 7471 - (CV); Chromium Hex - 7196

(2) NO2/NO3 - 353.1; IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Sulfides - 9030; Ammonia - 350.1; Total Cyanide - 9010

(3) Gamma Spectroscopy {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Strontium-89,90 -- Total Sr; Total Uranium {Uranium}; Isotopic Plutonium; Isotopic Thorium {Thorium-232}; Americium-241

~~From non-reference~~ BTD 10-21-99

Matrix *
- Soil
- Water
- Vapor
- Other Solid
- Other Liquid

Quanterra®

Radioactive Package Monitoring and Receipt

(For DOT Compliance)

What radioactive labels are present on or in the package? (Circle)

Exempt - Complete Section A
Radioactive White I - Complete Section B
Radioactive Yellow II - Complete Section B
Radioactive Yellow III - Complete Section B

Client/Originator Waste Mgmt. Hanford Carrier Fed X

Document/Shipping Number 8146 1372 4159

Date/Time Received 10.23.99 845

Section A

Is package damaged (crushed, dented, wet, punctured, or stained)?

Yes - Complete Section B
No - Complete Section C

Section B

B.1 Using the dose rate, record the highest dose rate at contact with the surface of the package.

_____ μR/hr

If this measurement exceeds;
500 μR/hr for an exempt package; or
500 μR/hr for Radioactive White I; or
50 mR/hr for Radioactive Yellow II; or
200 m R/hr for Radioactive Yellow III,
contact the RSO (or designee) immediately.

B.2 Using a single 47 mm glass microfiber filter, wipe a 100 cm x 100 cm (4 in x 4 in) area on three sides of the package (total 300 cm^2). Place the wipe, exposed side facing upward into a petri dish. Using a Model 44-9 alpha-beta-gamma (α-β-γ) probe, determine the background countrate. The place the detector over the wipe and wait at least 2 minutes before recording the wipe countrate.

_____ wipe cpm - _____ background cpm = _____ net α/β/γ cpm

Is the net α/β/γ cpm less than 200 cpm? If yes, go to Section C. Is the net α/β/γ greater than 15,000 cpm? If yes, immediately **STOP** and contact RSO (or designee).

ERC Radiological Counting Facility Analysis Report

RCF Number RCF6668

Sample Date & Time 10/21/99 1012

Project ID: 200-CW-1 **SAF Number:** B99-078 **Date Analyzed** 10/21/99 2:40:

Sample ID: B0W9T9

Gamma Energy Analysis

Nuclide		Activity (pCi/g)		Error (pCi/g)	MDC (pCi/g)
K-40	<	1.8E+02			1.8E+02
Co-60	<	1.6E+01			1.6E+01
Cs-137		6.8E+02	+/-	4.4E+01	2.2E+01
Eu-152	<	6.0E+01			6.0E+01
Eu-154		2.5E+01	+/-	1.6E+01	6.7E+00
Eu-155	<	9.5E+01			9.5E+01
Th-232D	<	6.3E+01			6.3E+01
U-235	<	1.9E+02			1.9E+02
U-238D		5.7E+01	+/-	3.3E+01	2.8E+01
U-238	<	2.9E+03			2.9E+03
Am-241	<	6.3E+01			6.3E+01

B0W MM6
~~B0WMD1~~
~~B0WMD2~~

Total GEA (pCi/g)	7.6E+02	+/-	9.3E+01

	Activity (pCi/g)		Error (pCi/g)
Gross Alpha**	1.2E+03	+/-	1.7E+02
Gross Beta	1.8E+04	+/-	5.5E+02

Alpha MDC (pCi/g)
4.4E+02
Beta MDC (pCi/g)
9.8E+03

Definitions:

All errors reported at 2 standard deviations.
N/R = no result or analysis not requested. <MDC = Less than detection limit.
All GEA results reported as "<" list the Minimum Detectable Concentration (MDC) value for that radionuclide.
Rounding error may result in the reported total GEA activity differing from the sum of the > MDC GEA values in the second significant digit.

For soils and natural samples, the following applies:

The analysis of U-238 is based on the activity of Pa-234m.
The analysis of Np-237 is based on the activity of Pa-233.
U-238dau is the activity of Pb-214 and Bi-214, short lived daughter products of U-238. Equilibrium between parent and daughter products probably does not exist in disturbed materials.
Th-232dau is the activity of Ac-228, Pb-212, and Tl-208, short lived daughter products of Th-232. Equilibrium between parent and daughter products may not exist in disturbed materials.
Other samples, not containing natural materials, may have inapplicable results for the Th, U, transuranics and daughter products. The results must then be balanced for the gross alpha analysis.
**The gross alpha results are not corrected for mass absorbtion
No peaks for this radionuclide were visible above background in the spectrum. The result was reported as less than MDC.

Analyst T. J. Snider 10/22/99

Report To Dave St. John

Fax 372-9487

Report Printed: Friday, October 22, 1999

RADIOACTIVE SHIPMENT RECORD

106623 3.

Page 1 of 2

1. SHIP FROM U.S. DEPT. OF ENERGY C/O

Company: BECHTEL HANFORD INC.
Address: 3728 BLDG. 300 AREA
City, State, Zip: RICHLAND, WA. 99352
Contact: JEFF GALE
Phone: 509-372-9281

Ship: [X] Prepaid [ ] Collect 4.

Via: [ ] Motor [X] Air Psgr [ ] UPS [ ] Rail [X] Air Cargo [ ] Site Carrier

SHIPMENT AUTHORIZATION NUMBER

2. SHIP TO

Company: QUANTERRA INC.
Address: 13715 RIDER TRAIL NORTH
City, State, Zip: EARTH CITY, MO. 63045
Attention: MARTY CAHILL
Phone: 314-298-8566

Markings Applied 6.

- [ ] Radioactive - LSA
- [ ] Radioactive - SCO
- [ ] Type A N/A
- [ ] Type B with trefoil

LSA Description 8.

- [ ] LSA-I
- [ ] LSA-II
- [ ] LSA-III
- [ ] SCO-I N/A
- [ ] SCO-II

Labels Applied 10.

- [ ] Empty
- [ ] Radioactive White - I
- [ ] Radioactive Yellow - II
- [ ] Radioactive Yellow - III
- [ ] Subsidiary Hazard N/A

For Normal Form only 7.

Identify

Physical Form: [ ] Liquid [ ] Gas [X] Solid

Chemical Form: [X] Elemental [ ] Metal [ ] Nitrate [ ] Oxide [ ] Mixture [ ] Other

EMERGENCY RESPONSE 9.

Telephone: 1-888-766-0771

Emergency Response Guide(s): 161

- Highway Route Controlled Quantity [ ]
- Exclusive Use Shipment with instructions [ ]
- Placards Applied [ ]
- If Rail Specify:
- Fissile Excepted, Grams [ ]
- Excepted Package Statement [X]

5. HM Proper Shipping Name: _____ Radioactive Material,

	excepted package - empty packaging	7	UN2910
	excepted package - instruments or articles	7	UN2910
X	excepted package - limited quantity of material	7	UN2910
	excepted package - articles manufactured from natural or depleted uranium or natural thorium	7	UN2910
	Special Form, n.o.s.	7	UN2974
	Low Specific Activity, n.o.s.	7	UN2912
	n.o.s.	7	UN2982
	Fissile, n.o.s.	7	UN2918
	Surface Contaminated Object	7	UN2913

Warning -- Fissile Material Controlled Shipment. Do Not Load More Than N/A Packages Per Vehicle. In Loading and Storage Areas, Keep at Least 20 Feet From Other Packages Bearing Radioactive Labels.

11.

No. Pkg.	Model Package	COC/Spec	Serial No.	Seal No.	Isotopes	T.I.	Bq/Package	Gr. Wt. Kg.
1	POLYCOOLER	STRONG-TIGHT	~~ERC-FAUS~~	TAPE	Sr-90, Cs-137,	N/A	1.39×10^{-6}	~~15 Kg~~
			SML 455		U-238D, Eu-154			19 Kg
GLASS SAMPLE JARS, BUBBLE WRAPPED, DOUBLE POLY BAGGED PACKED IN WET ICE AND VERMICULITE TOTAL VOLUME 1180 ml / 2006 gm								19 kg
(Shipper may describe package in detail on one of the unused lines above) SAMPLE # BOWMM6					TOTALS	N/A	1.39×10^{-6}	15 Kg

12. This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Certifier's Signature: Stuart J. Zeh — On behalf of DOE-RL — Date: 10-22-99 — Organization: ERC-AFS — Complete Cost Code (Inc. End Function): B20CW1671C

13.

Surface Dose Rate of Package: [X] <0.005 or _____ mSv/hr; <0.5 or _____ mrem/hr (N+ß γ)

Dose Rate @ 1 Meter from Surface of Package: [X] <0.005 or _____ mSv/hr; <0.5 or _____ mrem/hr (N+ß γ)

Smears of Outer Container: [X] <0.41 Bq (22 dpm) ß γ /cm² [X] <0.04 Bq (2.2 dpm) α /cm² [X] <Tbl. 2-2 HSRCM Onsite Limits

TRUCK LOAD OR EXCLUSIVE USE: Surface [X] <2 mSv/hr (200 mrem/hr); @ 2 meters [X] <0.1 mSv/hr (10 mrem/hr); @ Cab or sleeper [X] <0.02 mSv/hr (2 mrem/hr) (Using N+ß γ)

Additional Data and Instructions (Inc. Readings on Internal Packaging)

Signature - Radiation Monitoring: Jen Mza — Bldg. 3728 — Survey No. FF½-99-1609 — Date 10-22-99

14. TRANSPORTER

Vehicle Number: G42 76304 — DRIVER SIGNATURE: R. Moran

RECEIVER — RECEIVER SIGNATURE — Date

15. OFFSITE AUTHORIZATION

Shipment has been inspected and verified to be in compliance with DOT regulations.

Authorized Signature: Keith R. Smith — Printed Name: Keith R. Smith — Date 10-22-99

16. AUTHORIZATION FOR SHIPMENT

AIR TRANSPORT CERTIFICATION: [ ] N/A

CARGO AIRCRAFT: [ ] Cargo Aircraft Only Labels Applied

PASSENGER AIRCRAFT: [ ] Ltd Qty [ ] <3 T.I. [ ] Research/Medical Diagnosis [ ] Human Medical Research

Pkg. Dimensions (cm)

17. OFFSITE AUTHORIZATION

Tracking No.: RMBH-3719 — Date Shipped: 10-22-99 — Routing: FEDEX — ETA: 10-23-99

Surveyed By: — Date: 10/22/99 — Approved for Shipment Offsite: John T. McCabe MCB — Date: 10-22-99

000014

54-6000-088 (06/97)

Quanterra
Environmental Services

020022

Login No.: 22459

W02935

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Waste Mgmt.
Date: 10-23-99
Time: 845
Project No: 550.269
Initiated by: SueMSR
Shipper/No: Fed X 814613724159
RFA/COC Numbers: B99-078-142

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/not tamper evident type (circle all that apply).
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°

Temperature Variance Does Not Affect the Following Analyses: _____

Notes:

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) SueMSR Date: 10-23-99

Project Management Review: Jennifer Smith Date: 10-25-99

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

SL-ADMIN-0004, Revised 6/29/99

W029935

Quanterra November 02, 1999 10:04 am
Account: 10722 Project: 550.267 Quanterra-Richland QAS No. 550.267 Rev. 0
Master Sample Login: 22502

Project Manager: M. Ward

Reviewed by and Date: JSmith 11-2-99

Sample Header Template:

Sample No. / #	Client ID / Container Type	C-Matrix / Analysis	Date: Collected / Class	Received / Preservative	Due / Anal. Due Date	Shipper / Hold Date	Site	Rad Category / (Container Numbers:% Filled)	Rad Sample No.
22502-001	B0WMM8	Soil	27-OCT-99 08:56	28-OCT-99 08:08	26-NOV-99	FED X'		3*	R9433-001
B99-078 // VOA = TCL Plus 1 Propanol and Ethanol.//ICAP=SEE SAF FOR LIST									
1	AN - Amber Glass-500ml	BNA/8270C/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468956:99)	
1		CL/300.0/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)	
1		CN/9010/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468955:100)	
1		FL/300.0/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)	
1		NH3/350.1/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)	
1		NO2/300.0/Q4	S	COLD	19-NOV-99	29-OCT-99	R16B	(468955:100)	
1		NO3/300.0/Q4	S	COLD	19-NOV-99	29-OCT-99	R16B	(468955:100)	
1		NO3/353.1/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)	
1		OPHOS/300.0/Q4	S	COLD	19-NOV-99	29-OCT-99	R16B	(468955:100)	
1		PCB/8082/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468956:99)	
1		S/9030/Q4	S	COLD	19-NOV-99	03-NOV-99	R16B	(468955:100)	
1		SO4/300.0/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)	
1		TPH/8015/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468956:99)	
1	AN - Amber Glass-60ML	CR6/7196/Q4	S	COLD	19-NOV-99	28-OCT-99	R16B	(468952:100)	
1		HG/7471/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468952:100)	
1		ICAPT/6010A/Q4	S	COLD	19-NOV-99	24-APR-00	R16B	(468952:100)	
1		PH/9045/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468954:98)	
1		PM/IT/Q4	S	COLD	19-NOV-99	24-APR-00	R16B	(468952:100)	
1		RAD/CSCREEN/Q4	S	COLD	19-NOV-99	25-APR-00	V9	(468953:99)	
1		VOA/8260/Q4	S	COLD	19-NOV-99	10-NOV-99	V9	(468953:99)	
22502-001DUP	B0WMM8	Soil	27-OCT-99 08:56	28-OCT-99 08:08	26-NOV-99	FED X'		3*	R9433-001
B99-078 // VOA = TCL Plus 1 Propanol and Ethanol.//ICAP=SEE SAF FOR LIST									
1	AN - Amber Glass-500ml	CL/300.0/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)	
1		CN/9010/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468955:100)	
1		FL/300.0/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)	
1		NH3/350.1/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)	
1		NO2/300.0/Q4	S	COLD	19-NOV-99	29-OCT-99	R16B	(468955:100)	
1		NO3/300.0/Q4	S	COLD	19-NOV-99	29-OCT-99	R16B	(468955:100)	
1		NO3/353.1/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)	
1		OPHOS/300.0/Q4	S	COLD	19-NOV-99	29-OCT-99	R16B	(468955:100)	
1		S/9030/Q4	S	COLD	19-NOV-99	03-NOV-99	R16B	(468955:100)	
1		SO4/300.0/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)	
1	AN - Amber Glass-60ML	CR6/7196/Q4	S	COLD	19-NOV-99	28-OCT-99	R16B	(468952:100)	
1		PH/9045/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468954:98)	
22502-001MS	B0WMM8	Soil	27-OCT-99 08:56	28-OCT-99 08:08	26-NOV-99	FED X'		3*	R9433-001
B99-078 // VOA = TCL Plus 1 Propanol and Ethanol.//ICAP=SEE SAF FOR LIST									

3*-Sample has not been rad screened.

00013

W02935

deleted Ed.

Quanterra November 03, 1999 03:41 pm

Account: 10722 Project: 550.267 Quanterra-Richland QAS No. 550.267 Rev. 0

Master Sample Login: 22502

Project Manager: M. Ward

Smd

Reviewed by and Date: Sherry Lowrie

Sample Header Template:

Sample No. / Comments / #	Client ID	C-Matrix	Date: Collected	Received	Due	Shipper	Rad Category	Rad Sample No.
Data:								
22502-001	B0WMM8	Soil	27-OCT-99 08:56	28-OCT-99 08:08	26-NOV-99	FED X'	3*	R9433-001
B99-078 // VOA = TCL Plus 1 Propanol and Ethanol //ICAP=SEE SAF FOR LIST								

#	Container Type	Analysis	Class	Preservative	Anal. Due Date	Hold Date	Site	(Container Numbers:% Filled)
1	AN - Amber Glass-500ml	BNA/8270C/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468956:99)
1		CL/300.0/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)
1		CN/9010/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468955:100)
1		FL/300.0/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)
1		NH3/350.1/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)
1		NO2/300.0/Q4	S	COLD	19-NOV-99	29-OCT-99	R16B	(468955:100)
1		NO3/300.0/Q4	S	COLD	19-NOV-99	29-OCT-99	R16B	(468955:100)
1		NO3/353.1/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)
1		OPHOS/300.0/Q4	S	COLD	19-NOV-99	29-OCT-99	R16B	(468955:100)
1		PCB/8082/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468956:99)
1		S/9030/Q4	S	COLD	19-NOV-99	03-NOV-99	R16B	(468955:100)
1		SO4/300.0/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468955:100)
1		TPH/8015/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468956:99)
1	AN - Amber Glass-60ML	CR6/7196/Q4	S	COLD	19-NOV-99	28-OCT-99	R16B	(468952:100)
1		HG/7471/Q4	S	COLD	19-NOV-99	24-NOV-99	R16B	(468952:100)
1		ICAPT/6010A/Q4	S	COLD	19-NOV-99	24-APR-00	R16B	(468952:100)
1		PH/9045/Q4	S	COLD	19-NOV-99	10-NOV-99	R16B	(468954:98)
1		PM/IT/Q4	S	COLD	19-NOV-99	24-APR-00	R16B	(468952:100)
1		RAD/CSCREEN/Q4	S	COLD	19-NOV-99	25-APR-00	V9	(468953:99)
1		VOA/8260/Q4	S	COLD	19-NOV-99	10-NOV-99	V9	(468953:99)

000017

*=Sample has not been rad screened.

WW6135

Bechtel Hanford Inc. 17.1°C

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B99-078-143

Collector Bowers/Trice	**Company Contact** Chris Cearlock	**Telephone No.** 372-9574	**Project Coordinator** TRENT, SJ
Price Code 8N	**Data Turnaround** 45 Days		
Project Designation 200 Area Source characterization - 200-CW-1 OU	**Sampling Location** 200 B pond		**SAF No.** B99-078
Ice Chest No. ERC 99 009	**Field Logbook No.** EL-1511-1		**Method of Shipment** FED EX and Gov Vehicle
Shipped To Quanterra Incorporated S+L.	**Offsite Property No.** A000016		**Bill of Lading/Air Bill No.** 42357953 1149
			COA B20CW1 671C

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C	Cool 4C	None	None	Cool 4C	Cool 4C	None			
Type of Container	aG	aG	aG	aG	aG	aG	aG			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	60mL	60mL	60mL	60mL	500mL	500mL	1000mL			
SAMPLE ANALYSIS	See item (1) in Special Instructions.	VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Propanol, Ethanol}	Isotopic Uranium	pH (Soil) - 9045	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082	See item (3) in Special Instructions.			
Sample No. / Matrix * / Sample Date / Sample Time										
B0WMM8 / Soil / 10-27-99 / 0856	X	X		X	X	X			Bowsc	

PM 55

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

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers	10-27-99/1130	Ref 3B	10-27-99/1130
Ref 3B	10-28-99/0800	Rikki Thoren	10-28-99/0800
R. Thoren	10-28-99/1430	FED EX	
Fed Ex	10-29-99	JRS 11-1-99	10-29-99 830

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; ICP Metals - 6010A (Supertrace Add-On) {Beryllium, Copper, Nickel, Vanadium, Zinc}; Mercury - 7471 - (CV); Chromium Hex - 7196

(2) NO2/NO3 - 353.1; IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Sulfides - 9030; Ammonia - 350.1; Total Cyanide - 9010

(3) Gamma Spectroscopy {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Strontium-89,90 -- Total Sr; Total Uranium {Uranium}; Isotopic Plutonium; Isotopic Thorium {Thorium-232}; Americium-241

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

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

ERC Radiological Counting Facility Analysis Report

W02935

RCF Number RCF6592

Sample Date & Time 10/5/99 0913

Project ID: 200-CW-1

SAF Number: B99-078

Date Analyzed 10/5/99 13:29

Sample ID: B0W8C1

Gamma Energy Analysis

Nuclide	Activity (pCi/g)	Error (pCi/g)	MDA (pCi/g)

Not Requested

Total GEA (pCi/g)	N/A	+/-	N/A

Bowmm8

LABORATORY COPY

	Activity (pCi/g)		Error (pCi/g)
Gross Alpha**	6.1E+00	+/-	1.3E+00
Gross Beta	8.5E+01	+/-	4.0E+00

Alpha MDA (pCi/g)
2.5E+00
Beta MDA (pCi/g)
4.7E+01

Definitions:

All errors reported at 2 standard deviations.
N/R = no result or analysis not requested.
<MDA = Less than detection limit.

