W02980-QRS
STL

0073107

ANALYTICAL REPORT

PROJECT NO. D&D

B00-013

Lot #: F9L200157
SDG #: W02980

APR 2000
RECEIVED
Data
Log In

Joan Kessner

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

RECEIVED
MAY 10 2000
EDMC

SEVERN TRENT LABORATORIES, INC.

MARTI WARD
Project Manager

March 17, 2000

000001
Da

Quanterra Environmental Services

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
314 298-8757 Fax

CASE NARRATIVE

Bechtel Hanford Incorporated
3350 George Washington Way
Richland, Washington 99352

January 17, 2000

Attention: Joan Kessner

JAN 2000 RECEIVED Data Mgt

Quote Number	:	33811
SDG	:	W02980
Number of Samples	:	Fifteen (15)
Sample Matrix	:	Solid
Data Deliverable	:	Summary
Date SDG Closed	:	December 20, 1999

II. Introduction

Between December 17, 1999, and December 20, 1999, fifteen (15) "solid" samples were received by Quanterra, Richland and transferred to Quanterra, St. Louis for chemical analysis. The samples were received at the St. Louis lab on 12/18/99 at 8 degrees C (COC #s B00-013-07; -12; -17), and 12/20/99 (COC # B00-013-52) at 4 degrees C. See the attached Sample Summary for a listing of Client Ids and their associated Lab numbers.

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 Super Trace - Lead
Mercury - 7471 - CV
PCBs - 8082

Deviation from Request: None

IV. Definitions

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

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

V. Comments

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

There were no non-conformances or comments associated with the metals data for this SDG.

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

Method 3545 (ASE) was used as the extraction method. The RPD for Aroclor 1016 in the MS/MSD is outside of control limits. Aroclor 1260 in the MS/MSD is slightly over the calibration range due to a hit in the sample for this Aroclor.

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

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5M4
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-001
WORK ORDER: D6LQ3
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 8:30
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LQ3-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LQ3 Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-O9-01) D6LQ3 Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LQ3-1-08 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5M4
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-001-D
WORK ORDER: D6LQ3 MSD
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 8:30
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Inductively Coupled Plasma (6010B Trace) METALS, TOTAL - Soils MT6010_S PB	06	12/20/99	0/00/00	6/13/00
(A-46-QM-01) D6LQ3 Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids METALS, TOTAL (Method Exclusive) - Solids M7471_S HG	06	12/20/99	0/00/00	1/13/00
(A-70-O9-01) D6LQ3 Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082) SONICATION w/ACID STRIP (PCB) STL: HANFORD PCB GC:LIST-1(7)	06	12/20/99	12/30/99	2/08/00
(A-71-QH-01) D6LQ3-1-0A Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5M4
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-001-S
WORK ORDER: D6LQ3 MS
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 8:30
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LQ3 Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-O9-01) D6LQ3 Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LQ3-1-09 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5M5
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-002
WORK ORDER: D6LQK
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 8:58
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LQK-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LQK Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-09-01) D6LQK Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LQK-1-04 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5M6
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-003
WORK ORDER: D6LQL
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 9:15
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LQL-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LQL Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-09-01) D6LQL Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LQL-1-04 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5M7
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-004
WORK ORDER: D6LQM
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 9:15
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LQM-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LQM Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-09-01) D6LQM Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LQM-1-04 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5M8
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-005
WORK ORDER: D6LQN
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 9:47
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LQN-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LQN Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-O9-01) D6LQN Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LQN-1-04 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5M9
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-006
WORK ORDER: D6LQP
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 10:05
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LQP-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LQP Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-O9-01) D6LQP Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LQP-1-04 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5N0
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-007
WORK ORDER: D6LQV
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 12:23
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LQV-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LQV Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-09-01) D6LQV Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LQV-1-04 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5N1
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-008
WORK ORDER: D6LQW
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 12:47
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LQW-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LQW Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-O9-01) D6LQW Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LQW-1-04 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5N2
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-009
WORK ORDER: D6LQX
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 13:00
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LQX-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LQX Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-09-01) D6LQX Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LQX-1-04 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5N3
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-010
WORK ORDER: D6LR0
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 13:12
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LR0-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LR0 Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-O9-01) D6LR0 Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LR0-1-04 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5N4
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-011
WORK ORDER: D6LR1
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 13:23
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LR1-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LR1 Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-O9-01) D6LR1 Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LR1-1-04 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/22/99
Time: 15:53:43
User Id.: SEITHELK