For soils and natural samples, the following applies:

**The gross alpha results are not corrected for mass absorbtion

Analysist T. J. Snider 10/5/99

Report To Dave St. John

Fax 372-9487

Report Printed: Tuesday, October 05, 1999

Quanterra
Environmental Services

020085

Login No.: 22502

W02935

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Bechtel Hanford

Date: 10.29.99

Time: 830

Project No: 550.2607

Initiated by: Sue Moss

Shipper/No: Airborne

RFA/COC Numbers: B99-078-143

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/not tamper evident type (circle all that apply).
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: 6°

Temperature Variance Does Not Affect the Following Analyses: _____

Notes:

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) Sue Moss Date: 10.29.99

Project Management Review: Jennifer Smith Date: 11-1-99

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

SL-ADMIN-0004, Revised 6/29/99

W02935

Quanterra November 04, 1999 10:50 am
Account: 10722 Project: 550.267 Quanterra-Richland QAS No. 550.267 Rev. 0
Master Sample Login: 22514

Project Manager: M. Ward

Reviewed by and Date: Sheila Lawrence

Sample Header Template:

Sample No. / #	Client ID / Container Type	C-Matrix / Analysis	Date: Collected / Class	Received / Preservative	Due / Anal. Due Date	Shipper / Hold Date	Site	Rad Category / (Container Numbers:% Filled)	Rad Sample No.
22514-001	B0WM44	Soil	28-OCT-99 08:13	02-NOV-99 09:05	02-DEC-99	FED X'	3*		R9436-001
B99-078 // VOA = TCL Plus 1 Propanol and Ethanol, // ICAPT TAL = SEE SAP LIST									
1	AN - Amber Glass-500ml	ANIONS/300.0/Q4	P	COLD	N/A	N/A	R16C	(469212:100)	
1		BNA/8270C/Q4	S	COLD	25-NOV-99	11-NOV-99	R16C	(469213:99)	
1		CL/300.0/Q4	C	COLD	25-NOV-99	25-NOV-99	R16C	(469212:100)	
1		CN/9010/Q4	S	COLD	25-NOV-99	11-NOV-99	R16C	(469212:100)	
1		FL/300.0/Q4	C	COLD	25-NOV-99	25-NOV-99	R16C	(469212:100)	
1		NH3/350.1/Q4	S	COLD	25-NOV-99	25-NOV-99	R16C	(469212:100)	
1		NO2/300.0/Q4	C	COLD	25-NOV-99	30-OCT-99	R16C	(469212:100)	
1		NO3/300.0/Q4	C	COLD	25-NOV-99	30-OCT-99	R16C	(469212:100)	
1		NO3/353.1/Q4	S	COLD	25-NOV-99	25-NOV-99	R16C	(469212:100)	
1		OPHOS/300.0/Q4	C	COLD	25-NOV-99	30-OCT-99	R16C	(469212:100)	
1		PCB/8082/Q4	S	COLD	25-NOV-99	11-NOV-99	R16C	(469213:99)	
1		S/9030/Q4	S	COLD	25-NOV-99	04-NOV-99	R16C	(469212:100)	
1		SO4/300.0/Q4	C	COLD	25-NOV-99	25-NOV-99	R16C	(469212:100)	
1		TPH/8015/Q4	S	COLD	25-NOV-99	11-NOV-99	R16C	(469213:99)	
1	AN - Amber Glass-60ML	CR6/7196/Q4	S	COLD	25-NOV-99	29-OCT-99	R16C	(469209:100)	
1		HG/7471/Q4	S	COLD	25-NOV-99	25-NOV-99	R16C	(469209:100)	
1		ICAPT/6010A/Q4	S	COLD	25-NOV-99	25-APR-00	R16C	(469209:100)	
1		PH/9045/Q4	S	COLD	25-NOV-99	11-NOV-99	R16C	(469211:98)	
1		PM/IT/Q4	S	COLD	25-NOV-99	25-APR-00	R16C	(469209:100)	
1		RAD/CSCREEN/Q4	S	COLD	25-NOV-99	30-APR-00	V9	(469210:99)	
1		VOA/8260/Q4	S	COLD	25-NOV-99	11-NOV-99	V9	(469210:99)	

000021

3*=Sample has not been rad screened.

020100 (10C)

Bechtel Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B99-078-141

Collector Bowers/Trice	**Company Contact** Chris Cearlock	**Telephone No.** 372-9574	**Project Coordinator** TRENT, SJ
Price Code 8N	**Data Turnaround** 45 Days		
Project Designation 200 Area Source characterization - 200-CW-1 OU	**Sampling Location** 200 B pond		**SAF No.** B99-078
Ice Chest No. GRC96 0068	**Field Logbook No.** EL-1511 ~ 1		**Method of Shipment** FED EX and Gov Vehicle
Shipped To Quanterra Incorporated STL	**Offsite Property No.** A0000019		**Bill of Lading/Air Bill No.** 42357953 1193
			COA B20CW1671C

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C	Cool 4C	None	None	Cool 4C	Cool 4C	None			
Type of Container	aG	aG	aG	aG	aG	aG	aG			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	60mL	60mL	60mL	60mL	500mL	500mL	1000mL			
SAMPLE ANALYSIS W02935	See item (1) in Special Instructions. ✓	VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Propanol, Ethanol) ✓	Isotopic Uranium	pH (Soil) - 9045 ✓	See item (2) in Special Instructions. ✓	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082 ✓	See item (3) in Special Instructions.			

Sample No.	Matrix *	Sample Date	Sample Time									
B0WMM4	Soil	10-28-99	0813 ~~0800~~ RT 10-28-99	X	X		X	X	X	← 102 to fuel		BOWBC

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

Relinquished By	Date/Time	Received By	Date/Time
C. Trice Catherine Trice	10/28/99 1430	Ref 3B	10/28/99 1430
Ref 3B	11.01.99/0800	Rikki Thoren R. Thoren	11.01.99/0800
Rikki Thoren R. Thoren	11.01.99/1430	FEDEX	

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; ICP Metals - 6010A (Supertrace Add-On) {Beryllium, Copper, Nickel, Vanadium, Zinc}; Mercury - 7471 - (CV); Chromium Hex - 7196

(2) NO2/NO3 - 353.1; IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Sulfides - 9030; Ammonia - 350.1; Total Cyanide - 9010

(3) Gamma Spectroscopy {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Strontium-89,90 -- Total Sr; Total Uranium {Uranium}; Isotopic Plutonium; Isotopic Thorium {Thorium-232}; Americium-241

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

LABORATORY SECTION — Received By: Linda A. Cantrell — 11-2-99 — Title: 905 — Date/Time: 11/2/99

FINAL SAMPLE DISPOSITION — Disposal Method — Disposed By — Date/Time

270000

ERC Radiological Counting Facility Analysis Report

RCF Number RCF6592

Sample Date & Time 10/5/99 0913

Project ID: 200-CW-1

SAF Number: B99-078

Date Analyzed 10/5/99 13:29

Sample ID: B0W8C1

Gamma Energy Analysis

Nuclide	Activity (pCi/g)	Error (pCi/g)	MDA (pCi/g)
Not Requested			

Bowmm4

Total GEA (pCi/g)	N/A	+/-	N/A

LABORATORY COPY

	Activity (pCi/g)		Error (pCi/g)
Gross Alpha**	6.1E+00	+/-	1.3E+00
Gross Beta	8.5E+01	+/-	4.0E+00

Alpha MDA (pCi/g)
2.5E+00
Beta MDA (pCi/g)
4.7E+01

Definitions:

All errors reported at 2 standard deviations.
N/R = no result or analysis not requested.
<MDA = Less than detection limit.

For soils and natural samples, the following applies:

**The gross alpha results are not corrected for mass absorbtion

Analysist T. J. Snider 10/5/99

Report To Dave St. John

Fax 372-9487

Report Printed: Tuesday, October 05, 1999

000023

OCT 08 '99 03:15PM

Quanterra
Environmental Services

020100

Login No.: ~~22513~~ 22514 sol 11/2/99
W02935

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Bechtel Hanford
Date: 11/2/99 Time: 905A
Project No: 550.267
Initiated by: Linda A Custodio
Shipper/No: FedX 423579531193
RFA/COC Numbers: B99-078-141

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: 1°C
   - ☐ 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/not tamper evident type (circle all that apply).
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 4aC 11/2/99

☐ No variances were noted during sample receipt. Cooler Temperature Upon Receipt: 1°C

Temperature Variance Does Not Affect the Following Analyses:

Notes:

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 designee) Linda A Custodio Date: 11/2/99

Project Management Review: Sheila Faunce Date: 11/4/99

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

SL-ADMIN-0004, Revised 6/29/99

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Volatiles
Method: SW846 8260A
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID: B0WMM2

Quanterra ID : 22449-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK210008-1	10/26/99	10/26/99	11	UG/KG	U	11	1
Bromomethane	74-83-9	QCBLK210008-1	10/26/99	10/26/99	11	UG/KG	U	11	1
Vinyl Chloride	75-01-4	QCBLK210008-1	10/26/99	10/26/99	11	UG/KG	U	11	1
Chloroethane	75-00-3	QCBLK210008-1	10/26/99	10/26/99	11	UG/KG	U	11	1
Methylene Chloride	75-09-2	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Acetone	67-64-1	QCBLK210008-1	10/26/99	10/26/99	27	UG/KG		22	1
Carbon Disulfide	75-15-0	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
1,1-Dichloroethene	75-35-4	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
1,1-Dichloroethane	75-34-3	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
1,2-Dichloroethene (total)	540-59-0	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Chloroform	67-66-3	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
1,2-Dichloroethane	107-06-2	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
2-Butanone (MEK)	78-93-3	QCBLK210008-1	10/26/99	10/26/99	11	UG/KG	BJ	22	1
1,1,1-Trichloroethane	71-55-6	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Carbon Tetrachloride	56-23-5	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Bromodichloromethane	75-27-4	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
1,2-Dichloropropane	78-87-5	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Trichloroethene	79-01-6	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Dibromochloromethane	124-48-1	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
1,1,2-Trichloroethane	79-00-5	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Benzene	71-43-2	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Bromoform	75-25-2	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
4-Methyl-2-Pentanone (MIBK)	108-10-1	QCBLK210008-1	10/26/99	10/26/99	22	UG/KG	U	22	1
2-Hexanone	591-78-6	QCBLK210008-1	10/26/99	10/26/99	22	UG/KG	U	22	1
Tetrachloroethene	127-18-4	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Toluene	108-88-3	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Chlorobenzene	108-90-7	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
EthylBenzene	100-41-4	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Styrene	100-42-5	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Xylene (total)	1330-20-7	QCBLK210008-1	10/26/99	10/26/99	6	UG/KG	U	6	1
Unknown	TIC-2	QCBLK210008-1	10/26/99	10/26/99	7	UG/KG	J		1
Bromofluorobenzene	460-00-4	QCBLK210008-1	10/26/99	10/26/99	98	%REC			1
Dibromofluoromethane	1868-53-7	QCBLK210008-1	10/26/99	10/26/99	96	%REC			1
Toluene-d8	2037-26-5	QCBLK210008-1	10/26/99	10/26/99	103	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Volatiles
Method: SW846 8260A
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID: B0WMM2

Quanterra ID : 22449-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK210008-1	10/26/99	10/26/99	50	%REC			1
Trichloroethene	79-01-6	QCBLK210008-1	10/26/99	10/26/99	78	%REC			1
Benzene	71-43-2	QCBLK210008-1	10/26/99	10/26/99	83	%REC			1
Toluene	108-88-3	QCBLK210008-1	10/26/99	10/26/99	97	%REC			1
Chlorobenzene	108-90-7	QCBLK210008-1	10/26/99	10/26/99	96	%REC			1
Bromofluorobenzene	460-00-4	QCBLK210008-1	10/26/99	10/26/99	103	%REC			1
Dibromofluoromethane	1868-53-7	QCBLK210008-1	10/26/99	10/26/99	97	%REC			1
Toluene-d8	2037-26-5	QCBLK210008-1	10/26/99	10/26/99	107	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Volatiles
Method: SW846 8260A
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID: B0WMM2

Quanterra ID : 22449-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
1,1-Dichloroethene	75-35-4	QCBLK210008-1	10/26/99	10/26/99	53	%REC			1
Trichloroethene	79-01-6	QCBLK210008-1	10/26/99	10/26/99	78	%REC			1
Benzene	71-43-2	QCBLK210008-1	10/26/99	10/26/99	82	%REC			1
Toluene	108-88-3	QCBLK210008-1	10/26/99	10/26/99	95	%REC			1
Chlorobenzene	108-90-7	QCBLK210008-1	10/26/99	10/26/99	95	%REC			1
Bromofluorobenzene	460-00-4	QCBLK210008-1	10/26/99	10/26/99	105	%REC			1
Dibromofluoromethane	1868-53-7	QCBLK210008-1	10/26/99	10/26/99	98	%REC			1
Toluene-d8	2037-26-5	QCBLK210008-1	10/26/99	10/26/99	105	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Volatiles
Method: SW846 8260A
Matrix: SOLID

Client ID: B0WMM6

Sample Date : 10/21/99
Receipt Date : 10/22/99
Report Date : 12/29/99

Quanterra ID : 22456-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK210229-1	10/28/99	10/28/99	11	UG/KG	U	11	1
Bromomethane	74-83-9	QCBLK210229-1	10/28/99	10/28/99	11	UG/KG	U	11	1
Vinyl Chloride	75-01-4	QCBLK210229-1	10/28/99	10/28/99	11	UG/KG	U	11	1
Chloroethane	75-00-3	QCBLK210229-1	10/28/99	10/28/99	11	UG/KG	U	11	1
Methylene Chloride	75-09-2	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Acetone	67-64-1	QCBLK210229-1	10/28/99	10/28/99	17	UG/KG	J	21	1
Carbon Disulfide	75-15-0	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Chloroform	67-66-3	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
2-Butanone (MEK)	78-93-3	QCBLK210229-1	10/28/99	10/28/99	21	UG/KG	U	21	1
1,1,1-Trichloroethane	71-55-6	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Bromodichloromethane	75-27-4	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Trichloroethene	79-01-6	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Dibromochloromethane	124-48-1	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Benzene	71-43-2	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Bromoform	75-25-2	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
4-Methyl-2-Pentanone (MIBK)	108-10-1	QCBLK210229-1	10/28/99	10/28/99	21	UG/KG	U	21	1
2-Hexanone	591-78-6	QCBLK210229-1	10/28/99	10/28/99	21	UG/KG	U	21	1
Tetrachloroethene	127-18-4	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Toluene	108-88-3	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Chlorobenzene	108-90-7	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
EthylBenzene	100-41-4	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Styrene	100-42-5	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Xylene (total)	1330-20-7	QCBLK210229-1	10/28/99	10/28/99	5	UG/KG	U	5	1
Bromofluorobenzene	460-00-4	QCBLK210229-1	10/28/99	10/28/99	112	%REC			1
Dibromofluoromethane	1868-53-7	QCBLK210229-1	10/28/99	10/28/99	125	%REC			1
Toluene-d8	2037-26-5	QCBLK210229-1	10/28/99	10/28/99	127	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Volatiles
Method: SW846 8260A
Matrix: SOLID

Client ID: B0WMM8

Sample Date : 10/27/99
Receipt Date : 10/28/99
Report Date : 12/29/99

Quanterra ID : 22502-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK210613-1	11/03/99	11/03/99	10	UG/KG	U	10	1
Bromomethane	74-83-9	QCBLK210613-1	11/03/99	11/03/99	10	UG/KG	U	10	1
Vinyl Chloride	75-01-4	QCBLK210613-1	11/03/99	11/03/99	10	UG/KG	U	10	1
Chloroethane	75-00-3	QCBLK210613-1	11/03/99	11/03/99	10	UG/KG	U	10	1
Methylene Chloride	75-09-2	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Acetone	67-64-1	QCBLK210613-1	11/03/99	11/03/99	63	UG/KG	B	21	1
Carbon Disulfide	75-15-0	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
1,1-Dichloroethene	75-35-4	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
1,1-Dichloroethane	75-34-3	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
1,2-Dichloroethene (total)	540-59-0	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Chloroform	67-66-3	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
1,2-Dichloroethane	107-06-2	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
2-Butanone (MEK)	78-93-3	QCBLK210613-1	11/03/99	11/03/99	21	UG/KG	U	21	1
1,1,1-Trichloroethane	71-55-6	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Carbon Tetrachloride	56-23-5	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Bromodichloromethane	75-27-4	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
1,2-Dichloropropane	78-87-5	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Trichloroethene	79-01-6	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Dibromochloromethane	124-48-1	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
1,1,2-Trichloroethane	79-00-5	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Benzene	71-43-2	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Bromoform	75-25-2	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
4-Methyl-2-Pentanone (MIBK)	108-10-1	QCBLK210613-1	11/03/99	11/03/99	21	UG/KG	U	21	1
2-Hexanone	591-78-6	QCBLK210613-1	11/03/99	11/03/99	21	UG/KG	U	21	1
Tetrachloroethene	127-18-4	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Toluene	108-88-3	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Chlorobenzene	108-90-7	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
EthylBenzene	100-41-4	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Styrene	100-42-5	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Xylene (total)	1330-20-7	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	U	5	1
Unknown-1	TIC-32	QCBLK210613-1	11/03/99	11/03/99	16	UG/KG	J		1
Unknown-2	TIC-33	QCBLK210613-1	11/03/99	11/03/99	5	UG/KG	BJ		1
Unknown-3	TIC-34	QCBLK210613-1	11/03/99	11/03/99	19	UG/KG	BJ		1
Unknown Alkane	TIC-40	QCBLK210613-1	11/03/99	11/03/99	6	UG/KG	J		1
Bromofluorobenzene	460-00-4	QCBLK210613-1	11/03/99	11/03/99	90	%REC			1
Dibromofluoromethane	1868-53-7	QCBLK210613-1	11/03/99	11/03/99	105	%REC			1
Toluene-d8	2037-26-5	QCBLK210613-1	11/03/99	11/03/99	111	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Volatiles
Method: SW846 8260A
Matrix: SOLID

Client ID: B0WMM4

Sample Date : 10/28/99
Receipt Date : 11/02/99
Report Date : 12/29/99

Quanterra ID : 22514-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Chloromethane	74-87-3	QCBLK210699-1	11/04/99	11/04/99	11	UG/KG	U	11	1
Bromomethane	74-83-9	QCBLK210699-1	11/04/99	11/04/99	11	UG/KG	U	11	1
Vinyl Chloride	75-01-4	QCBLK210699-1	11/04/99	11/04/99	11	UG/KG	U	11	1
Chloroethane	75-00-3	QCBLK210699-1	11/04/99	11/04/99	11	UG/KG	U	11	1
Methylene Chloride	75-09-2	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Acetone	67-64-1	QCBLK210699-1	11/04/99	11/04/99	16	UG/KG	BJ	22	1
Carbon Disulfide	75-15-0	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
1,1-Dichloroethene	75-35-4	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
1,1-Dichloroethane	75-34-3	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
1,2-Dichloroethene (total)	540-59-0	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Chloroform	67-66-3	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
1,2-Dichloroethane	107-06-2	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
2-Butanone (MEK)	78-93-3	QCBLK210699-1	11/04/99	11/04/99	22	UG/KG	U	22	1
1,1,1-Trichloroethane	71-55-6	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Carbon Tetrachloride	56-23-5	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Bromodichloromethane	75-27-4	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
1,2-Dichloropropane	78-87-5	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
cis-1,3-Dichloropropene	10061-01-5	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Trichloroethene	79-01-6	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Dibromochloromethane	124-48-1	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
1,1,2-Trichloroethane	79-00-5	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Benzene	71-43-2	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
trans-1,3-Dichloropropene	10061-02-6	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Bromoform	75-25-2	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
4-Methyl-2-Pentanone (MIBK)	108-10-1	QCBLK210699-1	11/04/99	11/04/99	22	UG/KG	U	22	1
2-Hexanone	591-78-6	QCBLK210699-1	11/04/99	11/04/99	22	UG/KG	U	22	1
Tetrachloroethene	127-18-4	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Toluene	108-88-3	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
1,1,2,2-Tetrachloroethane	79-34-5	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Chlorobenzene	108-90-7	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
EthylBenzene	100-41-4	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Styrene	100-42-5	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Xylene (total)	1330-20-7	QCBLK210699-1	11/04/99	11/04/99	6	UG/KG	U	6	1
Bromofluorobenzene	460-00-4	QCBLK210699-1	11/04/99	11/04/99	104	%REC			1
Dibromofluoromethane	1868-53-7	QCBLK210699-1	11/04/99	11/04/99	124	%REC			1
Toluene-d8	2037-26-5	QCBLK210699-1	11/04/99	11/04/99	120	%REC			1

Data is incomplete without Case Narrative

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM2

Lab Name: QUANTERRA MO Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22449-001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BSMP9228

Level: (low/med) LOW Date Received: 10/21/99

% Moisture: not dec. 10 Date Analyzed: 10/26/99

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/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	6	U
67-64-1	Acetone	27	
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	11	JB
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Chlorodibromomethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-pentanone	22	U
591-78-6	2-Hexanone	22	U
127-18-4	Tetrachloroethene	6	U
108-88-3	Toluene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Xylenes (total)	6	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0WMM2

Lab Name: QUANTERRA MO Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22449-001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: BSMP9228

Level: (low/med) LOW Date Received: 10/21/99

% Moisture: not dec. 10 Date Analyzed: 10/26/99

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

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

Number TICs found: 1

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

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	18.32	6.760	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM6

Lab Name: QUANTERRA MO Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22456-001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESMP0163

Level: (low/med) LOW Date Received: 10/22/99

% Moisture: not dec. 7 Date Analyzed: 10/28/99

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/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	5	U
67-64-1	Acetone	17	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	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	21	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	21	U
591-78-6	2-Hexanone	21	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.

B0WMM6

Lab Name: QUANTERRA MO Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22456-001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESMP0163

Level: (low/med) LOW Date Received: 10/22/99

% Moisture: not dec. 7 Date Analyzed: 10/28/99

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM8

Lab Name: QUANTERRA MO Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22502-001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESMP0215

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 3 Date Analyzed: 11/03/99

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/KG	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	63	B
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	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	21	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	21	U
591-78-6	2-Hexanone	21	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.

B0WMM8

Lab Name: QUANTERRA MO Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22502-001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESMP0215

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 3 Date Analyzed: 11/03/99

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

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

Number TICs found: 4

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	22.85	15.80	J
2.	UNKNOWN	23.41	5.260	JB
3.	UNKNOWN	24.37	18.82	JB
4.	UNKNOWN ALKANE	25.19	5.923	J
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM4

Lab Name: QUANTERRA MO Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22514-001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESMP0233

Level: (low/med) LOW Date Received: 11/02/99

% Moisture: not dec. 11 Date Analyzed: 11/04/99

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/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	6	U
67-64-1	Acetone	16	JB
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	22	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-Dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Chlorodibromomethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	trans-1,3-Dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-pentanone	22	U
591-78-6	2-Hexanone	22	U
127-18-4	Tetrachloroethene	6	U
108-88-3	Toluene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Xylenes (total)	6	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0WMM4

Lab Name: QUANTERRA MO Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22514-001

Sample wt/vol: 5.0 (g/mL) G Lab File ID: ESMP0233

Level: (low/med) LOW Date Received: 11/02/99

% Moisture: not dec. 11 Date Analyzed: 11/04/99

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

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

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Semivolatile
Method: SW-846 8270C
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID: B0WMM2

Quanterra ID : 22449-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Phenol	108-95-2	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
bis(2-Chloroethyl)Ether	111-44-4	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
2-Chlorophenol	95-57-8	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
1,3-Dichlorobenzene	541-73-1	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
1,4-Dichlorobenzene	106-46-7	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
1,2-Dichlorobenzene	95-50-1	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
2-Methylphenol	95-48-7	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
2,2'-oxybis (1-Chloropropane)	108-60-1	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
N-nitroso-di-n-propylamine	621-64-7	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
4-Methylphenol	106-44-5	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Hexachloroethane	67-72-1	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Nitrobenzene	98-95-3	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Isophorone	78-59-1	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
2-Nitrophenol	88-75-5	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
2,4-Dimethylphenol	105-67-9	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
bis(2-Chloroethoxy)Methane	111-91-1	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
2,4-Dichlorophenol	120-83-2	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
1,2,4-Trichlorobenzene	120-82-1	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Naphthalene	91-20-3	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
4-Chloroaniline	106-47-8	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Hexachlorobutadiene	87-68-3	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
4-Chloro-3-Methylphenol	59-50-7	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
2-Methylnaphthalene	91-57-6	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Hexachlorocyclopentadiene	77-47-4	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
2,4,6-Trichlorophenol	88-06-2	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
2,4,5-Trichlorophenol	95-95-4	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
2-Chloronaphthalene	91-58-7	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
2-Nitroaniline	88-74-4	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
Acenaphthylene	208-96-8	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
2,6-Dinitrotoluene	606-20-2	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
3-Nitroaniline	99-09-2	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
Acenaphthene	83-32-9	QCBLK209739-1	10/25/99	10/26/99	56	UG/KG	J	370	1
2,4-Dinitrophenol	51-28-5	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
Dibenzofuran	132-64-9	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
4-Nitrophenol	100-02-7	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
2,4-Dinitrotoluene	121-14-2	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Fluorene	86-73-7	QCBLK209739-1	10/25/99	10/26/99	40	UG/KG	J	370	1
DimethylPhthalate	131-11-3	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Diethylphthalate	84-66-2	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
4-Chlorophenyl-PhenylEther	7005-72-3	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
4-Nitroaniline	100-01-6	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
4,6-Dinitro-2-Methylphenol	534-52-1	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
n-Nitrosodiphenylamine	86-30-6	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
4-Bromophenyl-Phenyl Ether	101-55-3	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Hexachlorobenzene	118-74-1	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Pentachlorophenol	87-86-5	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
Phenanthrene	85-01-8	QCBLK209739-1	10/25/99	10/26/99	610	UG/KG		370	1
Anthracene	120-12-7	QCBLK209739-1	10/25/99	10/26/99	48	UG/KG	J	370	1
Di-N-Butylphthalate	84-74-2	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Fluoranthene	206-44-0	QCBLK209739-1	10/25/99	10/26/99	1300	UG/KG		370	1
Pyrene	129-00-0	QCBLK209739-1	10/25/99	10/26/99	1400	UG/KG		370	1
ButylBenzylPhthalate	85-68-7	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Benzo(a)Anthracene	56-55-3	QCBLK209739-1	10/25/99	10/26/99	560	UG/KG		370	1
3,3'-Dichlorobenzidine	91-94-1	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
Chrysene	218-01-9	QCBLK209739-1	10/25/99	10/26/99	790	UG/KG		370	1
bis(2-Ethylhexyl)Phthalate	117-81-7	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
di-N-OctylPhthalate	117-84-0	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Benzo(b)Fluoranthene	205-99-2	QCBLK209739-1	10/25/99	10/26/99	470	UG/KG		370	1
Benzo(k)Fluoranthene	207-08-9	QCBLK209739-1	10/25/99	10/26/99	620	UG/KG		370	1
Benzo(a)Pyrene	50-32-8	QCBLK209739-1	10/25/99	10/26/99	660	UG/KG		370	1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Semivolatile
Method: SW-846 8270C
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Indeno(1,2,3-CD)Pyrene	193-39-5	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	J	370	1
Dibenz(a,h)Anthracene	53-70-3	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG	U	370	1
Carbazole	86-74-8	QCBLK209739-1	10/25/99	10/26/99	38	UG/KG	J	370	1
Benzo(g,h,i)Perylene	191-24-2	QCBLK209739-1	10/25/99	10/26/99	370	UG/KG		370	1
2-Fluorophenol	367-12-4	QCBLK209739-1	10/25/99	10/26/99	84	%REC			1
Phenol-d5	4165-62-2	QCBLK209739-1	10/25/99	10/26/99	92	%REC			1
Nitrobenzene-d5	4165-60-0	QCBLK209739-1	10/25/99	10/26/99	84	%REC			1
2-Fluorobiphenyl	321-60-8	QCBLK209739-1	10/25/99	10/26/99	80	%REC			1
2,4,6-Tribromophenol	118-79-6	QCBLK209739-1	10/25/99	10/26/99	92	%REC			1
Terphenyl-d14	1718-51-0	QCBLK209739-1	10/25/99	10/26/99	76	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Semivolatile
Method: SW-846 8270C
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Phenol	108-95-2	QCBLK209739-1	10/25/99	10/26/99	77	%REC			1
2-Chlorophenol	95-57-8	QCBLK209739-1	10/25/99	10/26/99	81	%REC			1
1,4-Dichlorobenzene	106-46-7	QCBLK209739-1	10/25/99	10/26/99	79	%REC			1
N-nitroso-di-n-propylamine	621-64-7	QCBLK209739-1	10/25/99	10/26/99	90	%REC			1
1,2,4-Trichlorobenzene	120-82-1	QCBLK209739-1	10/25/99	10/26/99	82	%REC			1
4-Chloro-3-Methylphenol	59-50-7	QCBLK209739-1	10/25/99	10/26/99	81	%REC			1
Acenaphthene	83-32-9	QCBLK209739-1	10/25/99	10/26/99	85	%REC			1
4-Nitrophenol	100-02-7	QCBLK209739-1	10/25/99	10/26/99	92	%REC			1
2,4-Dinitrotoluene	121-14-2	QCBLK209739-1	10/25/99	10/26/99	96	%REC			1
Pentachlorophenol	87-86-5	QCBLK209739-1	10/25/99	10/26/99	79	%REC			1
Pyrene	129-00-0	QCBLK209739-1	10/25/99	10/26/99	40	%REC			1
2-Fluorophenol	367-12-4	QCBLK209739-1	10/25/99	10/26/99	88	%REC			1
Phenol-d5	4165-62-2	QCBLK209739-1	10/25/99	10/26/99	92	%REC			1
Nitrobenzene-d5	4165-60-0	QCBLK209739-1	10/25/99	10/26/99	89	%REC			1
2-Fluorobiphenyl	321-60-8	QCBLK209739-1	10/25/99	10/26/99	84	%REC			1
2,4,6-Tribromophenol	118-79-6	QCBLK209739-1	10/25/99	10/26/99	90	%REC			1
Terphenyl-d14	1718-51-0	QCBLK209739-1	10/25/99	10/26/99	78	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Semivolatile
Method: SW-846 8270C
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Phenol	108-95-2	QCBLK209739-1	10/25/99	10/26/99	73	%REC			1
2-Chlorophenol	95-57-8	QCBLK209739-1	10/25/99	10/26/99	76	%REC			1
1,4-Dichlorobenzene	106-46-7	QCBLK209739-1	10/25/99	10/26/99	77	%REC			1
N-nitroso-di-n-propylamine	621-64-7	QCBLK209739-1	10/25/99	10/26/99	85	%REC			1
1,2,4-Trichlorobenzene	120-82-1	QCBLK209739-1	10/25/99	10/26/99	78	%REC			1
4-Chloro-3-Methylphenol	59-50-7	QCBLK209739-1	10/25/99	10/26/99	78	%REC			1
Acenaphthene	83-32-9	QCBLK209739-1	10/25/99	10/26/99	82	%REC			1
4-Nitrophenol	100-02-7	QCBLK209739-1	10/25/99	10/26/99	90	%REC			1
2,4-Dinitrotoluene	121-14-2	QCBLK209739-1	10/25/99	10/26/99	94	%REC			1
Pentachlorophenol	87-86-5	QCBLK209739-1	10/25/99	10/26/99	82	%REC			1
Pyrene	129-00-0	QCBLK209739-1	10/25/99	10/26/99	15	%REC			1
2-Fluorophenol	367-12-4	QCBLK209739-1	10/25/99	10/26/99	84	%REC			1
Phenol-d5	4165-62-2	QCBLK209739-1	10/25/99	10/26/99	87	%REC			1
Nitrobenzene-d5	4165-60-0	QCBLK209739-1	10/25/99	10/26/99	84	%REC			1
2-Fluorobiphenyl	321-60-8	QCBLK209739-1	10/25/99	10/26/99	80	%REC			1
2,4,6-Tribromophenol	118-79-6	QCBLK209739-1	10/25/99	10/26/99	88	%REC			1
Terphenyl-d14	1718-51-0	QCBLK209739-1	10/25/99	10/26/99	71	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Semivolatile
Method: SW-846 8270C
Matrix: SOLID

Client ID: B0WMM6

Sample Date : 10/21/99
Receipt Date : 10/22/99
Report Date : 12/29/99

Quanterra ID : 22456-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Phenol	108-95-2	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
bis(2-Chloroethyl)Ether	111-44-4	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2-Chlorophenol	95-57-8	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
1,3-Dichlorobenzene	541-73-1	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
1,4-Dichlorobenzene	106-46-7	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
1,2-Dichlorobenzene	95-50-1	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2-Methylphenol	95-48-7	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2,2'-oxybis (1-Chloropropane)	108-60-1	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
N-nitroso-di-n-propylamine	621-64-7	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
4-Methylphenol	106-44-5	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Hexachloroethane	67-72-1	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Nitrobenzene	98-95-3	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Isophorone	78-59-1	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2-Nitrophenol	88-75-5	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2,4-Dimethylphenol	105-67-9	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
bis(2-Chloroethoxy)Methane	111-91-1	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2,4-Dichlorophenol	120-83-2	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
1,2,4-Trichlorobenzene	120-82-1	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Naphthalene	91-20-3	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
4-Chloroaniline	106-47-8	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Hexachlorobutadiene	87-68-3	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
4-Chloro-3-Methylphenol	59-50-7	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2-Methylnaphthalene	91-57-6	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Hexachlorocyclopentadiene	77-47-4	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
2,4,6-Trichlorophenol	88-06-2	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2,4,5-Trichlorophenol	95-95-4	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2-Chloronaphthalene	91-58-7	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2-Nitroaniline	88-74-4	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
Acenaphthylene	208-96-8	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2,6-Dinitrotoluene	606-20-2	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
3-Nitroaniline	99-09-2	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
Acenaphthene	83-32-9	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
2,4-Dinitrophenol	51-28-5	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
Dibenzofuran	132-64-9	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
4-Nitrophenol	100-02-7	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
2,4-Dinitrotoluene	121-14-2	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Fluorene	86-73-7	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
DimethylPhthalate	131-11-3	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Diethylphthalate	84-66-2	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
4-Chlorophenyl-PhenylEther	7005-72-3	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
4-Nitroaniline	100-01-6	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
4,6-Dinitro-2-Methylphenol	534-52-1	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
n-Nitrosodiphenylamine	86-30-6	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
4-Bromophenyl-Phenyl Ether	101-55-3	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Hexachlorobenzene	118-74-1	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Pentachlorophenol	87-86-5	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
Phenanthrene	85-01-8	QCBLK209739-1	10/25/99	10/26/99	110	UG/KG	J	350	1
Anthracene	120-12-7	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Di-N-Butylphthalate	84-74-2	QCBLK209739-1	10/25/99	10/26/99	110	UG/KG	J	350	1
Fluoranthene	206-44-0	QCBLK209739-1	10/25/99	10/26/99	220	UG/KG	J	350	1
Pyrene	129-00-0	QCBLK209739-1	10/25/99	10/26/99	280	UG/KG	J	350	1
ButylBenzylPhthalate	85-68-7	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Benzo(a)Anthracene	56-55-3	QCBLK209739-1	10/25/99	10/26/99	65	UG/KG	J	350	1
3,3'-Dichlorobenzidine	91-94-1	QCBLK209739-1	10/25/99	10/26/99	1800	UG/KG	U	1800	1
Chrysene	218-01-9	QCBLK209739-1	10/25/99	10/26/99	130	UG/KG	J	350	1
bis(2-Ethylhexyl)Phthalate	117-81-7	QCBLK209739-1	10/25/99	10/26/99	86	UG/KG	BJ	350	1
di-N-OctylPhthalate	117-84-0	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Benzo(b)Fluoranthene	205-99-2	QCBLK209739-1	10/25/99	10/26/99	100	UG/KG	J	350	1
Benzo(k)Fluoranthene	207-08-9	QCBLK209739-1	10/25/99	10/26/99	120	UG/KG	J	350	1
Benzo(a)Pyrene	50-32-8	QCBLK209739-1	10/25/99	10/26/99	100	UG/KG	J	350	1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Semivolatile
Method: SW-846 8270C
Matrix: SOLID

Client ID: B0WMM6

Sample Date : 10/21/99
Receipt Date : 10/22/99
Report Date : 12/29/99

Quanterra ID : 22456-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Indeno(1,2,3-CD)Pyrene	193-39-5	QCBLK209739-1	10/25/99	10/26/99	79	UG/KG	J	350	1
Dibenz(a,h)Anthracene	53-70-3	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Carbazole	86-74-8	QCBLK209739-1	10/25/99	10/26/99	350	UG/KG	U	350	1
Benzo(g,h,i)Perylene	191-24-2	QCBLK209739-1	10/25/99	10/26/99	88	UG/KG	J	350	1
2-Fluorophenol	367-12-4	QCBLK209739-1	10/25/99	10/26/99	79	%REC			1
Phenol-d5	4165-62-2	QCBLK209739-1	10/25/99	10/26/99	87	%REC			1
Nitrobenzene-d5	4165-60-0	QCBLK209739-1	10/25/99	10/26/99	81	%REC			1
2-Fluorobiphenyl	321-60-8	QCBLK209739-1	10/25/99	10/26/99	75	%REC			1
2,4,6-Tribromophenol	118-79-6	QCBLK209739-1	10/25/99	10/26/99	78	%REC			1
Terphenyl-d14	1718-51-0	QCBLK209739-1	10/25/99	10/26/99	88	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Semivolatile
Method: SW-846 8270C
Matrix: SOLID

Client ID: B0WMM8

Sample Date : 10/27/99
Receipt Date : 10/28/99
Report Date : 12/29/99

Quanterra ID : 22502-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Phenol	108-95-2	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
bis(2-Chloroethyl)Ether	111-44-4	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2-Chlorophenol	95-57-8	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
1,3-Dichlorobenzene	541-73-1	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
1,4-Dichlorobenzene	106-46-7	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
1,2-Dichlorobenzene	95-50-1	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2-Methylphenol	95-48-7	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2,2'-oxybis (1-Chloropropane)	108-60-1	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
N-nitroso-di-n-propylamine	621-64-7	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
4-Methylphenol	106-44-5	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Hexachloroethane	67-72-1	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Nitrobenzene	98-95-3	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Isophorone	78-59-1	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2-Nitrophenol	88-75-5	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2,4-Dimethylphenol	105-67-9	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
bis(2-Chloroethoxy)Methane	111-91-1	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2,4-Dichlorophenol	120-83-2	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
1,2,4-Trichlorobenzene	120-82-1	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Naphthalene	91-20-3	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
4-Chloroaniline	106-47-8	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Hexachlorobutadiene	87-68-3	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
4-Chloro-3-Methylphenol	59-50-7	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2-Methylnaphthalene	91-57-6	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Hexachlorocyclopentadiene	77-47-4	QCBLK210573-1	11/03/99	11/03/99	1700	UG/KG	U	1700	1
2,4,6-Trichlorophenol	88-06-2	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2,4,5-Trichlorophenol	95-95-4	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2-Chloronaphthalene	91-58-7	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2-Nitroaniline	88-74-4	QCBLK210573-1	11/03/99	11/03/99	1700	UG/KG	U	1700	1
Acenaphthylene	208-96-8	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2,6-Dinitrotoluene	606-20-2	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
3-Nitroaniline	99-09-2	QCBLK210573-1	11/03/99	11/03/99	1700	UG/KG	U	1700	1
Acenaphthene	83-32-9	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2,4-Dinitrophenol	51-28-5	QCBLK210573-1	11/03/99	11/03/99	1700	UG/KG	U	1700	1
Dibenzofuran	132-64-9	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
4-Nitrophenol	100-02-7	QCBLK210573-1	11/03/99	11/03/99	1700	UG/KG	U	1700	1
2,4-Dinitrotoluene	121-14-2	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Fluorene	86-73-7	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
DimethylPhthalate	131-11-3	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Diethylphthalate	84-66-2	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
4-Chlorophenyl-PhenylEther	7005-72-3	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
4-Nitroaniline	100-01-6	QCBLK210573-1	11/03/99	11/03/99	1700	UG/KG	U	1700	1
4,6-Dinitro-2-Methylphenol	534-52-1	QCBLK210573-1	11/03/99	11/03/99	1700	UG/KG	U	1700	1
n-Nitrosodiphenylamine	86-30-6	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
4-Bromophenyl-Phenyl Ether	101-55-3	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Hexachlorobenzene	118-74-1	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Pentachlorophenol	87-86-5	QCBLK210573-1	11/03/99	11/03/99	1700	UG/KG	U	1700	1
Phenanthrene	85-01-8	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Anthracene	120-12-7	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Di-N-Butylphthalate	84-74-2	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Fluoranthene	206-44-0	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Pyrene	129-00-0	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
ButylBenzylPhthalate	85-68-7	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Benzo(a)Anthracene	56-55-3	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
3,3'-Dichlorobenzidine	91-94-1	QCBLK210573-1	11/03/99	11/03/99	1700	UG/KG	U	1700	1
Chrysene	218-01-9	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
bis(2-Ethylhexyl)Phthalate	117-81-7	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
di-N-OctylPhthalate	117-84-0	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Benzo(b)Fluoranthene	205-99-2	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Benzo(k)Fluoranthene	207-08-9	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Benzo(a)Pyrene	50-32-8	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Semivolatile
Method: SW-846 8270C
Matrix: SOLID