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: S6C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5N5
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L200157-012
WORK ORDER: D6LR2
RECEIVING DATE: 12/17/99
SAMPLING DATE: 12/16/99
ANALYTICAL DUE DATE: 1/04/00N
REPORT DUE DATE: 1/04/00
PRIORITY: 15
SAMPLING TIME: 13:40
RECEIVING TIME: 9:41
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Moisture, Percent (160.3)	06	12/20/99	0/00/00	3/24/00
NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION				
(A-88-WM-01) D6LR2-1-01 Protocol: A QC Program: STANDARD TEST SET				
Inductively Coupled Plasma (6010B Trace)	06	12/20/99	0/00/00	6/13/00
METALS, TOTAL - Soils				
MT6010_S PB				
(A-46-QM-01) D6LR2 Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids	06	12/20/99	0/00/00	1/13/00
METALS, TOTAL (Method Exclusive) - Solids				
M7471_S HG				
(A-70-O9-01) D6LR2 Protocol: A QC Program: STANDARD TEST SET				
PCBs (8082)	06	12/20/99	12/30/99	2/08/00
SONICATION w/ACID STRIP (PCB)				
STL: HANFORD PCB GC:LIST-1(7)				
(A-71-QH-01) D6LR2-1-04 Protocol: A QC Program: STANDARD TEST SET				

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-013-07	Page 1 of 1

Collector: R. Fahlberg/R. Nielson	Company Contact: Jason Adler	Telephone No.: 373-4316	Project Coordinator: TRENT, SJ
Price Code: 9L	Data Turnaround: 21 Days	Air Quality ☐	
Project Designation: 105-F/DR Phase III Below-grade Areas Sampling and Analy	Sampling Location: 105-DR	SAF No.: B00-013	
Ice Chest No.: ERC 96-087	Field Logbook No.: EL-1424	COA: R105D2280C	Method of Shipment: Federal Express
Shipped To: ~~TMA/RECRA~~ RC 12-16-99 Quanterra	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

SAMPLE ANALYSIS

5D6
W02980
J9L170163

Preservation				Cool 4C	None	None	None					
Type of Container				aG	aG	aG	aG					
No. of Container(s)				0	0	1	1					
Volume				60mL	60mL	60mL	60mL					
				PCBs - 8082 - 12/18/99 100%	Isotopic Uranium 12/18/99 100%	See item (1) in Special Instructions 12/18/99 100%	ICP Metals - 6010A (Supertrace) (Lead); Mercury - 7471 - (CV) 100%					
Sample No.	Matrix *	Sample Date	Sample Time									
B0X5M4	Other Solid	12-16-99	0830	X	X	X	X				Box4	N6
Box5m5	other solid	12-16-99	0858	X	X	X	X				Box4	N6
Box5m6	other solid	12-16-99	0915	X	X	X	X				Box4	N6
BOX5m7	other solid	12-16-99	0915	X	X	X	X				Box4	N6
BOX5m8	other solid	12-16-99	0947	X	X	X	X				Box4	N6

1x60mL Hg per sample ID

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
R. Fahlberg/R. Fahlberg	12-16-99 1600	R.F. Fahlberg	12-16-99 1600
R. Fahlberg	12-17-99 0730	R. Thoren	12-17-99 0730
R. Thoren	12-17-99 0941	R. Goldenberg	12-17-99 0941
R. Goldenberg	12-17-99 1600	[illegible]	12/18/99 0945

SPECIAL INSTRUCTIONS

(1) Gamma Spectroscopy (Cobalt-60); Gamma Spec - Add-on (Barium-133); Isotopic Plutonium; Strontium-89,90 -- Total Sr; Technetium-99; Americium-241; Nickel-63; Carbon-14

out of ICP metals, analize for PCBs

out of Gamma Spec: analize Iso Uranium

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

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

BHI-EE-011 (10/99)

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-013-12	Page 1 of 1

Collector R. Fahlberg/R. Nielson	Company Contact Jason Adler	Telephone No. 373-4316	Project Coordinator TRENT, SJ
Project Designation 105-F/DR Phase III Below-grade Areas Sampling and Analy	Sampling Location 105-DR		SAF No. B00-013
Ice Chest No. ERC-96-087	Field Logbook No. EL-1424	COA R105D2280C	Method of Shipment Federal Express
Shipped To ~~TMA/RECRA~~ RE 12-16-99 Quanterra	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A