Client ID: B0WMM8

Sample Date : 10/27/99
Receipt Date : 10/28/99
Report Date : 12/29/99

Quanterra ID : 22502-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Indeno(1,2,3-CD)Pyrene	193-39-5	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Dibenz(a,h)Anthracene	53-70-3	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Carbazole	86-74-8	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
Benzo(g,h,i)Perylene	191-24-2	QCBLK210573-1	11/03/99	11/03/99	340	UG/KG	U	340	1
2-Fluorophenol	367-12-4	QCBLK210573-1	11/03/99	11/03/99	76	%REC			1
Phenol-d5	4165-62-2	QCBLK210573-1	11/03/99	11/03/99	86	%REC			1
Nitrobenzene-d5	4165-60-0	QCBLK210573-1	11/03/99	11/03/99	72	%REC			1
2-Fluorobiphenyl	321-60-8	QCBLK210573-1	11/03/99	11/03/99	69	%REC			1
2,4,6-Tribromophenol	118-79-6	QCBLK210573-1	11/03/99	11/03/99	68	%REC			1
Terphenyl-d14	1718-51-0	QCBLK210573-1	11/03/99	11/03/99	65	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Semivolatile
Method: SW-846 8270C
Matrix: SOLID

Client ID: B0WMM4

Sample Date : 10/28/99
Receipt Date : 11/02/99
Report Date : 12/29/99

Quanterra ID : 22514-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Phenol	108-95-2	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
bis(2-Chloroethyl)Ether	111-44-4	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2-Chlorophenol	95-57-8	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
1,3-Dichlorobenzene	541-73-1	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
1,4-Dichlorobenzene	106-46-7	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
1,2-Dichlorobenzene	95-50-1	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2-Methylphenol	95-48-7	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2,2'-oxybis (1-Chloropropane)	108-60-1	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
N-nitroso-di-n-propylamine	621-64-7	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
4-Methylphenol	106-44-5	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Hexachloroethane	67-72-1	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Nitrobenzene	98-95-3	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Isophorone	78-59-1	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2-Nitrophenol	88-75-5	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2,4-Dimethylphenol	105-67-9	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
bis(2-Chloroethoxy)Methane	111-91-1	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2,4-Dichlorophenol	120-83-2	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
1,2,4-Trichlorobenzene	120-82-1	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Naphthalene	91-20-3	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
4-Chloroaniline	106-47-8	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Hexachlorobutadiene	87-68-3	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
4-Chloro-3-Methylphenol	59-50-7	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2-Methylnaphthalene	91-57-6	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Hexachlorocyclopentadiene	77-47-4	QCBLK211066-1	11/10/99	11/11/99	1900	UG/KG	U	1900	1
2,4,6-Trichlorophenol	88-06-2	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2,4,5-Trichlorophenol	95-95-4	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2-Chloronaphthalene	91-58-7	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2-Nitroaniline	88-74-4	QCBLK211066-1	11/10/99	11/11/99	1900	UG/KG	U	1900	1
Acenaphthylene	208-96-8	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2,6-Dinitrotoluene	606-20-2	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
3-Nitroaniline	99-09-2	QCBLK211066-1	11/10/99	11/11/99	1900	UG/KG	U	1900	1
Acenaphthene	83-32-9	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2,4-Dinitrophenol	51-28-5	QCBLK211066-1	11/10/99	11/11/99	1900	UG/KG	U	1900	1
Dibenzofuran	132-64-9	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
4-Nitrophenol	100-02-7	QCBLK211066-1	11/10/99	11/11/99	1900	UG/KG	U	1900	1
2,4-Dinitrotoluene	121-14-2	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Fluorene	86-73-7	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
DimethylPhthalate	131-11-3	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Diethylphthalate	84-66-2	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
4-Chlorophenyl-PhenylEther	7005-72-3	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
4-Nitroaniline	100-01-6	QCBLK211066-1	11/10/99	11/11/99	1900	UG/KG	U	1900	1
4,6-Dinitro-2-Methylphenol	534-52-1	QCBLK211066-1	11/10/99	11/11/99	1900	UG/KG	U	1900	1
n-Nitrosodiphenylamine	86-30-6	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
4-Bromophenyl-Phenyl Ether	101-55-3	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Hexachlorobenzene	118-74-1	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Pentachlorophenol	87-86-5	QCBLK211066-1	11/10/99	11/11/99	1900	UG/KG	U	1900	1
Phenanthrene	85-01-8	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Anthracene	120-12-7	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Di-N-Butylphthalate	84-74-2	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Fluoranthene	206-44-0	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Pyrene	129-00-0	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
ButylBenzylPhthalate	85-68-7	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Benzo(a)Anthracene	56-55-3	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
3,3'-Dichlorobenzidine	91-94-1	QCBLK211066-1	11/10/99	11/11/99	1900	UG/KG	U	1900	1
Chrysene	218-01-9	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
bis(2-Ethylhexyl)Phthalate	117-81-7	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
di-N-OctylPhthalate	117-84-0	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Benzo(b)Fluoranthene	205-99-2	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Benzo(k)Fluoranthene	207-08-9	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Benzo(a)Pyrene	50-32-8	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Semivolatile
Method: SW-846 8270C
Matrix: SOLID

Client ID: B0WMM4

Sample Date : 10/28/99
Receipt Date : 11/02/99
Report Date : 12/29/99

Quanterra ID : 22514-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Indeno(1,2,3-CD)Pyrene	193-39-5	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Dibenz(a,h)Anthracene	53-70-3	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Carbazole	86-74-8	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
Benzo(g,h,i)Perylene	191-24-2	QCBLK211066-1	11/10/99	11/11/99	380	UG/KG	U	380	1
2-Fluorophenol	367-12-4	QCBLK211066-1	11/10/99	11/11/99	65	%REC			1
Phenol-d5	4165-62-2	QCBLK211066-1	11/10/99	11/11/99	70	%REC			1
Nitrobenzene-d5	4165-60-0	QCBLK211066-1	11/10/99	11/11/99	65	%REC			1
2-Fluorobiphenyl	321-60-8	QCBLK211066-1	11/10/99	11/11/99	62	%REC			1
2,4,6-Tribromophenol	118-79-6	QCBLK211066-1	11/10/99	11/11/99	85	%REC			1
Terphenyl-d14	1718-51-0	QCBLK211066-1	11/10/99	11/11/99	73	%REC			1

Data is incomplete without Case Narrative

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM2

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22449-001

Sample wt/vol: 30.2 (g/mL) G Lab File ID: KSMP3357

Level: (low/med) LOW Date Received: 10/21/99

% Moisture: not dec. 10 dec._____ Date Extracted:10/25/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/26/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	370	U
111-44-4	Bis(2-chloroethyl)ether	370	U
95-57-8	2-Chlorophenol	370	U
541-73-1	1,3-Dichlorobenzene	370	U
106-46-7	1,4-Dichlorobenzene	370	U
95-50-1	1,2-Dichlorobenzene	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2-oxybis(1-Chloropropane)	370	U
621-64-7	N-Nitrosodinpropylamine	370	U
106-44-5	4-Methylphenol	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	Bis(2-chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
120-82-1	1,2,4-Trichlorobenzene	370	U
91-20-3	Naphthalene	370	U
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
59-50-7	4-Chloro-3-Methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
91-58-7	2-Chloronaphthalene	370	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM2

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22449-001

Sample wt/vol: 30.2 (g/mL) G Lab File ID: KSMP3357

Level: (low/med) LOW Date Received: 10/21/99

% Moisture: not dec. 10 dec._____ Date Extracted:10/25/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/26/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
88-74-4	2-Nitroaniline	1800	U
208-96-8	Acenaphthylene	370	U
606-20-2	2,6-Dinitrotoluene	370	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	56	J
51-28-5	2,4-Dinitrophenol	1800	U
132-64-9	Dibenzofuran	370	U
100-02-7	4-Nitrophenol	1800	U
121-14-2	2,4-Dinitrotoluene	370	U
86-73-7	Fluorene	40	J
131-11-3	Dimethylphthalate	370	U
84-66-2	Diethylphthalate	370	U
7005-72-3	4-Chlorophenyl-phenylether	370	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	610	
120-12-7	Anthracene	48	J
84-74-2	Di-n-Butylphthalate	370	U
206-44-0	Fluoranthene	1300	
129-00-0	Pyrene	1400	
85-68-7	Butylbenzylphthalate	370	U
56-55-3	Benzo(a)Anthracene	560	
91-94-1	3,3'-Dichlorobenzidine	1800	U

(1) - Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM2

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22449-001

Sample wt/vol: 30.2 (g/mL) G Lab File ID: KSMP3357

Level: (low/med) LOW Date Received: 10/21/99

% Moisture: not dec. 10 dec._____ Date Extracted:10/25/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/26/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
218-01-9	Chrysene	790	
117-81-7	bis(2-ethylhexyl)Phthalate	370	U
117-84-0	Di-n-octylphthalate	370	U
205-99-2	Benzo(b)fluoranthene	470	
207-08-9	Benzo(k)fluoranthene	620	
50-32-8	Benzo(a)pyrene	660	
193-39-5	Indeno(1,2,3-cd)pyrene	350	J
53-70-3	Dibenzo(a,h)anthracene	370	U
86-74-8	Carbazole	38	J
191-24-2	Benzo(g,h,i)perylene	370	

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0WMM2

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22449-001

Sample wt/vol: 30.2 (g/mL) G Lab File ID: KSMP3357

Level: (low/med) LOW Date Received: 10/21/99

% Moisture: not dec. 10 dec._____ Date Extracted:10/25/99

Final Volume: 1000 Date Analyzed: 10/26/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM6

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22456-001

Sample wt/vol: 30.4 (g/mL) G Lab File ID: KSMP3360

Level: (low/med) LOW Date Received: 10/22/99

% Moisture: not dec. 7 dec._____ Date Extracted:10/25/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/26/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	350	U
111-44-4	Bis(2-chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
541-73-1	1,3-Dichlorobenzene	350	U
106-46-7	1,4-Dichlorobenzene	350	U
95-50-1	1,2-Dichlorobenzene	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2-oxybis(1-Chloropropane)	350	U
621-64-7	N-Nitrosodinpropylamine	350	U
106-44-5	4-Methylphenol	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	Bis(2-chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
120-82-1	1,2,4-Trichlorobenzene	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
59-50-7	4-Chloro-3-Methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	1800	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
91-58-7	2-Chloronaphthalene	350	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM6

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22456-001

Sample wt/vol: 30.4 (g/mL) G Lab File ID: KSMP3360

Level: (low/med) LOW Date Received: 10/22/99

% Moisture: not dec. 7 dec._____ Date Extracted:10/25/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/26/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
88-74-4	2-Nitroaniline	1800	U
208-96-8	Acenaphthylene	350	U
606-20-2	2,6-Dinitrotoluene	350	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	350	U
51-28-5	2,4-Dinitrophenol	1800	U
132-64-9	Dibenzofuran	350	U
100-02-7	4-Nitrophenol	1800	U
121-14-2	2,4-Dinitrotoluene	350	U
86-73-7	Fluorene	350	U
131-11-3	Dimethylphthalate	350	U
84-66-2	Diethylphthalate	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine (1)	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	110	J
120-12-7	Anthracene	350	U
84-74-2	Di-n-Butylphthalate	110	J
206-44-0	Fluoranthene	220	J
129-00-0	Pyrene	280	J
85-68-7	Butylbenzylphthalate	350	U
56-55-3	Benzo(a)Anthracene	65	J
91-94-1	3,3'-Dichlorobenzidine	1800	U

(1) - Cannot be separated from Diphenylamine

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM6

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22456-001

Sample wt/vol: 30.4 (g/mL) G Lab File ID: KSMP3360

Level: (low/med) LOW Date Received: 10/22/99

% Moisture: not dec. 7 dec._____ Date Extracted:10/25/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 10/26/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
218-01-9	Chrysene	130	J
117-81-7	bis(2-ethylhexyl)Phthalate	86	JB
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	100	J
207-08-9	Benzo(k)fluoranthene	120	J
50-32-8	Benzo(a)pyrene	100	J
193-39-5	Indeno(1,2,3-cd)pyrene	79	J
53-70-3	Dibenzo(a,h)anthracene	350	U
86-74-8	Carbazole	350	U
191-24-2	Benzo(g,h,i)perylene	88	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0WMM6

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22456-001

Sample wt/vol: 30.4 (g/mL) G Lab File ID: KSMP3360

Level: (low/med) LOW Date Received: 10/22/99

% Moisture: not dec. 7 dec._____ Date Extracted:10/25/99

Final Volume: 1000 Date Analyzed: 10/26/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM8

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22502-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JSMP3618

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 3 dec._____ Date Extracted:11/03/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 11/03/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	340	U
111-44-4	Bis(2-chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
541-73-1	1,3-Dichlorobenzene	340	U
106-46-7	1,4-Dichlorobenzene	340	U
95-50-1	1,2-Dichlorobenzene	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	2,2-oxybis(1-Chloropropane)	340	U
621-64-7	N-Nitrosodinpropylamine	340	U
106-44-5	4-Methylphenol	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethyphenol	340	U
111-91-1	Bis(2-chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
120-82-1	1,2,4-Trichlorobenzene	340	U
91-20-3	Naphthalene	340	U
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
59-50-7	4-Chloro-3-Methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	1700	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorphenol	340	U
91-58-7	2-Chloronaphthalene	340	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM8

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22502-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JSMP3618

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 3 dec._____ Date Extracted:11/03/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 11/03/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
88-74-4	2-Nitroaniline	1700	U
208-96-8	Acenaphthylene	340	U
606-20-2	2,6-Dinitrotoluene	340	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	340	U
51-28-5	2,4-Dinitrophenol	1700	U
132-64-9	Dibenzofuran	340	U
100-02-7	4-Nitrophenol	1700	U
121-14-2	2,4-Dinitrotoluene	340	U
86-73-7	Fluorene	340	U
131-11-3	Dimethylphthalate	340	U
84-66-2	Diethylphthalate	340	U
7005-72-3	4-Chlorophenyl-phenylether	340	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamine (1)	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	340	U
120-12-7	Anthracene	340	U
84-74-2	Di-n-Butylphthalate	340	U
206-44-0	Fluoranthene	340	U
129-00-0	Pyrene	340	U
85-68-7	Butylbenzylphthalate	340	U
56-55-3	Benzo(a)Anthracene	340	U
91-94-1	3,3'-Dichlorobenzidine	1700	U

(1) - Cannot be separated from Diphenylamine

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM8

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22502-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JSMP3618

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 3 dec._____ Date Extracted:11/03/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 11/03/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
218-01-9	Chrysene	340	U
117-81-7	bis(2-ethylhexyl)Phthalate	340	U
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	340	U
207-08-9	Benzo(k)fluoranthene	340	U
50-32-8	Benzo(a)pyrene	340	U
193-39-5	Indeno(1,2,3-cd)pyrene	340	U
53-70-3	Dibenzo(a,h)anthracene	340	U
86-74-8	Carbazole	340	U
191-24-2	Benzo(g,h,i)perylene	340	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0WMM8

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22502-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JSMP3618

Level: (low/med) LOW Date Received: 10/28/99

% Moisture: not dec. 3 dec._____ Date Extracted:11/03/99

Final Volume: 1000 Date Analyzed: 11/03/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM4

Lab Name: QUANTERRA Contract: 550.267W

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22514-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JSMP3660

Level: (low/med) LOW Date Received: 11/02/99

% Moisture: not dec. 11 dec._____ Date Extracted:11/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 11/11/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
108-95-2	Phenol	380	U
111-44-4	Bis(2-chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
541-73-1	1,3-Dichlorobenzene	380	U
106-46-7	1,4-Dichlorobenzene	380	U
95-50-1	1,2-Dichlorobenzene	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2-oxybis(1-Chloropropane)	380	U
621-64-7	N-Nitrosodinpropylamine	380	U
106-44-5	4-Methylphenol	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethyphenol	380	U
111-91-1	Bis(2-chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
120-82-1	1,2,4-Trichlorobenzene	380	U
91-20-3	Naphthalene	380	U
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
59-50-7	4-Chloro-3-Methylphenol	380	U
91-57-6	2-Methylnaphthalene	380	U
77-47-4	Hexachlorocyclopentadiene	1900	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorphenol	380	U
91-58-7	2-Chloronaphthalene	380	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM4

Lab Name: QUANTERRA Contract: 550.267W

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22514-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JSMP3660

Level: (low/med) LOW Date Received: 11/02/99

% Moisture: not dec. 11 dec._____ Date Extracted:11/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 11/11/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
88-74-4	2-Nitroaniline	1900	U
208-96-8	Acenaphthylene	380	U
606-20-2	2,6-Dinitrotoluene	380	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	380	U
51-28-5	2,4-Dinitrophenol	1900	U
132-64-9	Dibenzofuran	380	U
100-02-7	4-Nitrophenol	1900	U
121-14-2	2,4-Dinitrotoluene	380	U
86-73-7	Fluorene	380	U
131-11-3	Dimethylphthalate	380	U
84-66-2	Diethylphthalate	380	U
7005-72-3	4-Chlorophenyl-phenylether	380	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamine (1)	380	U
101-55-3	4-Bromophenyl-phenylether	380	U
118-74-1	Hexachlorobenzene	380	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	380	U
120-12-7	Anthracene	380	U
84-74-2	Di-n-Butylphthalate	380	U
206-44-0	Fluoranthene	380	U
129-00-0	Pyrene	380	U
85-68-7	Butylbenzylphthalate	380	U
56-55-3	Benzo(a)Anthracene	380	U
91-94-1	3,3'-Dichlorobenzidine	1900	U

(1) - Cannot be separated from Diphenylamine

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

B0WMM4

Lab Name: QUANTERRA Contract: 550.267W

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22514-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JSMP3660

Level: (low/med) LOW Date Received: 11/02/99

% Moisture: not dec. 11 dec._____ Date Extracted:11/10/99

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 11/11/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
218-01-9	Chrysene	380	U
117-81-7	bis(2-ethylhexyl)Phthalate	380	U
117-84-0	Di-n-octylphthalate	380	U
205-99-2	Benzo(b)fluoranthene	380	U
207-08-9	Benzo(k)fluoranthene	380	U
50-32-8	Benzo(a)pyrene	380	U
193-39-5	Indeno(1,2,3-cd)pyrene	380	U
53-70-3	Dibenzo(a,h)anthracene	380	U
86-74-8	Carbazole	380	U
191-24-2	Benzo(g,h,i)perylene	380	U

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

B0WMM4

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITSL Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22514-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: JSMP3660

Level: (low/med) LOW Date Received: 11/02/99

% Moisture: not dec. 11 dec._____ Date Extracted:11/10/99

Final Volume: 1000 Date Analyzed: 11/11/99

GPC Cleanup: (Y/N) N pH: 7.0 Dilution Factor: 1.0

Number TICs found: 0

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: PCB's
Method: SW-846 8082A
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aroclor-1016	12674-11-2	QCBLK209745-1	10/25/99	10/26/99	37	UG/KG	U	37	1
Aroclor-1221	11104-28-2	QCBLK209745-1	10/25/99	10/26/99	37	UG/KG	U	37	1
Aroclor-1232	11141-16-5	QCBLK209745-1	10/25/99	10/26/99	37	UG/KG	U	37	1
Aroclor-1242	53469-21-9	QCBLK209745-1	10/25/99	10/26/99	37	UG/KG	U	37	1
Aroclor-1248	12672-29-6	QCBLK209745-1	10/25/99	10/26/99	37	UG/KG	U	37	1
Aroclor-1254	11097-69-1	QCBLK209745-1	10/25/99	10/26/99	37	UG/KG	U	37	1
Aroclor-1260	11096-82-5	QCBLK209745-1	10/25/99	10/26/99	360	UG/KG		37	1
TCMX	877-09-8	QCBLK209745-1	10/25/99	10/26/99	91	%REC			1
DCB	2051-24-3	QCBLK209745-1	10/25/99	10/26/99	110	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: PCB's
Method: SW-846 8082A
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID: B0WMM2

Quanterra ID : 22449-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aroclor-1016	12674-11-2	QCBLK209745-1	10/25/99	10/26/99	94	%REC			1
Aroclor-1260	11096-82-5	QCBLK209745-1	10/25/99	10/26/99	106	%REC			1
TCMX	877-09-8	QCBLK209745-1	10/25/99	10/26/99	99	%REC			1
DCB	2051-24-3	QCBLK209745-1	10/25/99	10/26/99	101	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: PCB's
Method: SW-846 8082A
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aroclor-1016	12674-11-2	QCBLK209745-1	10/25/99	10/26/99	99	%REC			1
Aroclor-1260	11096-82-5	QCBLK209745-1	10/25/99	10/26/99	144	%REC			1
TCMX	877-09-8	QCBLK209745-1	10/25/99	10/26/99	107	%REC			1
DCB	2051-24-3	QCBLK209745-1	10/25/99	10/26/99	116	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: PCB's
Method: SW-846 8082A
Matrix: SOLID

Client ID: B0WMM6

Sample Date : 10/21/99
Receipt Date : 10/22/99
Report Date : 12/29/99

Quanterra ID : 22456-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aroclor-1016	12674-11-2	QCBLK209745-1	10/25/99	10/26/99	1800	UG/KG	U	1800	50
Aroclor-1221	11104-28-2	QCBLK209745-1	10/25/99	10/26/99	1800	UG/KG	U	1800	50
Aroclor-1232	11141-16-5	QCBLK209745-1	10/25/99	10/26/99	1800	UG/KG	U	1800	50
Aroclor-1242	53469-21-9	QCBLK209745-1	10/25/99	10/26/99	1800	UG/KG	U	1800	50
Aroclor-1248	12672-29-6	QCBLK209745-1	10/25/99	10/26/99	1800	UG/KG	U	1800	50
Aroclor-1254	11097-69-1	QCBLK209745-1	10/25/99	10/26/99	1800	UG/KG	U	1800	50
Aroclor-1260	11096-82-5	QCBLK209745-1	10/25/99	10/26/99	10000	UG/KG		1800	50
TCMX	877-09-8	QCBLK209745-1	10/25/99	10/26/99	0	%REC	D		50
DCB	2051-24-3	QCBLK209745-1	10/25/99	10/26/99	0	%REC	D		50

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: PCB's
Method: SW-846 8082A
Matrix: SOLID

Client ID: B0WMM8

Sample Date : 10/27/99
Receipt Date : 10/28/99
Report Date : 12/29/99

Quanterra ID : 22502-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aroclor-1016	12674-11-2	QCBLK210576-1	11/03/99	11/04/99	34	UG/KG	U	34	1
Aroclor-1221	11104-28-2	QCBLK210576-1	11/03/99	11/04/99	34	UG/KG	U	34	1
Aroclor-1232	11141-16-5	QCBLK210576-1	11/03/99	11/04/99	34	UG/KG	U	34	1
Aroclor-1242	53469-21-9	QCBLK210576-1	11/03/99	11/04/99	34	UG/KG	U	34	1
Aroclor-1248	12672-29-6	QCBLK210576-1	11/03/99	11/04/99	34	UG/KG	U	34	1
Aroclor-1254	11097-69-1	QCBLK210576-1	11/03/99	11/04/99	34	UG/KG	U	34	1
Aroclor-1260	11096-82-5	QCBLK210576-1	11/03/99	11/04/99	34	UG/KG	U	34	1
TCMX	877-09-8	QCBLK210576-1	11/03/99	11/04/99	85	%REC			1
DCB	2051-24-3	QCBLK210576-1	11/03/99	11/04/99	124	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: PCB's
Method: SW-846 8082A
Matrix: SOLID

Client ID: B0WMM4

Sample Date : 10/28/99
Receipt Date : 11/02/99
Report Date : 12/29/99

Quanterra ID : 22514-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Aroclor-1016	12674-11-2	QCBLK210711-1	11/05/99	11/08/99	38	UG/KG	U	38	1
Aroclor-1221	11104-28-2	QCBLK210711-1	11/05/99	11/08/99	38	UG/KG	U	38	1
Aroclor-1232	11141-16-5	QCBLK210711-1	11/05/99	11/08/99	38	UG/KG	U	38	1
Aroclor-1242	53469-21-9	QCBLK210711-1	11/05/99	11/08/99	38	UG/KG	U	38	1
Aroclor-1248	12672-29-6	QCBLK210711-1	11/05/99	11/08/99	38	UG/KG	U	38	1
Aroclor-1254	11097-69-1	QCBLK210711-1	11/05/99	11/08/99	38	UG/KG	U	38	1
Aroclor-1260	11096-82-5	QCBLK210711-1	11/05/99	11/08/99	38	UG/KG	U	38	1
TCMX	877-09-8	QCBLK210711-1	11/05/99	11/08/99	110	%REC			1
DCB	2051-24-3	QCBLK210711-1	11/05/99	11/08/99	110	%REC			1

Data is incomplete without Case Narrative

FORM 1 Quanterra-Richland SAMPLE NO.

PCB ORGANICS ANALYSIS DATA SHEET

B0WMM2

Lab Name: QUANTERRA, ST. LOUIS MO Contract: 550.267

Lab Code: Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22449-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: DB__634

% Moisture: 10 decanted: (Y/N) N Date Received: 10/21/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/25/99

Concentrated Extract Volume: 10(mL) Date Analyzed: 10/26/99

Injection Volume: 1.0(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/KG	Q
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	37	U
1114-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	37	U
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	360	
37324-23-5	Aroclor-1262	37	U
11100-14-4	Aroclor-1268	37	U

FORM I PCB

FORM 1 Quanterra-Richland SAMPLE NO.

PCB ORGANICS ANALYSIS DATA SHEET

B0WMM6

Lab Name: QUANTERRA, ST. LOUIS MO Contract: 550.267

Lab Code: Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22456-001

Sample wt/vol: 30.3 (g/mL) G Lab File ID: DB__637

% Moisture: 7 decanted: (Y/N) N Date Received: 10/22/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:10/25/99

Concentrated Extract Volume: 10(mL) Date Analyzed: 10/26/99

Injection Volume: 1.0(uL) Dilution Factor: 50.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	1800	U
11104-28-2	Aroclor-1221	1800	U
1114-16-5	Aroclor-1232	1800	U
53469-21-9	Aroclor-1242	1800	U
12672-29-6	Aroclor-1248	1800	U
11097-69-1	Aroclor-1254	1800	U
11096-82-5	Aroclor-1260	10000	
37324-23-5	Aroclor-1262	1800	U
11100-14-4	Aroclor-1268	1800	U

FORM 1 Quanterra-Richland SAMPLE NO.

PCB ORGANICS ANALYSIS DATA SHEET

B0WMM8

Lab Name: QUANTERRA, ST. LOUIS MO Contract: 550.267

Lab Code: Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22502-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: DB__827

% Moisture: 3 decanted: (Y/N) N Date Received: 10/28/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:11/03/99

Concentrated Extract Volume: 10(mL) Date Analyzed: 11/04/99

Injection Volume: 1.0(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/KG	Q
12674-11-2	Aroclor-1016	34	U
11104-28-2	Aroclor-1221	34	U
1114-16-5	Aroclor-1232	34	U
53469-21-9	Aroclor-1242	34	U
12672-29-6	Aroclor-1248	34	U
11097-69-1	Aroclor-1254	34	U
11096-82-5	Aroclor-1260	34	U
37324-23-5	Aroclor-1262	34	U
11100-14-4	Aroclor-1268	34	U

FORM 1 Quanterra-Richland SAMPLE NO.

PCB ORGANICS ANALYSIS DATA SHEET

B0WMM4

Lab Name: QUANTERRA, ST. LOUIS MO Contract: 550.267

Lab Code: Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22514-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: DB__874

% Moisture: 11 decanted: (Y/N) N Date Received: 11/02/99

Extraction: (SepF/Cont/Sonc) SONC Date Extracted:11/05/99

Concentrated Extract Volume: 10(mL) Date Analyzed: 11/08/99

Injection Volume: 1.0(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/KG	Q
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	38	U
1114-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	38	U
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U
37324-23-5	Aroclor-1262	38	U
11100-14-4	Aroclor-1268	38	U

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: TPH
Method: EPA 8015
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Diesel	68334-30-5	QCBLK210550-1	11/03/99	11/05/99	28	UG/KG	U	28	1
Waste Oil	TPH/OILH	QCBLK210550-1	11/03/99	11/05/99	28	UG/KG	U	28	1
Miscellaneous Oil	MO-002	QCBLK210550-1	11/03/99	11/05/99	28	UG/KG	U	28	1
o-Terphenyl	84-15-1	QCBLK210550-1	11/03/99	11/05/99	87	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: TPH
Method: EPA 8015
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Diesel	68334-30-5	QCBLK210550-1	11/03/99	11/05/99	91	%REC			1
o-Terphenyl	84-15-1	QCBLK210550-1	11/03/99	11/05/99	107	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: TPH
Method: EPA 8015
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Diesel	68334-30-5	QCBLK210550-1	11/03/99	11/05/99	88	%REC			1
o-Terphenyl	84-15-1	QCBLK210550-1	11/03/99	11/05/99	103	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: TPH
Method: EPA 8015
Matrix: SOLID

Client ID: B0WMM6

Sample Date : 10/21/99
Receipt Date : 10/22/99
Report Date : 12/29/99

Quanterra ID : 22456-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Diesel	68334-30-5	QCBLK210550-1	11/03/99	11/05/99	27	UG/KG	U	27	1
Waste Oil	TPH/OILH	QCBLK210550-1	11/03/99	11/05/99	98	UG/KG		27	1
Miscellaneous Oil	MO-002	QCBLK210550-1	11/03/99	11/05/99	27	UG/KG	U	27	1
o-Terphenyl	84-15-1	QCBLK210550-1	11/03/99	11/05/99	95	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: TPH
Method: EPA 8015
Matrix: SOLID

Client ID: B0WMM8

Sample Date : 10/27/99
Receipt Date : 10/28/99
Report Date : 12/29/99

Quanterra ID : 22502-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Diesel	68334-30-5	QCBLK210550-1	11/03/99	11/05/99	26	UG/KG	U	26	1
Waste Oil	TPH/OILH	QCBLK210550-1	11/03/99	11/05/99	26	UG/KG	U	26	1
Miscellaneous Oil	MO-002	QCBLK210550-1	11/03/99	11/05/99	26	UG/KG	U	26	1
o-Terphenyl	84-15-1	QCBLK210550-1	11/03/99	11/05/99	88	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: TPH
Method: EPA 8015
Matrix: SOLID

Client ID: B0WMM4

Sample Date : 10/28/99
Receipt Date : 11/02/99
Report Date : 12/29/99

Quanterra ID : 22514-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Diesel	68334-30-5	QCBLK211292-1	11/11/99	11/24/99	28	UG/KG	U	28	1
Waste Oil	TPH/OILH	QCBLK211292-1	11/11/99	11/24/99	28	UG/KG	U	28	1
Miscellaneous Oil	MO-002	QCBLK211292-1	11/11/99	11/24/99	28	UG/KG	U	28	1
o-Terphenyl	84-15-1	QCBLK211292-1	11/11/99	11/24/99	86	%REC			1

Data is incomplete without Case Narrative

FORM 1 Quanterra-Richland SAMPLE NO.

TPH ORGANICS ANALYSIS DATA SHEET

B0WMM2

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22449-001TPH

Sample wt/vol: 20.2 (g/mL) G Lab File ID: FA__483

% Moisture: 10 decanted: (Y/N) N Date Received: 10/21/99

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted:11/03/99

Concentrated Extract Volume: 5(ml) Date Analyzed: 11/05/99

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	----------Diesel	27.67	U
	----------Waste Oil	27.67	U
	----------Miscellaneous	27.67	U

FORM 1 Quanterra-Richland SAMPLE NO.

TPH ORGANICS ANALYSIS DATA SHEET

B0WMM6

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22456-001TPH

Sample wt/vol: 20.3 (g/mL) G Lab File ID: FA__486

% Moisture: 7 decanted: (Y/N) N Date Received: 10/22/99

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted:11/03/99

Concentrated Extract Volume: 5(ml) Date Analyzed: 11/05/99

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	----------Diesel	26.80	U
	----------Waste Oil	97.84	
	----------Miscellaneous	26.80	U

FORM I TPH

FORM 1 Quanterra-Richland SAMPLE NO.

TPH ORGANICS ANALYSIS DATA SHEET

B0WMM8

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22502-001TPH

Sample wt/vol: 20.5 (g/mL) G Lab File ID: FA__487

% Moisture: 3 decanted: (Y/N) N Date Received: 10/28/99

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted:11/03/99

Concentrated Extract Volume: 5(ml) Date Analyzed: 11/05/99

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	----------Diesel	25.89	U
	----------Waste Oil	25.89	U
	----------Miscellaneous	25.89	U

FORM I TPH

FORM 1
TPH ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

B0WMM4

Lab Name: QUANTERRA Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix: (soil/water) SOIL Lab Sample ID: 22514-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: FA__630

% Moisture: 11 decanted: (Y/N) N Date Received: 11/02/99

Extraction: (SepF/Cont/Sonc) OTHER Date Extracted:11/11/99

Concentrated Extract Volume: 5(ml) Date Analyzed: 11/24/99

Injection Volume: 1.0(uL) Dilution Factor: 1.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) MG/KG	Q
	----------Diesel	28.22	U
	----------Waste Oil	28.22	U
	----------Miscellaneous	28.22	U

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: ICAP Metals
Method: EPA 6010
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Arsenic	7440-38-2	QCBLK210724-1	11/05/99	11/17/99	4.8	MG/KG		1.1	1
Barium	7440-39-3	QCBLK210724-1	11/05/99	11/17/99	81.0	MG/KG		22.1	1
Beryllium	7440-41-7	QCBLK210724-1	11/05/99	11/17/99	0.33	MG/KG	B	0.55	1
Chromium	7440-47-3	QCBLK210724-1	11/05/99	11/17/99	10.2	MG/KG		1.1	1
Cobalt	7440-48-4	QCBLK210724-1	11/05/99	11/17/99	11.0	MG/KG		5.5	1
Copper	7440-50-8	QCBLK210724-1	11/05/99	11/17/99	16.2	MG/KG		2.8	1
Lead	7439-92-1	QCBLK210724-1	11/05/99	11/17/99	17.0	MG/KG		0.33	1
Nickel	7440-02-0	QCBLK210724-1	11/05/99	11/17/99	10.2	MG/KG	EN	4.4	1
Selenium	7782-49-2	QCBLK210724-1	11/05/99	11/17/99	0.31	MG/KG	U	0.55	1
Silver	7440-22-4	QCBLK210724-1	11/05/99	11/17/99	1.0	MG/KG	B	1.1	1
Vanadium	7440-62-2	QCBLK210724-1	11/05/99	11/17/99	56.1	MG/KG		5.5	1
Zinc	7440-66-6	QCBLK210724-1	11/05/99	11/17/99	90.1	MG/KG		2.2	1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: ICAP Metals
Method: EPA 6010
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Arsenic	7440-38-2	QCBLK210724-1	11/05/99	11/17/99	96	%REC			1
Barium	7440-39-3	QCBLK210724-1	11/05/99	11/17/99	91	%REC			1
Beryllium	7440-41-7	QCBLK210724-1	11/05/99	11/17/99	100	%REC			1
Chromium	7440-47-3	QCBLK210724-1	11/05/99	11/17/99	90	%REC			1
Cobalt	7440-48-4	QCBLK210724-1	11/05/99	11/17/99	90	%REC			1
Copper	7440-50-8	QCBLK210724-1	11/05/99	11/17/99	98	%REC			1
Lead	7439-92-1	QCBLK210724-1	11/05/99	11/17/99	88	%REC			1
Nickel	7440-02-0	QCBLK210724-1	11/05/99	11/17/99	95	%REC			1
Selenium	7782-49-2	QCBLK210724-1	11/05/99	11/17/99	92	%REC			1
Silver	7440-22-4	QCBLK210724-1	11/05/99	11/17/99	99	%REC			1
Vanadium	7440-62-2	QCBLK210724-1	11/05/99	11/17/99	91	%REC			1
Zinc	7440-66-6	QCBLK210724-1	11/05/99	11/17/99	82	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: ICAP Metals
Method: EPA 6010
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001MSD

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Arsenic	7440-38-2	QCBLK210724-1	11/05/99	11/17/99	98	%REC			1
Barium	7440-39-3	QCBLK210724-1	11/05/99	11/17/99	92	%REC			1
Beryllium	7440-41-7	QCBLK210724-1	11/05/99	11/17/99	102	%REC			1
Chromium	7440-47-3	QCBLK210724-1	11/05/99	11/17/99	94	%REC			1
Cobalt	7440-48-4	QCBLK210724-1	11/05/99	11/17/99	91	%REC			1
Copper	7440-50-8	QCBLK210724-1	11/05/99	11/17/99	106	%REC			1
Lead	7439-92-1	QCBLK210724-1	11/05/99	11/17/99	89	%REC			1
Nickel	7440-02-0	QCBLK210724-1	11/05/99	11/17/99	194	%REC	N		1
Selenium	7782-49-2	QCBLK210724-1	11/05/99	11/17/99	93	%REC			1
Silver	7440-22-4	QCBLK210724-1	11/05/99	11/17/99	103	%REC			1
Vanadium	7440-62-2	QCBLK210724-1	11/05/99	11/17/99	92	%REC			1
Zinc	7440-66-6	QCBLK210724-1	11/05/99	11/17/99	80	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: ICAP Metals
Method: EPA 6010
Matrix: SOLID

Client ID: B0WMM6

Sample Date : 10/21/99
Receipt Date : 10/22/99
Report Date : 12/29/99

Quanterra ID : 22456-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Arsenic	7440-38-2	QCBLK210724-1	11/05/99	11/17/99	2.3	MG/KG		1.1	1
Barium	7440-39-3	QCBLK210724-1	11/05/99	11/17/99	80.6	MG/KG		21.4	1
Beryllium	7440-41-7	QCBLK210724-1	11/05/99	11/17/99	0.29	MG/KG	B	0.54	1
Chromium	7440-47-3	QCBLK210724-1	11/05/99	11/17/99	10.9	MG/KG		1.1	1
Cobalt	7440-48-4	QCBLK210724-1	11/05/99	11/17/99	11.0	MG/KG		5.4	1
Copper	7440-50-8	QCBLK210724-1	11/05/99	11/17/99	16.2	MG/KG		2.7	1
Lead	7439-92-1	QCBLK210724-1	11/05/99	11/17/99	68.9	MG/KG		0.32	1
Nickel	7440-02-0	QCBLK210724-1	11/05/99	11/17/99	9.2	MG/KG	EN	4.3	1
Selenium	7782-49-2	QCBLK210724-1	11/05/99	11/17/99	0.30	MG/KG	U	0.54	1
Silver	7440-22-4	QCBLK210724-1	11/05/99	11/17/99	4.3	MG/KG		1.1	1
Vanadium	7440-62-2	QCBLK210724-1	11/05/99	11/17/99	61.1	MG/KG		5.4	1
Zinc	7440-66-6	QCBLK210724-1	11/05/99	11/17/99	96.5	MG/KG		2.1	1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: ICAP Metals
Method: EPA 6010
Matrix: SOLID

Client ID: B0WMM8

Sample Date : 10/27/99
Receipt Date : 10/28/99
Report Date : 12/29/99

Quanterra ID : 22502-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Arsenic	7440-38-2	QCBLK210724-1	11/05/99	11/17/99	2.9	MG/KG		1.0	1
Barium	7440-39-3	QCBLK210724-1	11/05/99	11/17/99	52.4	MG/KG		20.7	1
Beryllium	7440-41-7	QCBLK210724-1	11/05/99	11/17/99	0.26	MG/KG	B	0.52	1
Chromium	7440-47-3	QCBLK210724-1	11/05/99	11/17/99	5.2	MG/KG		1.0	1
Cobalt	7440-48-4	QCBLK210724-1	11/05/99	11/17/99	12.6	MG/KG		5.2	1
Copper	7440-50-8	QCBLK210724-1	11/05/99	11/17/99	20.0	MG/KG		2.6	1
Lead	7439-92-1	QCBLK210724-1	11/05/99	11/17/99	2.0	MG/KG		0.31	1
Nickel	7440-02-0	QCBLK210724-1	11/05/99	11/17/99	6.7	MG/KG	EN	4.1	1
Selenium	7782-49-2	QCBLK210724-1	11/05/99	11/17/99	0.29	MG/KG	U	0.52	1
Silver	7440-22-4	QCBLK210724-1	11/05/99	11/17/99	0.09	MG/KG	U	1.0	1
Vanadium	7440-62-2	QCBLK210724-1	11/05/99	11/17/99	72.1	MG/KG		5.2	1
Zinc	7440-66-6	QCBLK210724-1	11/05/99	11/17/99	43.5	MG/KG		2.1	1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: ICAP Metals
Method: EPA 6010
Matrix: SOLID