Price Code 9L

Air Quality ☐

Data Turnaround 21 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C	None	None	None							
Type of Container	aG	aG	aG	aG							
No. of Container(s)	0	0	1	1							
Volume	60mL	60mL	60mL	60mL							
SAMPLE ANALYSIS	PCBs - 8082	Isotopic Uranium	See item (1) in Special Instructions.	ICP Metals - 6010A (Supertrace) (Lead); Mercury - 7471 - (CV)							
SOG W02980 J9L170163	100%	100%	100%	100%							
Sample No. / Matrix * / Sample Date / Sample Time											
B0X5M9 / Other Solid / 12-16-99 / 1005	X	X	X	X						Box 4 of 6	
B0X5N0 / other Solid / 12-16-99 / 1223	X	X	X	X							
B0X5N1 / other Solid / 12-16-99 / 1247	X	X	X	X							
B0X5N2 / other Solid / 12-16-99 / 1300	X	X	X	X							
B0X5N3 / other Solid / 12-16-99 / 1312	X	X	X	X							

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By	Date/Time	Received By	Date/Time
R. Fahlberg / R. Fahlberg	12-16-99 1600	RE 1-C	12-16-99 1600
RE 1-C	12-17-99/0730	R. Thoren	12-17-99/0730
R. Thoren	12-17-99/0941	R. Fahlberg	12-17-99 0941
R. Fahlberg	12-17-99 1600	[illegible]	12/18/99 12-18-99 0945

SPECIAL INSTRUCTIONS

(1) Gamma Spectroscopy (Cobalt-60); Gamma Spec - Add-on (Barium-133); Isotopic Plutonium; Strontium-89,90 -- Total Sr; Technetium-99; Americium-241; Nickel-63; Carbon-14

out of ICP metals, analize PCBs
out of Gamma Spec, Analize Iso Uranium

Matrix *

S=Soil
SE=Sediment
SO=Solid
S=Sludge
W=Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wi=Wipe
L=Liquid
V=Vegetation
X=Other

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

BHI-EE-011 (10/99)

C00020

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-013-17	Page 1 of 1

Collector R. Fahlberg/R. Nielson	Company Contact Jason Adler	Telephone No. 373-4316	Project Coordinator TRENT, SJ
Project Designation 105-F/DR Phase III Below-grade Areas Sampling and Analy	Sampling Location 105-DR		SAF No. B00-013
Ice Chest No. ERC.96.087	Field Logbook No. EL-1424	COA R105D2280C	Method of Shipment Federal Express
Shipped To ~~TMA/RECRA~~ RF 12-16-99 Quaterra	Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A

Price Code 9L

Air Quality ☐

Data Turnaround 21 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

SAMPLE ANALYSIS

SOG W02980 J9L170163

Preservation				Cool 4C	None	None	None						
Type of Container				aG	aG	aG	aG						
No. of Container(s)				0	0	1	1						
Volume				60mL	60mL	60mL	60mL						
				PCBs - 8082	Isotopic Uranium	See item (1) in Special Instructions.	ICP Metals - 6010A (Supertrace) (Lead); Mercury - 7471 - (CV)						
Sample No.	Matrix *	Sample Date	Sample Time										
B0X5N4	Other Solid	12-16-99	1323	X	X	X	X					BOX	4N6
BOX5N5	other solid	12-16-99	1340	X	X	X	X					BOX	4N6

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By / Date/Time 1600	R. Fahlberg / R. Fahlberg 12-16-99	Received By / Date/Time 1600 Ref 1-C 12-16-99
Relinquished By / Date/Time	Ref 1-C 12-17-99/0730	Received By / Date/Time R. Thoren 12-17-99/0730
Relinquished By / Date/Time	R. Thoren 12-17-99/0941	Received By / Date/Time R. Fahlberg 12-17-99 0941
Relinquished By / Date/Time 1600	R. Fahlberg 12-17-99	Received By / Date/Time [illegible] 12/18/99 0945
Relinquished By / Date/Time		Received By / Date/Time
Relinquished By / Date/Time		Received By / Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spectroscopy (Cobalt-60); Gamma Spec - Add-on (Barium-133); Isotopic Plutonium; Strontium-89,90 -- Total Sr; Technetium-99; Americium-241; Nickel-63; Carbon-14

out of ICP metals analize PCBs

out of Gamma Spec analize Isotopic Uranium

Matrix *

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

LABORATORY SECTION	Received By [illegible] 12/18/99	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

BHI-EE-011 (10/99)