Client ID: B0WMM4

Sample Date : 10/28/99
Receipt Date : 11/02/99
Report Date : 12/29/99

Quanterra ID : 22514-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Arsenic	7440-38-2	QCBLK210724-1	11/05/99	11/17/99	3.6	MG/KG		1.1	1
Barium	7440-39-3	QCBLK210724-1	11/05/99	11/17/99	54.2	MG/KG		22.6	1
Beryllium	7440-41-7	QCBLK210724-1	11/05/99	11/17/99	0.21	MG/KG	B	0.56	1
Chromium	7440-47-3	QCBLK210724-1	11/05/99	11/17/99	6.5	MG/KG		1.1	1
Cobalt	7440-48-4	QCBLK210724-1	11/05/99	11/17/99	8.6	MG/KG		5.6	1
Copper	7440-50-8	QCBLK210724-1	11/05/99	11/17/99	35.7	MG/KG		2.8	1
Lead	7439-92-1	QCBLK210724-1	11/05/99	11/17/99	36.5	MG/KG		0.34	1
Nickel	7440-02-0	QCBLK210724-1	11/05/99	11/17/99	6.7	MG/KG	EN	4.5	1
Selenium	7782-49-2	QCBLK210724-1	11/05/99	11/17/99	0.32	MG/KG	U	0.56	1
Silver	7440-22-4	QCBLK210724-1	11/05/99	11/17/99	0.92	MG/KG	B	1.1	1
Vanadium	7440-62-2	QCBLK210724-1	11/05/99	11/17/99	51.9	MG/KG		5.6	1
Zinc	7440-66-6	QCBLK210724-1	11/05/99	11/17/99	70.7	MG/KG		2.3	1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Mercury
Method: EPA 7471
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0WMM2	22449-001	Mercury	7439-97-6	QCBLK211041-1	11/09/99	11/09/99	0.14	MG/KG		0.037	1
B0WMM2	22449-001MS	Mercury	7439-97-6	QCBLK211041-1	11/09/99	11/09/99	114	%REC			1
B0WMM2	22449-001MSD	Mercury	7439-97-6	QCBLK211041-1	11/09/99	11/09/99	84	%REC			1
B0WMM6	22456-001	Mercury	7439-97-6	QCBLK211041-1	11/09/99	11/09/99	0.55	MG/KG		0.035	1
B0WMM8	22502-001	Mercury	7439-97-6	QCBLK211041-1	11/09/99	11/09/99	0.02	MG/KG	U	0.034	1
B0WMM4	22514-001	Mercury	7439-97-6	QCBLK211041-1	11/09/99	11/09/99	0.36	MG/KG		0.037	1
NA	QCLCS211041-1	Mercury	7439-97-6	QCBLK211041-1	11/09/99	11/09/99	104	%REC			2
NA	QCBLK211041-1	Mercury	7439-97-6	QCBLK211041-1	11/09/99	11/09/99	0.017	MG/KG	U	0.033	1

Data is incomplete without Case Narrative

U.S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: QUANTERRA_MO_____ Contract: 550.267___

Lab Code: ITMO__ Case No.: _____ SAS No.: _____ SDG No.: W02935_____

SOW No.: SW846

EPA Sample No.	Lab Sample ID
B0WMM2	22449-001
B0WMM2SD	22449-001SD
B0WMM2S	22449-001S
B0WMM4	22514-001
B0WMM6	22456-001
B0WMM8	22502-001

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

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0WMM2

Lab Name: QUANTERRA MO Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix (soil/water): SOIL Lab Sample ID: 22449-001

Level (low/med): LOW Date Received: 10/21/99

% Solids: 90.4

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.8			P
7440-39-3	Barium	81.0			P
7440-41-7	Beryllium	0.33	B		P
7440-47-3	Chromium	10.2			P
7440-48-4	Cobalt	11.0			P
7440-50-8	Copper	16.2			P
7439-92-1	Lead	17.0			P
7439-97-6	Mercury	0.14			CV
7440-02-0	Nickel	10.2		EN	P
7782-49-2	Selenium	0.31	U		P
7440-22-4	Silver	1.0	B		P
7440-62-2	Vanadium	56.1			P
7440-66-6	Zinc	90.1			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

FORM I - IN

SW-846

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0WMM4

Lab Name: QUANTERRA_MO Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix (soil/water): SOIL Lab Sample ID: 22514-001

Level (low/med): LOW Date Received: 11/02/99

% Solids: 88.6

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.6			P
7440-39-3	Barium	54.2			P
7440-41-7	Beryllium	0.21	B		P
7440-47-3	Chromium	6.5			P
7440-48-4	Cobalt	8.6			P
7440-50-8	Copper	35.7			P
7439-92-1	Lead	36.5			P
7439-97-6	Mercury	0.36			CV
7440-02-0	Nickel	6.7		EN	P
7782-49-2	Selenium	0.32	U		P
7440-22-4	Silver	0.92	B		P
7440-62-2	Vanadium	51.9			P
7440-66-6	Zinc	70.7			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

FORM I - IN

SW-846

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0WMM6

Lab Name: QUANTERRA MO Contract: 550.267
Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935
Matrix (soil/water): SOIL Lab Sample ID: 22456-001
Level (low/med): LOW Date Received: 10/22/99
% Solids: 93.3

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.3			P
7440-39-3	Barium	80.6			P
7440-41-7	Beryllium	0.29	B		P
7440-47-3	Chromium	10.9			P
7440-48-4	Cobalt	11.0			P
7440-50-8	Copper	16.2			P
7439-92-1	Lead	68.9			P
7439-97-6	Mercury	0.55			CV
7440-02-0	Nickel	9.2		EN	P
7782-49-2	Selenium	0.30	U		P
7440-22-4	Silver	4.3			P
7440-62-2	Vanadium	61.1			P
7440-66-6	Zinc	96.5			P

Color Before: Clarity Before: Texture:
Color After: Clarity After: Artifacts:

Comments:

FORM I - IN

SW-846

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

B0WMM8

Lab Name: QUANTERRA MO Contract: 550.267

Lab Code: ITMO Case No.: SAS No.: SDG No.: W02935

Matrix (soil/water): SOIL Lab Sample ID: 22502-001

Level (low/med): LOW Date Received: 10/28/99

% Solids: 96.6

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

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.9			P
7440-39-3	Barium	52.4			P
7440-41-7	Beryllium	0.26	B		P
7440-47-3	Chromium	5.2			P
7440-48-4	Cobalt	12.6			P
7440-50-8	Copper	20.0			P
7439-92-1	Lead	2.0			P
7439-97-6	Mercury	0.02	U		CV
7440-02-0	Nickel	6.7		EN	P
7782-49-2	Selenium	0.29	U		P
7440-22-4	Silver	0.09	U		P
7440-62-2	Vanadium	72.1			P
7440-66-6	Zinc	43.5			P

Color Before: Clarity Before: Texture:

Color After: Clarity After: Artifacts:

Comments:

FORM I - IN

SW-846

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: AMMONIA
Method: EPA 350.1
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0WMM2	22449-001	Ammonia	NH3-N	QCBLK210219-1	10/29/99	10/29/99	0.55	MG/KG	U	0.55	1
B0WMM2	22449-001DUP	Ammonia	NH3-N	QCBLK210219-1	10/29/99	10/29/99	0.55	MG/KG	U	0.55	1
B0WMM2	22449-001MS	Ammonia	NH3-N	QCBLK210219-1	10/29/99	10/29/99	92	%REC			1
B0WMM6	22456-001	Ammonia	NH3-N	QCBLK210219-1	10/29/99	10/29/99	0.53	MG/KG	U	0.53	1
NA	QCBLK210219-1	Ammonia	NH3-N	QCBLK210219-1	10/29/99	10/29/99	0.50	MG/KG	U	0.50	1
NA	QCLCS210219-1	Ammonia	NH3-N	QCBLK210219-1	10/29/99	10/29/99	96	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: AMMONIA
Method: EPA 350.1
Matrix: SOLID

Sample Date : 10/27/99
Receipt Date : 10/28/99
Report Date : 12/29/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0WMM8	22502-001	Ammonia	NH3-N	QCBLK211846-1	11/24/99	11/24/99	0.52	MG/KG	U	0.52	1
B0WMM4	22514-001	Ammonia	NH3-N	QCBLK211846-1	11/24/99	11/24/99	0.56	MG/KG	U	0.56	1
NA	QCBLK211846-1	Ammonia	NH3-N	QCBLK211846-1	11/24/99	11/24/99	0.50	MG/KG	U	0.50	1
NA	QCLCS211846-1	Ammonia	NH3-N	QCBLK211846-1	11/24/99	11/24/99	96	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Anions
Method: EPA 300.0
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID: B0WMM2

Quanterra ID : 22449-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Fluoride	16984-48-8	QCBLK210707-1	11/02/99	11/02/99	1.96	MG/KG		1.10	1
Chloride	16887-00-6	QCBLK210707-1	11/02/99	11/02/99	12.0	MG/KG		2.20	1
Nitrite	NO2-N	QCBLK210707-1	11/02/99	11/02/99	0.22	MG/KG	U	0.22	1
Nitrate	NO3-N	QCBLK210707-1	11/02/99	11/02/99	40.1	MG/KG		1.10	5
O-phosphate-P	14265-44-2	QCBLK210707-1	11/02/99	11/02/99	5.50	MG/KG	U	5.50	1
Sulfate	14808-79-8	QCBLK210707-1	11/02/99	11/02/99	247	MG/KG		27.5	5

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Anions
Method: EPA 300.0
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID: B0WMM2

Quanterra ID : 22449-001DUP

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Fluoride	16984-48-8	QCBLK210707-1	11/02/99	11/02/99	1.57	MG/KG		1.10	1
Chloride	16887-00-6	QCBLK210707-1	11/02/99	11/02/99	10.7	MG/KG		2.19	1
Nitrite	NO2-N	QCBLK210707-1	11/02/99	11/02/99	0.22	MG/KG	U	0.22	1
Nitrate	NO3-N	QCBLK210707-1	11/02/99	11/02/99	35.9	MG/KG		1.10	5
O-phosphate-P	14265-44-2	QCBLK210707-1	11/02/99	11/02/99	5.48	MG/KG	U	5.48	1
Sulfate	14808-79-8	QCBLK210707-1	11/02/99	11/02/99	219	MG/KG		27.4	5

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Anions
Method: EPA 300.0
Matrix: SOLID

Client ID: B0WMM2

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Quanterra ID : 22449-001MS

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Fluoride	16984-48-8	QCBLK210707-1	11/02/99	11/02/99	77	%REC			1
Chloride	16887-00-6	QCBLK210707-1	11/02/99	11/02/99	121	%REC			10
Nitrite	NO2-N	QCBLK210707-1	11/02/99	11/02/99	115	%REC			10
Nitrate	NO3-N	QCBLK210707-1	11/02/99	11/02/99	104	%REC			10
O-phosphate-P	14265-44-2	QCBLK210707-1	11/02/99	11/02/99	97	%REC			1
Sulfate	14808-79-8	QCBLK210707-1	11/02/99	11/02/99	111	%REC			10

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Anions
Method: EPA 300.0
Matrix: SOLID

Client ID: B0WMM6

Sample Date : 10/21/99
Receipt Date : 10/22/99
Report Date : 12/29/99

Quanterra ID : 22456-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Fluoride	16984-48-8	QCBLK210707-1	11/02/99	11/02/99	1.39	MG/KG		1.07	1
Chloride	16887-00-6	QCBLK210707-1	11/02/99	11/02/99	3.97	MG/KG		2.13	1
Nitrite	NO2-N	QCBLK210707-1	11/02/99	11/02/99	0.21	MG/KG	U	0.21	1
Nitrate	NO3-N	QCBLK210707-1	11/02/99	11/02/99	33.0	MG/KG		1.07	5
O-phosphate-P	14265-44-2	QCBLK210707-1	11/02/99	11/02/99	5.33	MG/KG	U	5.33	1
Sulfate	14808-79-8	QCBLK210707-1	11/02/99	11/02/99	65.2	MG/KG		5.33	1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Anions
Method: EPA 300.0
Matrix: SOLID

Sample Date : 10/27/99
Receipt Date : 10/28/99
Report Date : 12/29/99

Client ID: B0WMM8

Quanterra ID : 22502-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Fluoride	16984-48-8	QCBLK211908-1	11/23/99	11/23/99	1.32	MG/KG		1.03	1
Chloride	16887-00-6	QCBLK211908-1	11/23/99	11/23/99	2.26	MG/KG		2.07	1
Nitrite	NO2-N	QCBLK211908-1	11/23/99	11/23/99	0.21	MG/KG	U	0.21	1
Nitrate	NO3-N	QCBLK211908-1	11/23/99	11/23/99	13.7	MG/KG		0.41	2
O-phosphate-P	14265-44-2	QCBLK211908-1	11/23/99	11/23/99	5.17	MG/KG	U	5.17	1
Sulfate	14808-79-8	QCBLK211908-1	11/23/99	11/23/99	90.8	MG/KG		5.17	1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Anions
Method: EPA 300.0
Matrix: SOLID

Client ID: B0WMM4

Sample Date : 10/28/99
Receipt Date : 11/02/99
Report Date : 12/29/99

Quanterra ID : 22514-001

Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dilution
Fluoride	16984-48-8	QCBLK211908-1	11/23/99	11/23/99	1.12	MG/KG	U	1.12	1
Chloride	16887-00-6	QCBLK211908-1	11/23/99	11/23/99	2.28	MG/KG		2.25	1
Nitrite	NO2-N	QCBLK211908-1	11/23/99	11/23/99	0.22	MG/KG	U	0.22	1
Nitrate	NO3-N	QCBLK211908-1	11/23/99	11/23/99	24.5	MG/KG		1.12	5
O-phosphate-P	14265-44-2	QCBLK211908-1	11/23/99	11/23/99	5.61	MG/KG	U	5.61	1
Sulfate	14808-79-8	QCBLK211908-1	11/23/99	11/23/99	34.1	MG/KG		5.61	1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: CYANIDE
Method: EPA 9010
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0WMM2	22449-001	Cyanide	57-12-5	QCBLK211817-1	11/01/99	11/03/99	0.25	MG/KG	U	0.25	1
B0WMM2	22449-001DUP	Cyanide	57-12-5	QCBLK211817-1	11/01/99	11/03/99	0.27	MG/KG	U	0.27	1
B0WMM2	22449-001MS	Cyanide	57-12-5	QCBLK211817-1	11/01/99	11/03/99	98	%REC			1
B0WMM6	22456-001	Cyanide	57-12-5	QCBLK211817-1	11/01/99	11/03/99	11.2	MG/KG		0.27	1
NA	QCBLK211817-1	Cyanide	57-12-5	QCBLK211817-1	11/01/99	11/03/99	0.25	MG/KG	U	0.25	1
NA	QCLCS211817-1	Cyanide	57-12-5	QCBLK211817-1	11/01/99	11/03/99	95	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: CYANIDE
Method: EPA 9010
Matrix: SOLID

Sample Date : 10/27/99
Receipt Date : 10/28/99
Report Date : 12/29/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0WMM8	22502-001	Cyanide	57-12-5	QCBLK211815-1	11/09/99	11/10/99	0.24	MG/KG	U	0.24	1
B0WMM4	22514-001	Cyanide	57-12-5	QCBLK211815-1	11/09/99	11/10/99	0.28	MG/KG	U	0.28	1
NA	QCBLK211815-1	Cyanide	57-12-5	QCBLK211815-1	11/09/99	11/10/99	0.25	MG/KG	U	0.25	1
NA	QCLCS211815-1	Cyanide	57-12-5	QCBLK211815-1	11/09/99	11/10/99	97	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Hexavalent Chromium
Method: SW846 7196
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0WMM2	22449-001	Hexavalent Chro	18540-29-9	QCBLK209721-1	10/23/99	10/23/99	0.11	UG/G	U	0.11	1
B0WMM2	22449-001MS	Hexavalent Chro	18540-29-9	QCBLK209721-1	10/23/99	10/23/99	78	%REC			1
B0WMM2	22449-001MSD	Hexavalent Chro	18540-29-9	QCBLK209721-1	10/23/99	10/23/99	78	%REC			1
B0WMM6	22456-001	Hexavalent Chro	18540-29-9	QCBLK209721-1	10/23/99	10/23/99	0.11	UG/G	U	0.11	1
NA	QCBLK209721-1	Hexavalent Chro	18540-29-9	QCBLK209721-1	10/23/99	10/23/99	0.10	UG/G	U	0.10	1
NA	QCLCS209721-1	Hexavalent Chro	18540-29-9	QCBLK209721-1	10/23/99	10/23/99	104	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: Hexavalent Chromium
Method: SW846 7196
Matrix: SOLID

Sample Date : 10/27/99
Receipt Date : 10/28/99
Report Date : 12/29/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0WMM8	22502-001	Hexavalent Chro	18540-29-9	QCBLK212381-1	12/17/99	12/17/99	0.10	UG/G	U	0.10	1
B0WMM4	22514-001	Hexavalent Chro	18540-29-9	QCBLK212381-1	12/17/99	12/17/99	0.11	UG/G	U	0.11	1
NA	QCBLK212381-1	Hexavalent Chro	18540-29-9	QCBLK212381-1	12/17/99	12/17/99	0.10	UG/G	U	0.10	1
NA	QCLCS212381-1	Hexavalent Chro	18540-29-9	QCBLK212381-1	12/17/99	12/17/99	125	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: NO3-NO2
Method: EPA 353.1
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0WMM2	22449-001	Nitrate/Nitrite	NO2+NO3-N	QCBLK210217-1	10/29/99	10/29/99	39.6	MG/KG		5.49	10
B0WMM2	22449-001DUP	Nitrate/Nitrite	NO2+NO3-N	QCBLK210217-1	10/29/99	10/29/99	42.2	MG/KG		5.51	10
B0WMM2	22449-001MS	Nitrate/Nitrite	NO2+NO3-N	QCBLK210217-1	10/29/99	10/29/99	114	%REC			10
B0WMM6	22456-001	Nitrate/Nitrite	NO2+NO3-N	QCBLK210217-1	10/29/99	10/29/99	33.4	MG/KG		5.34	10
NA	QCBLK210217-1	Nitrate/Nitrite	NO2+NO3-N	QCBLK210217-1	10/29/99	10/29/99	0.50	MG/KG	U	0.50	1
NA	QCLCS210217-1	Nitrate/Nitrite	NO2+NO3-N	QCBLK210217-1	10/29/99	10/29/99	112	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: NO3-NO2
Method: EPA 353.1
Matrix: SOLID

Sample Date : 10/27/99
Receipt Date : 10/28/99
Report Date : 12/29/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0WMM8	22502-001	Nitrate/Nitrite	NO2+NO3-N	QCBLK211848-1	11/24/99	11/24/99	11.9	MG/KG		1.03	2
B0WMM4	22514-001	Nitrate/Nitrite	NO2+NO3-N	QCBLK211848-1	11/24/99	11/24/99	25.5	MG/KG		2.82	5
NA	QCBLK211848-1	Nitrate/Nitrite	NO2+NO3-N	QCBLK211848-1	11/24/99	11/24/99	0.50	MG/KG	U	0.50	1
NA	QCLCS211848-1	Nitrate/Nitrite	NO2+NO3-N	QCBLK211848-1	11/24/99	11/24/99	108	%REC			1

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: pH
Method: EPA 9045
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0WMM2	22449-001	pH	PH	QCBLK211249-1	11/11/99	11/11/99	8.03	PH			1
B0WMM2	22449-001DUP	pH	PH	QCBLK211249-1	11/11/99	11/11/99	7.99	PH			1
B0WMM6	22456-001	pH	PH	QCBLK211249-1	11/11/99	11/11/99	8.25	PH			1
B0WMM8	22502-001	pH	PH	QCBLK211249-1	11/11/99	11/11/99	8.77	PH			1
B0WMM4	22514-001	pH	PH	QCBLK211249-1	11/11/99	11/11/99	7.73	PH			1
NA	QCBLK211249-1	pH	PH	QCBLK211249-1	11/11/99	11/11/99	5.99	PH			1

Sample 22449-001 analysis time : 11:50
Sample 22449-001DUP analysis time : 11:51
Sample 22456-001 analysis time : 11:35
Sample 22502-001 analysis time : 11:40
Sample 22514-001 analysis time : 11:37
Sample QCBLK211249-1 analysis time : 10:43

Data is incomplete without Case Narrative

Bechtel Hanford Inc.
3350 George Washington Way
MSIN H9-03
Richland, WA 99352-1613

Project: Bechtel Hanford Inc.

Category: SULFIDE
Method: EPA 9030
Matrix: SOLID

Sample Date : 10/20/99
Receipt Date : 10/21/99
Report Date : 12/29/99

Client ID	Quanterra ID	Analyte	CAS Number	Blank Sample Name	Prep. Date	Analyses Date	Result	Unit	Qual.	Detection Limit	Dil.
B0WMM2	22449-001	Sulfide	18496-25-8	QCBLK211533-1	11/12/99	11/12/99	11.8	UG/G	U	11.8	1
B0WMM2	22449-001DUP	Sulfide	18496-25-8	QCBLK211533-1	11/12/99	11/12/99	11.8	UG/G	U	11.8	1
B0WMM2	22449-001MS	Sulfide	18496-25-8	QCBLK211533-1	11/12/99	11/12/99	45	%REC			1
B0WMM6	22456-001	Sulfide	18496-25-8	QCBLK211533-1	11/12/99	11/12/99	11.3	UG/G	U	11.3	1
B0WMM8	22502-001	Sulfide	18496-25-8	QCBLK211533-1	11/12/99	11/12/99	11.0	UG/G	U	11.0	1
B0WMM4	22514-001	Sulfide	18496-25-8	QCBLK211533-1	11/12/99	11/12/99	12.0	UG/G	U	12.0	1
NA	QCBLK211533-1	Sulfide	18496-25-8	QCBLK211533-1	11/12/99	11/12/99	10.8	UG/G	U	10.8	1
NA	QCLCS211533-1	Sulfide	18496-25-8	QCBLK211533-1	11/12/99	11/12/99	95	%REC			1

Data is incomplete without Case Narrative

ORIGINAL Dayes

SDR # B00-018
Revision #: 0
Date Initiated: 11/04/99

SAMPLE DISPOSITION RECORD

SAF: B99-078
OU: 200-CW-1
Project ID: 200-CW-1
Task ID: 1
Sampling Event: 200 Area Source Characterization 200-CW-1 OU

Laboratory: Quanterra Incorporated

Task Manager: M.E. Todd

Sampling Information:
Number of Samples: 1
ID Numbers: B0WMM4
Matrix: Soil
Collection Date: 10/28/99

Issue Background:

Class: ☒ Project Data Use ☐ General Laboratory Direction ☐ Validation Direction ☐ Sample Management Direction

Type: Incorrect Sample Preservation

Description: Sample Arrived at Laboratory at 1°C

Disposition:

Description: The laboratory measured the ambient interior temperature of the cooler at 1°C, which is outside the 4°C ± 2°C temperature range requirement. No changes in analytical scope for this sample were made.

Justification: Although the temperature requirement was not met for this sample, the data are usable for all intended data uses. This sample preservation issue will not result in analysis or validation qualifications.

Approval Signatures:

S. J. Trent — 11/19/99
Project Coordinator (Print/Sign Name) — Date

M. E. Todd — 11/22/99
Task Manager (Print/Sign Name) — Date

Quanterra
2800 George Washington Way
Richland, Washington 99352-1613

509 375-3131 Telephone
509 375-5590 Fax

CERTIFICATE OF ANALYSIS

Bechtel Hanford, Inc.
3350 George Washington Way
Richland, WA 99352

February 1, 2000

Attention: Joan Kessner

FEB 2000
RECEIVED
Data
Log In

SAF Number	:	B99-078
Date SDG Closed	:	November 4, 1999
Number of Samples	:	Four (4)
Sample Type	:	Soil
SDG Number	:	W02935
Data Deliverable	:	Summary

I. Introduction

Between October 21, 1999 and November 1, 1999, four soil samples were received at the Quanterra Richland Laboratory (QRL) for radiochemical analysis. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Bechtel Hanford, Inc. (BHI) specific IDs:

QESRL ID#	BHI ID#	MATRIX	DATE OF RECEIPT
9D40C010	B0WMM2	SOIL	10/21/99
9D426510	B0WMM6	SOIL	10/22/99
9D494310	B0WMM8	SOIL	10/28/99
9D4E6M10	B0WMM4	SOIL	11/1/99

II. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Gas Proportional Counting
Total Strontium by method RICH-RC-5006
Alpha Spectroscopy
Plutonium-238, -239/40 by method RICH-RC-5010
Americium-241 by method RICH-RC-5080
Uranium-234, -235, -238 by method RICH-RC-5079

Thorium-232 by method RICH-RC-5011
Gamma Spectroscopy
Gamma Scan by method RICH-RC-5017
Total Uranium
Total Uranium by method RICH-RC-5058

III. Quality Control

The analytical results for each analysis performed under SDG W02935 include a minimum of one Laboratory Control Sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

IV. Comments

Gas Proportional Counting
Total Strontium by method RICH-RC-5006:
The MDA achieved for sample B0WMM6 does not meet the CRDL due to a reduced volume analyzed based on an elevated beta screen result. The detected activity exceeds the achieved MDA, therefore the data are accepted for reporting. Except as noted, the LCS, batch blank, samples and sample duplicate (B0WMM8) results are within contractual requirements.

Alpha Spectroscopy
Plutonium-238, -239/40 by method RICH-RC-5010:
The MDA achieved for sample B0WMM6 does not meet the CRDL due to a reduced volume analyzed based on an elevated beta screen result. The detected activity does not exceed the achieved MDA for this analysis, however, the results are reported with the MDAs achieved due to the activity level of the sample. Except as noted, the LCS, batch blank, samples and sample duplicate (B0WMM4) results are within contractual requirements.

Americium-241 by method RICH-RC-5080:
The MDA achieved for sample B0WMM6 does not meet the CRDL due to a reduced volume analyzed based on an elevated beta screen result. The detected activity exceeds the achieved MDA, therefore the data are accepted for reporting. Except as noted, the LCS, batch blank, samples and sample duplicate (B0WMM4) results are within contractual requirements.

Uranium-234, -235, -238 by method RICH-RC-5079:
The MDA achieved for sample B0WMM6 does not meet the CRDL due to a reduced volume analyzed based on an elevated beta screen result. The detected activity does not exceed the

achieved MDA for this analysis, however, the results are reported with the MDAs achieved due to the activity level of the sample. Except as noted, the LCS, batch blank, samples and sample duplicate (B0WMM2) results are within contractual requirements.

Thorium-232 by method RICH-RC-5011:
The MDA achieved for sample B0WMM6 does not meet the CRDL due to a reduced volume analyzed based on an elevated beta screen result. The detected activity does not exceed the achieved MDA for this analysis, however, the results are reported with the MDAs achieved due to the activity level of the sample. Except as noted, the LCS, batch blank, samples and sample duplicate (B0WMM4) results are within contractual requirements.

Gamma Spectroscopy
Gamma Scan by method RICH-RC-5017:
The MDAs achieved for samples B0WMM2 and B0WMM6 do not meet the CRDL due to matrix effects. Elevated Cs-137 detected in these samples increased the sample background. The detected activity for Ra-226, Ra-228 and Cs-137 exceed the achieved MDAs; the data are accepted with the MDAs achieved for Eu-152, Eu-154 and Eu-155. Except as noted, the LCS, batch blank, samples and sample duplicate (B0WMM4) results are within contractual requirements.

Total Uranium
Total Uranium by method RICH-RC-5058:
The matrix spike recovery was below acceptance limits. The sample and matrix spike were reanalyzed. The reanalysis recovery for the matrix spike was within limits, therefore the data are accepted for reporting. Except as noted, the LCS, batch blank, samples, sample duplicate (B0WMM2) and sample matrix spike (B0WMM4) results are within contractual requirements.

I certify that this Certificate of Analysis 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:

Jackie Waddell

Jackie Waddell
Project Manager

Quanterra

SAMPLE RESULTS

LAB NAME:	**QUANTERRA, Richland**	**SDG: /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	9D40C010	**MATRIX:**	SOIL
CLIENT ID:	B0WMM2	**DATE RECEIVED:**	10/21/99 2:05:00 PM

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
TOTAL-URANIUM	1.64E+00		0.0E+00	2.7E-01	7.29E-05	ug/g		RICHRC5058
AM-241	2.84E-01	J	1.1E-01	1.2E-01	5.51E-02	pCi/g	76.74%	RICHRC5080
PU-238	1.58E-02	U	3.2E-02	3.2E-02	4.27E-02	pCi/g	54.49%	RICHRC5010
PU239/40	2.04E-01	J	1.1E-01	1.2E-01	4.26E-02	pCi/g	54.49%	RICHRC5010
TH-228	8.87E-01	J	2.3E-01	3.1E-01	1.20E-01	pCi/g	86.04%	RICHRC5011
TH-230	1.10E+00	J	2.4E-01	3.6E-01	5.25E-02	pCi/g	86.04%	RICHRC5011
TH-232	9.78E-01	J	2.3E-01	3.3E-01	5.25E-02	pCi/g	86.04%	RICHRC5011
U-234	1.11E+00		2.3E-01	3.1E-01	9.74E-02	pCi/g	74.02%	RICHRC5079
U-235	2.15E-02	U	3.5E-02	3.5E-02	6.09E-02	pCi/g	74.02%	RICHRC5079
U-238	9.43E-01	J	2.2E-01	2.7E-01	8.39E-02	pCi/g	74.02%	RICHRC5079
AM-241	1.33E-01	U	9.9E-02	9.9E-02	1.44E-01	pCi/g		RICHRC5017
CO-60	1.64E-02	U	1.3E-02	1.3E-02	2.29E-02	pCi/g		RICHRC5017
CS-137	2.56E+02		2.6E+01	2.6E+01	6.46E-02	pCi/g		RICHRC5017
EU-152	-1.41E-03	U	2.2E-01	2.2E-01	3.56E-01	pCi/g		RICHRC5017
EU-154	3.02E-01	U	7.0E-02	7.0E-02	9.23E-02	pCi/g		RICHRC5017
EU-155	2.39E-01	U	1.5E-01	1.5E-01	2.41E-01	pCi/g		RICHRC5017
RA-226	7.18E-01		1.5E-01	1.5E-01	1.51E-01	pCi/g		RICHRC5017
RA-228	9.02E-01	U	1.2E-01	1.2E-01	1.51E-01	pCi/g		RICHRC5017
STRONTIUM	1.33E+01		1.1E+00	4.0E+00	7.72E-01	pCi/g	81.70%	RICHRC5006

Number of Results: 19

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result <

Quanterra

SAMPLE RESULTS

LAB NAME:	QUANTERRA, Richland	**SDG: /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	9D426510	**MATRIX:**	SOIL
CLIENT ID:	B0WMM6	**DATE RECEIVED:**	10/22/99 1:30:00 PM

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
TOTAL-URANIUM	5.31E+00		0.0E+00	1.6E+00	7.29E-05	ug/g		RICHRC5058
AM-241	8.13E+00		7.4E+00	7.5E+00	6.65E+00	pCi/g	66.86%	RICHRC5080
PU-238	-1.15E+00	U	8.7E-01	9.0E-01	1.27E+01	pCi/g	57.86%	RICHRC5010
PU239/40	0.00E+00	U	0.0E+00	5.0E+00	5.57E+00	pCi/g	57.86%	RICHRC5010
TH-228	2.01E+00	U	4.8E+00	4.9E+00	1.10E+01	pCi/g	74.05%	RICHRC5011
TH-230	-1.77E-01	U	3.5E-01	3.6E-01	8.89E+00	pCi/g	74.05%	RICHRC5011
TH-232	0.00E+00	U	0.0E+00	5.4E+00	5.98E+00	pCi/g	74.05%	RICHRC5011
U-234	5.45E-02	U	2.8E+00	2.8E+00	9.93E+00	pCi/g	87.91%	RICHRC5079
U-235	-1.09E-01	U	2.2E-01	2.2E-01	5.50E+00	pCi/g	87.91%	RICHRC5079
U-238	-6.56E-01	U	5.4E-01	5.5E-01	8.11E+00	pCi/g	87.91%	RICHRC5079
AM-241	1.04E+00	U	1.8E+00	1.8E+00	2.94E+00	pCi/g		RICHRC5017
CO-60	1.51E-02	U	1.9E-02	1.9E-02	3.32E-02	pCi/g		RICHRC5017
CS-137	8.55E+02		8.6E+01	8.6E+01	1.90E-01	pCi/g		RICHRC5017
EU-152	4.08E-01	U	4.8E-01	4.8E-01	7.91E-01	pCi/g		RICHRC5017
EU-154	1.93E+00		2.4E-01	2.4E-01	1.09E-01	pCi/g		RICHRC5017
EU-155	1.36E+00	U	7.0E-01	7.0E-01	1.10E+00	pCi/g		RICHRC5017
RA-226	5.11E-01		2.4E-01	2.4E-01	3.77E-01	pCi/g		RICHRC5017
RA-228	6.21E-01	U	1.9E-01	1.9E-01	2.32E-01	pCi/g		RICHRC5017
STRONTIUM	1.56E+04		6.4E+02	4.5E+03	2.32E+02	pCi/g	92.20%	RICHRC5006

Number of Results: 19

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result <

Quanterra Analytical Services, Inc
rptChemRadSample; v3.41

Quanterra

SAMPLE RESULTS

LAB NAME:	QUANTERRA, Richland	**SDG: /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	9D494310	**MATRIX:**	SOIL
CLIENT ID:	B0WMM8	**DATE RECEIVED:**	10/28/99 1:45:00 PM

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
TOTAL-URANIUM	1.74E+00		0.0E+00	2.8E-01	7.29E-05	ug/g		RICHRC5058
AM-241	0.00E+00	U	0.0E+00	1.1E-02	1.17E-02	pCi/g	86.51%	RICHRC5080
PU-238	-6.61E-04	U	1.3E-03	1.3E-03	3.33E-02	pCi/g	48.81%	RICHRC5010
PU239/40	-6.60E-04	U	1.3E-03	1.3E-03	3.32E-02	pCi/g	48.81%	RICHRC5010
TH-228	7.92E-01	J	1.6E-01	2.5E-01	6.52E-02	pCi/g	81.06%	RICHRC5011
TH-230	8.01E-01	J	1.5E-01	2.5E-01	2.83E-02	pCi/g	81.06%	RICHRC5011
TH-232	9.55E-01	J	1.6E-01	2.8E-01	2.83E-02	pCi/g	81.06%	RICHRC5011
U-234	8.40E-01	J	1.3E-01	1.9E-01	2.65E-02	pCi/g	85.33%	RICHRC5079
U-235	2.36E-02	U	2.2E-02	2.3E-02	2.47E-02	pCi/g	85.33%	RICHRC5079
U-238	8.26E-01	J	1.3E-01	1.9E-01	2.47E-02	pCi/g	85.33%	RICHRC5079
AM-241	-1.07E-02	U	4.2E-02	4.2E-02	6.97E-02	pCi/g		RICHRC5017
CO-60	2.62E-03	U	1.1E-02	1.1E-02	1.89E-02	pCi/g		RICHRC5017
CS-137	2.08E-03	U	1.1E-02	1.1E-02	1.85E-02	pCi/g		RICHRC5017
EU-152	-1.65E-02	U	3.4E-02	3.4E-02	4.68E-02	pCi/g		RICHRC5017
EU-154	3.62E-03	U	3.5E-02	3.5E-02	5.94E-02	pCi/g		RICHRC5017
EU-155	3.89E-02	U	3.0E-02	3.0E-02	5.10E-02	pCi/g		RICHRC5017
RA-226	4.10E-01		5.9E-02	5.9E-02	3.23E-02	pCi/g		RICHRC5017
RA-228	5.78E-01		1.1E-01	1.1E-01	6.71E-02	pCi/g		RICHRC5017
STRONTIUM	8.76E-02	U	6.1E-02	6.6E-02	1.20E-01	pCi/g	84.30%	RICHRC5006

Number of Results: 19

Quanterra

SAMPLE RESULTS

LAB NAME:	**QUANTERRA, Richland**	**SDG: /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	9D4E6M10	**MATRIX:**	SOIL
CLIENT ID:	B0WMM4	**DATE RECEIVED:**	11/1/99 11:50:00 AM

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
TOTAL-URANIUM	1.88E+00		0.0E+00	3.0E-01	7.29E-05	ug/g		RICHRC5058
AM-241	3.96E-01	J	8.8E-02	1.1E-01	1.97E-02	pCi/g	80.05%	RICHRC5080
PU-238	6.03E-02	J	3.8E-02	4.0E-02	1.63E-02	pCi/g	52.30%	RICHRC5010
PU239/40	3.14E+00		2.8E-01	6.2E-01	2.75E-02	pCi/g	52.30%	RICHRC5010
TH-228	1.25E+00	J	1.8E-01	3.5E-01	5.72E-02	pCi/g	84.41%	RICHRC5011
TH-230	1.03E+00	J	1.6E-01	3.0E-01	3.13E-02	pCi/g	84.41%	RICHRC5011
TH-232	1.17E+00	J	1.7E-01	3.3E-01	1.70E-02	pCi/g	84.41%	RICHRC5011
U-234	1.05E+00		1.5E-01	2.3E-01	3.12E-02	pCi/g	84.35%	RICHRC5079
U-235	3.99E-02	J	2.9E-02	2.9E-02	2.03E-02	pCi/g	84.35%	RICHRC5079
U-238	9.71E-01	J	1.4E-01	2.2E-01	2.85E-02	pCi/g	84.35%	RICHRC5079
AM-241	2.20E-01	U	2.0E-01	2.0E-01	3.27E-01	pCi/g		RICHRC5017
CO-60	-8.27E-03	U	1.4E-02	1.4E-02	2.33E-02	pCi/g		RICHRC5017
CS-137	9.50E+00		9.6E-01	9.6E-01	3.00E-02	pCi/g		RICHRC5017
EU-152	-7.19E-02	U	6.6E-02	6.6E-02	9.86E-02	pCi/g		RICHRC5017
EU-154	-2.35E-02	U	4.7E-02	4.7E-02	7.71E-02	pCi/g		RICHRC5017
EU-155	2.18E-02	U	6.1E-02	6.1E-02	1.05E-01	pCi/g		RICHRC5017
RA-226	7.30E-01		1.0E-01	1.0E-01	5.62E-02	pCi/g		RICHRC5017
RA-228	8.74E-01		1.3E-01	1.3E-01	8.15E-02	pCi/g		RICHRC5017
STRONTIUM	1.59E-01	J	7.3E-02	8.6E-02	1.31E-01	pCi/g	86.10%	RICHRC5006

Number of Results: 19

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result <

Quanterra Analytical Services, Inc
rptChemRadSample; v3.41

Quanterra

DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02935 / 9673
LAB SAMPLE ID:	D40C01AR	MATRIX:	SOIL
CLIENT ID:	B0WMM2 DUP	DATE RECEIVED:	10/21/99 2:05:00 P
ORIG LAB SAMPLE ID:	9D40C010		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
U-234	1.24E+00		2.2E-01	3.1E-01	6.86E-02	pCi/g	86.82%	RICHRC5079	1.11E+00	11.24%
U-235	5.67E-02	J	4.9E-02	5.0E-02	5.33E-02	pCi/g	86.82%	RICHRC5079	2.15E-02	90.05%
U-238	1.12E+00		2.1E-01	2.9E-01	5.64E-02	pCi/g	86.82%	RICHRC5079	9.43E-01	17.53%

Number of Results: 3

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analyticall Services, Inc

rptChemRadDup; v3.41

Quanterra

DUPLICATE RESULTS

LAB NAME:	**QUANTERRA, Richland**	**SDG: /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	D40C01CR	**MATRIX:**	SOIL
CLIENT ID:	B0WMM2 DUP	**DATE RECEIVED:**	10/21/99 2:05:00 P
ORIG LAB SAMPLE ID:	9D40C010		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
TOTAL-URANIUM	1.63E+00		0.0E+00	2.6E-01	7.29E-05	ug/g		RICHRC5058	1.64E+00	0.66%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analyticall Services, Inc
rptChemRadDup; v3.41

Quanterra

DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	**SDG: /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	D49431AR	**MATRIX:**	SOIL
CLIENT ID:	B0WMM8 DUP	**DATE RECEIVED:**	10/28/99 1:45:00 P
ORIG LAB SAMPLE ID:	9D494310		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
STRONTIUM	6.63E-02	U	6.5E-02	6.8E-02	1.36E-01	pCi/g	77.40%	RICHRC5006	8.76E-02	27.66%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analyticall Services, Inc

rptChemRadDup; v3.41

Quanterra

DUPLICATE RESULTS

LAB NAME:	**QUANTERRA, Richland**	**SDG: /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	D4E6M19R	**MATRIX:**	SOIL
CLIENT ID:	B0WMM4 DUP	**DATE RECEIVED:**	11/1/99 11:50:00 A
ORIG LAB SAMPLE ID:	9D4E6M10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
TH-228	1.28E+00	J	2.0E-01	3.7E-01	6.11E-02	pCi/g	78.36%	RICHRC5011	1.25E+00	2.78%
TH-230	1.17E+00	J	1.8E-01	3.3E-01	2.75E-02	pCi/g	78.36%	RICHRC5011	1.03E+00	11.97%
TH-232	1.00E+00	J	1.7E-01	2.9E-01	3.12E-02	pCi/g	78.36%	RICHRC5011	1.17E+00	15.83%

Number of Results: 3

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analyticall Services, Inc
rptChemRadDup; v3.41