C00021

ERC Radiological Counting Facility Analysis Report

RCF Number RCF6874

Sample Date & Time 12/7/99 1130

Project ID: 105-DR **SAF Number:** B00-013 **Date Analyzed** 12/8/99 7:54:3

Sample ID: B0X4N6

Gamma Energy Analysis

Nuclide		Activity (pCi/g)		Error (pCi/g)	MDC (pCi/g)
K-40	<	1.7E+02			1.7E+02
Co-60	<	2.3E+01			2.3E+01
Cs-137	<	2.1E+01			2.1E+01
Eu-152		1.5E+02	+/-	5.5E+01	5.8E+01
Eu-154	<	6.0E+01			6.0E+01
Eu-155	<	8.6E+01			8.6E+01
Th-232D	<	5.3E+01			5.3E+01
Th-234	<	2.4E+02			2.4E+02
U-235	<	1.7E+02			1.7E+02
U-238D		2.7E+02	+/-	6.8E+01	6.2E+01
U-238	<	3.1E+03			3.1E+03
Am-241	<	4.4E+01			4.4E+01

BOX5M4 Thru
BOX5M8
BOX5M9
BOX5N4
BOX5N5
BOX5N0 Thru
BOX5N3

Total GEA (pCi/g)	4.1E+02	+/-	1.2E+02

	Activity (pCi/g)		Error (pCi/g)
Gross Alpha**	1.1E+01	+/-	1.6E+00
Gross Beta	8.5E+01	+/-	4.0E+00

Alpha MDC (pCi/g)
4.2E+00
Beta MDC (pCi/g)
4.7E+01

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 12/8/99

Report To JASON ADLER **Fax** 373-7719

Report Printed: Wednesday, December 08, 1999

Figure 1

SAMPLE CHECK-IN LIST

Date/Time Received: 12-17-99 0941 SG#: W02980

Work Order Number: J9L170163 SAF #: B00-013

Shipping Container ID: ERC9-087 Chain of Custody # n/a

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature 4°C
5. Vermiculite/packing materials is Wet [ ] Dry [✓]
6. Number of samples in shipping container: 24
7. Sample holding times exceeded? Yes [ ] No [✓]

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

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

10. Where any anomalies identified in sample receipt? Yes [ ] No [✓]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: K. Hattenburg Date: 12-17-99

Telephoned To: _____ On _____ By _____

Quanterra Environmental Services

020474

Login No.: F9L200157
W02980

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Bechtel Hanford
Date: 12/18/99 Time: 0945
Project No: 33811
Initiated by: [illegible]
Shipper/No: AIRBORNE 4012573412
RFA/COC Numbers: [illegible] 03-07, 12, 17.

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: 8°
   - ☐ 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: 8°

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): [illegible] Date: 12/18/99

Project Management Review: Sheila Fournier Date: 12-22-99

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

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

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/23/99
Time: 14:42:31
User Id.: SMITHJE

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: R3C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5Y7
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L230207-001
WORK ORDER: D6TCG
RECEIVING DATE: 12/20/99
SAMPLING DATE: 12/17/99
ANALYTICAL DUE DATE: 1/05/00N
REPORT DUE DATE: 1/10/00
PRIORITY: 16
SAMPLING TIME: 13:22
RECEIVING TIME: 8:40
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Inductively Coupled Plasma (6010B Trace) METALS, TOTAL - Soils MT6010_S PB	06	12/23/99	0/00/00	6/14/00
(A-46-QM-01) D6TCG Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids METALS, TOTAL (Method Exclusive) - Solids M7471_S HG	06	12/23/99	0/00/00	1/14/00
(A-70-09-01) D6TCG Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/23/99
Time: 14:42:31
User Id.: SMITHJE

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: R3C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5Y8
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L230207-002
WORK ORDER: D6TD3
RECEIVING DATE: 12/20/99
SAMPLING DATE: 12/17/99
ANALYTICAL DUE DATE: 1/05/00N
REPORT DUE DATE: 1/10/00
PRIORITY: 16
SAMPLING TIME: 13:34
RECEIVING TIME: 8:40
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Inductively Coupled Plasma (6010B Trace) METALS, TOTAL - Soils MT6010_S PB	06	12/23/99	0/00/00	6/14/00
(A-46-QM-01) D6TD3 Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids METALS, TOTAL (Method Exclusive) - Solids M7471_S HG	06	12/23/99	0/00/00	1/14/00
(A-70-09-01) D6TD3 Protocol: A QC Program: STANDARD TEST SET				