Quanterra

DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	**SDG: /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	D4E6M1CR	**MATRIX:**	SOIL
CLIENT ID:	B0WMM4 DUP	**DATE RECEIVED:**	11/1/99 11:50:00 A
ORIG LAB SAMPLE ID:	9D4E6M10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
AM-241	1.68E-01	U	7.8E-02	7.8E-02	1.28E-01	pCi/g		RICHRC5017	2.20E-01	26.58%
CO-60	5.22E-03	U	1.4E-02	1.4E-02	2.39E-02	pCi/g		RICHRC5017	-8.27E-03	885.47%
CS-137	1.04E+01		1.0E+00	1.0E+00	3.05E-02	pCi/g		RICHRC5017	9.50E+00	8.99%
EU-152	-5.88E-02	U	7.3E-02	7.3E-02	9.95E-02	pCi/g		RICHRC5017	-7.19E-02	20.14%
EU-154	1.54E-02	U	4.6E-02	4.6E-02	7.84E-02	pCi/g		RICHRC5017	-2.35E-02	957.57%
EU-155	-2.16E-02	U	5.3E-02	5.3E-02	8.80E-02	pCi/g		RICHRC5017	2.18E-02	7831.72%
RA-226	6.70E-01		9.4E-02	9.4E-02	5.31E-02	pCi/g		RICHRC5017	7.30E-01	8.56%
RA-228	8.64E-01		1.4E-01	1.4E-01	8.57E-02	pCi/g		RICHRC5017	8.74E-01	1.14%

Number of Results: 8

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analyticall Services, Inc
rptChemRadDup; v3.41

Quanterra

DUPLICATE RESULTS

LAB NAME:	**QUANTERRA, Richland**	**SDG: /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	D4E6M1DR	**MATRIX:**	SOIL
CLIENT ID:	B0WMM4 DUP	**DATE RECEIVED:**	11/1/99 11:50:00 A
ORIG LAB SAMPLE ID:	9D4E6M10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
PU-238	1.31E-01	J	8.8E-02	9.2E-02	3.96E-02	pCi/g	21.70%	RICHRC5010	6.03E-02	74.16%
PU239/40	3.28E+00		4.4E-01	8.3E-01	5.87E-02	pCi/g	21.70%	RICHRC5010	3.14E+00	4.25%

Number of Results: 2

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analyticall Services, Inc
rptChemRadDup; v3.41

Quanterra

DUPLICATE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02935 / 9673
LAB SAMPLE ID:	D4E6M1ER	MATRIX:	SOIL
CLIENT ID:	B0WMM4 DUP	DATE RECEIVED:	11/1/99 11:50:00 A
ORIG LAB SAMPLE ID:	9D4E6M10		

ANALYTE	DUP RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	METHOD NUMBER	ORIG RESULT	RPD
AM-241	3.01E-01	J	8.4E-02	1.0E-01	2.38E-02	pCi/g	88.86%	RICHRC5080	3.96E-01	27.12%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analyticall Services, Inc

rptChemRadDup; v3.41

Quanterra

BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02935 / 9673

LAB SAMPLE ID: D4JDD11B MATRIX: SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
TH-228	1.16E-02	U	2.8E-02	2.8E-02	6.64E-02	pCi/g	73.62%	RICHRC5011
TH-230	6.16E-03	U	1.5E-02	1.5E-02	3.35E-02	pCi/g	73.62%	RICHRC5011
TH-232	7.33E-03	U	1.5E-02	1.5E-02	1.99E-02	pCi/g	73.62%	RICHRC5011

Number of Results: 3

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra

BLANK RESULTS

LAB NAME:	QUANTERRA, Richland	**SDG /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	D4JDG11B	**MATRIX:**	SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
PU-238	0.00E+00	U	0.0E+00	2.3E-02	2.53E-02	pCi/g	33.93%	RICHRC5010
PU239/40	-7.47E-04	U	1.5E-03	1.5E-03	3.76E-02	pCi/g	33.93%	RICHRC5010

Number of Results: 2

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra Analytical Services, Inc

rptChemRadBlank; v3.41

Quanterra

BLANK RESULTS

LAB NAME:	QUANTERRA, Richland	**SDG /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	D4JDH11B	**MATRIX:**	SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
U-234	6.01E-03	U	1.3E-02	1.3E-02	2.84E-02	pCi/g	93.01%	RICHRC5079
U-235	1.59E-03	U	9.1E-03	9.1E-03	2.84E-02	pCi/g	93.01%	RICHRC5079
U-238	-5.85E-03	U	9.6E-03	9.7E-03	4.33E-02	pCi/g	93.01%	RICHRC5079

Number of Results: 3

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra Analytical Services, Inc

rptChemRadBlank; v3.41

Quanterra

BLANK RESULTS

LAB NAME:	QUANTERRA, Richland	**SDG /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	D4JDP11B	**MATRIX:**	SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
TOTAL-URANIUM	0.00E+00	U	0.0E+00	0.0E+00	7.29E-05	ug/g		RICHRC5058

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra

BLANK RESULTS

LAB NAME:	QUANTERRA, Richland	SDG /RPT GRP:	W02935 / 9673
LAB SAMPLE ID:	D4JDT11B	MATRIX:	SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
AM-241	8.90E-03	U	1.3E-02	1.3E-02	1.21E-02	pCi/g	87.04%	RICHRC5080

Number of Results: 1

Quanterra

BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02935 / 9673

LAB SAMPLE ID: D4JE113B MATRIX: SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
AM-241	1.46E-02	U	1.4E-02	1.4E-02	2.06E-02	pCi/g		RICHRC5017
CO-60	5.74E-03	U	7.3E-03	7.3E-03	1.39E-02	pCi/g		RICHRC5017
CS-137	1.16E-03	U	7.9E-03	7.9E-03	1.38E-02	pCi/g		RICHRC5017
EU-152	4.24E-03	U	2.2E-02	2.2E-02	3.80E-02	pCi/g		RICHRC5017
EU-154	-1.25E-03	U	2.1E-02	2.1E-02	3.72E-02	pCi/g		RICHRC5017
EU-155	-1.98E-04	U	1.7E-02	1.7E-02	2.93E-02	pCi/g		RICHRC5017
RA-226	5.20E-02		3.8E-02	3.8E-02	2.59E-02	pCi/g		RICHRC5017
RA-228	6.14E-02	U	5.6E-02	5.6E-02	6.79E-02	pCi/g		RICHRC5017

Number of Results: 8

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra

BLANK RESULTS

LAB NAME:	QUANTERRA, Richland	**SDG /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	D4JF611B	**MATRIX:**	SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
STRONTIUM	3.86E-02	U	5.4E-02	5.5E-02	1.18E-01	pCi/g	95.10%	RICHRC5006

Number of Results: 1

Result = IDL When Not Detected
(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra Analytical Services, Inc
rptChemRadBlank; v3.41

Quanterra

BLANK RESULTS

LAB NAME: QUANTERRA, Richland SDG /RPT GRP: W02935 / 9673

LAB SAMPLE ID: D788P11B MATRIX: SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2s)	TOTAL ERROR (2s)	MDA/IDL	REPORT UNIT	YIELD	METHOD NUMBER
TOTAL-URANIUM	0.00E+00	U	0.0E+00	0.0E+00	7.29E-05	ug/g		RICHRC5058

Number of Results: 1

Result = IDL When Not Detected

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL

Quanterra Analytical Services, Inc

rptChemRadBlank; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02935 / 9673
LAB SAMPLE ID:	D4JDD12S	MATRIX:	SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
TH-230	1.13E+00	J	2.0E-01	3.4E-01	3.66E-02	pCi/g	59.41%	1.14E+00	98.55%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	**SDG: /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	D4JDG12S	**MATRIX:**	SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
PU239/40	2.87E+00		3.8E-01	7.0E-01	5.66E-02	pCi/g	26.33%	3.48E+00	82.58%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02935 / 9673
LAB SAMPLE ID:	D4JDH12S	MATRIX:	SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
U-234	7.70E-01	J	1.2E-01	1.8E-01	2.01E-02	pCi/g	86.46%	8.69E-01	88.65%
U-235	6.34E-02	J	3.6E-02	3.8E-02	2.67E-02	pCi/g	86.46%	3.96E-02	160.05%
U-238	7.84E-01	J	1.3E-01	1.8E-01	2.50E-02	pCi/g	86.46%	9.10E-01	86.21%

Number of Results: 3

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland SDG: /RPT GRP: W02935 / 9673

LAB SAMPLE ID: D4JDP12S MATRIX: SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
TOTAL-URANIUM	2.00E-01	J	0.0E+00	3.2E-02	7.29E-05	ug/g		2.02E-01	98.98%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02935 / 9673
LAB SAMPLE ID:	D4JDT12S	MATRIX:	SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
AM-241	4.10E+00		2.9E-01	7.6E-01	1.36E-02	pCi/g	79.19%	4.81E+00	85.34%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland **SDG: /RPT GRP:** W02935 / 9673

LAB SAMPLE ID: D4JE112S **MATRIX:** SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
CS-137	3.25E-01		4.9E-02	4.9E-02	3.75E-02	pCi/g		3.09E-01	105.33%
K-40	1.94E+01		2.1E+00	2.1E+00	2.49E-01	pCi/g		1.95E+01	99.37%
RA-226	1.05E+00		1.3E-01	1.3E-01	5.75E-02	pCi/g		1.15E+00	90.91%
RA-228	2.12E+00		2.8E-01	2.8E-01	1.13E-01	pCi/g		1.87E+00	113.04%
U-238	1.15E+00		1.4E-01	1.4E-01	5.91E-02	pCi/g		1.05E+00	109.30%

Number of Results: 5

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME: QUANTERRA, Richland **SDG: /RPT GRP:** W02935 / 9673

LAB SAMPLE ID: D4JF612S **MATRIX:** SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
STRONTIUM	9.77E-01	J	1.2E-01	3.0E-01	1.16E-01	pCi/g	91.70%	1.13E+00	86.43%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

LABORATORY CONTROL SAMPLE

LAB NAME:	QUANTERRA, Richland	**SDG: /RPT GRP:**	W02935 / 9673
LAB SAMPLE ID:	D788P12S	**MATRIX:**	SOIL

ANALYTE	RESULT	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/ IDL	REPORT UNIT	YIELD	EXPECTED	RECOVERY
TOTAL-URANIUM	1.08E+00		0.0E+00	1.7E-01	7.29E-05	ug/g		1.00E+01	10.76%

Number of Results: 1

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadLcs; v3.41

Quanterra

MATRIX SPIKE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02935	/ 9673	
LAB SAMPLE ID:	D4E6M1AW	MATRIX:	SOIL		

ANALYTE	SPIKE RESULT*	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	SAMPLE RESULT	EXPECTED	RECOVERY
TOTAL-URANIUM	2.31E+00		0.0E+00	3.7E-01	7.29E-05	ug/g	1.88E+00	N/A	

Number of Results: 1

*Spike Result Corrected For Sample Result

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadMatrixSpike; v3.41

Quanterra

MATRIX SPIKE RESULTS

LAB NAME:	QUANTERRA, Richland	SDG: /RPT GRP:	W02935 / 9673
LAB SAMPLE ID:	D4E6M2AW	MATRIX:	SOIL

ANALYTE	SPIKE RESULT*	Q	COUNTING ERROR (2 s)	TOTAL ERROR (2 s)	MDA/IDL	REPORT UNIT	SAMPLE RESULT	EXPECTED	RECOVERY
TOTAL-URANIUM	1.07E+01		0.0E+00	2.6E+00	7.29E-05	ug/g	1.88E+00	1.01E+01	106.74%

Number of Results: 1

*Spike Result Corrected For Sample Result

Result = IDL When Not Detecte

(Q)ualifiers: U = Analyte result < MDA/IDL,
J = No U qualifier and result < RDL.

Quanterra Analytical Services, Inc

rptChemRadMatrixSpike; v3.41

Bechtel Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B99-078-141

Collector Bowers/Trice	**Company Contact** Chris Cearlock	**Telephone No.** 372-9574	**Project Coordinator** TRENT, SJ
Price Code 8N	**Data Turnaround** 45 Days		
Project Designation 200 Area Source characterization - 200-CW-1 OU	**Sampling Location** 200 B pond		**SAF No.** B99-078
Ice Chest No. FRC 96 087	**Field Logbook No.** EL-1511		**Method of Shipment** ~~FED EX~~ and Gov Vehicle 10-21-99
Shipped To Quanterra Incorporated -RICH	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** N/A
			COA B22CW01 671C

POSSIBLE SAMPLE HAZARDS/REMARKS

Q-27038

Special Handling and/or Storage

Preservation	Cool 4C	Cool 4C	None	None	Cool 4C	Cool 4C	None				
Type of Container	aG	aG	aG	aG	aG	aG	aG				
No. of Container(s)	1	1	1	1	1	1	1				
Volume	60mL	60mL	60mL	60mL	500mL	500mL	1000mL				
SAMPLE ANALYSIS	See item (1) in Special Instructions.	VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Propanol, Ethanol)	Isotopic, Uranium	pH (Soil) - 9045	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082	See item (3) in Special Instructions.				

SDG W02935 J9J210229

Sample No.	Matrix *	Sample Date	Sample Time									
~~B0WMM1~~ 10/12/99 B0WMM2	Soil	10/20/99	0907			X				X		BOW8C2
D4OCO												

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

Relinquished By	Date/Time	Received By	Date/Time
Catherine Sha	10/20/99 1230	Ref 3A	10/20/99 1230
REF 3A ~~Rikki~~ 10-21-99	10:21:99 / 0830	Rikki Thoren / RThoren	10/21/99 / 083
Relinquished By	Date/Time 1405	Received By	Date/Time
R Fallis for R Thoren 10-21-99		Keith Fahnestall	10/21/99 14:05
Relinquished By	Date/Time	Received By	Date/Time 2100 CPM

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; ICP Metals - 6010A (Supertrace Add-On) {Beryllium, Copper, Nickel, Vanadium, Zinc}; Mercury - 7471 - (CV); Chromium Hex - 7196

(2) NO2/NO3 - 353.1; IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Sulfides - 9030; Ammonia - 350.1; Total Cyanide - 9010

(3) Gamma Spectroscopy {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Strontium-89,90 -- Total Sr; Total Uranium {Uranium}; Isotopic Plutonium; Isotopic Thorium {Thorium-232}; Americium-241

Sampler not available to Rel. Sample

Matrix *

Soil
Water
Vapor
Other Solid
Other Liquid

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

0047

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-078-142	Page 1 of 1

Collector: Bowers/Trice	Company Contact: Chris Cearlock	Telephone No.: 372-9574	Project Coordinator: TRENT, SJ
Price Code: 8N	Data Turnaround: 45 Days		
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: 200 B pond		SAF No.: B99-078
Ice Chest No.: MAC 10	Field Logbook No.: EL-1511		Method of Shipment: FED EX and Gov Vehicle
Shipped To: Quanterra Incorporated Richland	Offsite Property No.: NA		Bill of Lading/Air Bill No.: NA
			COA: B20CW1 671C

POSSIBLE SAMPLE HAZARDS/REMARKS: Q-27038

Special Handling and/or Storage: SDG W02935

SAMPLE ANALYSIS: J9J220245

Preservation	Cool 4C	Cool 4C	None	None	Cool 4C	Cool 4C	None			
Type of Container	aG	aG	aG	aG	aG	aG	aG			
No. of Container(s)	1	1	1	1	1	1	1			
Volume	60mL	60mL	60mL	60mL	500mL	500mL	1000mL			
	See item (1) in Special Instructions.	VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Propanol, Ethanol}	Isotopic Uranium ✓	pH (Soil) - 9045	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082	See item (3) in Special Instructions.			

Sample No.	Matrix *	Sample Date	Sample Time									
B0WMM6 D4265	Soil	10-21-99	1012			X				X		B0W9T9

.pm
ok

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By: Doug Bowers Date/Time: Doug Bowers 10-21-99/1400	Received By: Ref 3C Date/Time: 10-21-99/1400	
Relinquished By: Ref 3C Date/Time: 10-22-99 1100	Received By: R. Fahlberg Date/Time: R. Fahlberg 10-22-99 1100	
Relinquished By: R. Fahlberg Date/Time: R. Fahlberg 10-22-99 1330	Received By: Fed. Ex Date/Time: 10-22-99	
Relinquished By: R. Fahlberg Date/Time: R. Fahlberg 10-22-99 1330	Received By: K. Heldenburg Date/Time: 10-22-99 1330	
LABORATORY SECTION: Received By	Title: GOCHAL	Date/Time
FINAL SAMPLE DISPOSITION: Disposal Method	Disposed By	Date/Time

SPECIAL INSTRUCTIONS
See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; ICP Metals - 6010A (Supertrace Add-On) {Beryllium, Copper, Nickel, Vanadium, Zinc}; Mercury - 7471 - (CV); Chromium Hex - 7196
(2) NO2/NO3 - 353.1; IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Sulfides - 9030; Ammonia - 350.1; Total Cyanide - 9010
(3) Gamma Spectroscopy {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Strontium-89,90 -- Total Sr; Total Uranium {Uranium}; Isotopic Plutonium; Isotopic Thorium {Thorium-232}; Americium-241

~~From non-pond area~~ 10-21-99

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

0050

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-078-143	Page 1 of 1

Collector: Bowers/Trice	Company Contact: Chris Cearlock	Telephone No.: 372-9574	Project Coordinator: TRENT, SJ
Price Code: 8N	Data Turnaround: 45 Days		
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: 200 B pond		SAF No.: B99-078
Ice Chest No.: IC 001	Field Logbook No.: EL-1511		Method of Shipment: FED EX and Gov Vehicle
Shipped To: Quanterra Incorporated Bich	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: NA
Q-27038			COA: B20CW1 671C

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

SDG W02935

SAMPLE ANALYSIS J9J280225

	Preservation	Cool 4C	Cool 4C	None	None	Cool 4C	Cool 4C	None			
	Type of Container	aG	aG	aG	aG	aG	aG	aG			
	No. of Container(s)	1	1	1	1	1	1	1			
	Volume	60mL	60mL	60mL	60mL	500mL	500mL	1000mL			
		See item (1) in Special Instructions.	VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Propanol, Ethanol)	Isotopic Uranium ✓	pH (Soil) - 9045	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082	See item (3) in Special Instructions.			
Sample No.	Matrix *	Sample Date	Sample Time								
B0WMM8 D4943	Soil	10-27-99	0856			X				X		B0W8C1

CHAIN OF POSSESSION	Sign/Print Names	Date/Time
Relinquished By: Doug Bowers	Received By: Rick 3B	10-27-99/1130
Relinquished By: Rick 3B	Received By: Rikk Thoren	10-28-99/0800
Relinquished By: Rikk Thoren	Received By: [illegible]	10-28-99/1345
Relinquished By:	Received By:	

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; ICP Metals - 6010A (Supertrace Add-On) {Beryllium, Copper, Nickel, Vanadium, Zinc}; Mercury - 7471 - (CV); Chromium Hex - 7196

(2) NO2/NO3 - 353.1; IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Sulfides - 9030; Ammonia - 350.1; Total Cyanide - 9010

(3) Gamma Spectroscopy {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Strontium-89,90 -- Total Sr; Total Uranium {Uranium}; Isotopic Plutonium; Isotopic Thorium {Thorium-232}; Americium-241

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

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

0056

ex-21000 5111T

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-078-141	Page 1 of 1

Collector: Bowers/Trice	Company Contact: Chris Cearlock	Telephone No.: 372-9574	Project Coordinator: TRENT, SJ
Price Code: 8N	Data Turnaround: 45 Days		
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: 200 B pond		SAF No.: B99-078
Ice Chest No.: ERC 99020	Field Logbook No.: EL-1511 ~1		Method of Shipment: FED EX and Gov Vehicle
Shipped To: Quanterra Incorporated Rich	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A
			COA: B20CW1 671C

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

SDG W02935

SAMPLE ANALYSIS U9K010135

Preservation				Cool 4C	Cool 4C	None	None	Cool 4C	Cool 4C	None		
Type of Container				aG	aG	aG	aG	aG	aG	aG		
No. of Container(s)				1	1	1	1	1	1	1		
Volume				60mL	60mL	60mL	60mL	500mL	500mL	1000mL		
				See item (1) in Special Instructions.	VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Propanol, Ethanol}	Isotopic Uranium	pH (Soil) - 9045	See item (2) in Special Instructions.	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082	See item (3) in Special Instructions.		
Sample No.	Matrix *	Sample Date	Sample Time									
B0WMM4 D4E6M	Soil	10-28-99	0813 ~~0818~~ RT 10-28-99			X				X		DOW 8C1

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By: Catherine Trice CTrice	Date/Time: 10/28/99 1430	Received By: Ref 3B
Relinquished By: Ref 3B	Date/Time: 11.01.99/0800	Received By: Rikki Thoren R. Thoren
Relinquished By: Rikki Thoren R. Thoren	Date/Time: 11.01.99/1150	Received By: K. Schlenberg
Relinquished By:	Date/Time:	Received By:

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; ICP Metals - 6010A (Supertrace Add-On) {Beryllium, Copper, Nickel, Vanadium, Zinc}; Mercury - 7471 - (CV); Chromium Hex - 7196

(2) NO2/NO3 - 353.1; IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Sulfides - 9030; Ammonia - 350.1; Total Cyanide - 9010

(3) Gamma Spectroscopy {Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Strontium-89,90 -- Total Sr; Total Uranium {Uranium}; Isotopic Plutonium; Isotopic Thorium {Thorium-232}; Americium-241

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

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

0059