QUANTERRA INCORPORATED
CLIENT ANALYSIS SUMMARY
Quanterra - St. Louis

Run Date: 12/23/99
Time: 14:42:31
User Id.: SMITHJE

CLIENT: 127642 BECHTEL HANFORD, INC.
PROJECT MANAGER: MARTI WARD
PROJECT #: D&D
REPORT TO: Bechtel Hanford, Inc.
P.O. NUMBER: MRC-SBB-A-19981
SITE: B00-013
AMOUNT REC"D: 60MLG
STORAGE LOC: R3C
LOT COMMENTS: Hanford Summary and FEAD EDD required
MATRIX: SOLID
SAMPLE ID: B0X5Y9
QC PACKAGE: Special Report - see checklist
SAMPLE COMMENTS:

QUOTE/SAR #: 33811
LAB ID: F-9L230207-003
WORK ORDER: D6TDP
RECEIVING DATE: 12/20/99
SAMPLING DATE: 12/17/99
ANALYTICAL DUE DATE: 1/05/00N
REPORT DUE DATE: 1/10/00
PRIORITY: 16
SAMPLING TIME: 13:46
RECEIVING TIME: 8:40
SDG# : W02980

Beginning Depth: .00 **Ending Depth:** .00

***** ANALYSIS *****	WRK LOC	REQUEST DATE	EXTRACTION EXP DATE	ANALYSIS EXP DATE
Inductively Coupled Plasma (6010B Trace) METALS, TOTAL - Soils MT6010_S PB	06	12/23/99	0/00/00	6/14/00
(A-46-QM-01) D6TDP Protocol: A QC Program: STANDARD TEST SET				
Mercury (7471A, Cold Vapor) - Solids METALS, TOTAL (Method Exclusive) - Solids M7471_S HG	06	12/23/99	0/00/00	1/14/00
(A-70-09-01) D6TDP Protocol: A QC Program: STANDARD TEST SET				

Q- 21038 UNR 670498 4°C

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-013-52	Page 1 of 1

Collector: R. Fahlberg	Company Contact: Jason Adler	Telephone No.: 373-4316	Project Coordinator: TRENT, SJ
Project Designation: 105-F/DR Phase III Below-grade Areas Sampling and Analy	Sampling Location: 105-DR		SAF No.: B00-013
Ice Chest No.: ERC 99-003	Field Logbook No.: EL-1424	COA: R105D2280C	Method of Shipment: Federal Express
Shipped To: ~~TMA/RECRA~~ QUANTERRA Rich 2+12-20-99	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A

Price Code: 9L

Air Quality ☐

Data Turnaround: 21 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

SDG W02980

SAMPLE ANALYSIS Due 1-11-00 J9L200121

Preservation	None	None
Type of Container	aG	aG
No. of Container(s)	1	1
Volume	60mL	120mL
	ICP Metals - 6010A (Supertrace) (Lead); Mercury - 7471 - (CV)	Site (1) Special Instructions

Sample No.	Matrix *	Sample Date	Sample Time										
B0X5Y7 D6LCN	Other Solid	12-17-99	1322	X	X		1 X 60mL		95%		Box	4N5
B0X5Y8 D6LCP	other solid	12-17-99	1334	X	X		1 X 60mL		full		Box	4N5
B0X5Y9 D6LCQ	other solid	12-17-99	1346	X	X		1 X 60mL		full		Box	4N5

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By: R. Fahlberg / R. Fahlberg 12-17-99	Date/Time: 1515	Received By: Bob 1-C 12-17-99	Date/Time: 1515
Relinquished By: Bob 1-C 12-20-99	Date/Time: 0730	Received By: R. Thoren 12-20-99	Date/Time: 0730
Relinquished By: R. Thoren 12-20-99	Date/Time: 0840	Received By: Heidelberg 12-20-99	Date/Time: 0840
Relinquished By: Heidelberg 12-20-99	Date/Time: 1600	Received By: 4100 CPN Jennifer Smith 12-22-99	Date/Time: 0900
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS

(1) Gamma Spectroscopy {Cobalt-60}; Gamma Spec - Add-on {Barium-133}; Isotopic Plutonium; Strontium-89,90 -- Total Sr; Technetium-99; Americium-241; Nickel-63; Carbon-14

γ ✓ Pu/Am ✓ TOT SR ✓ TC ✓ Ni63 ✓ C14 ✓

Matrix *

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

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

BHI-EE-011 (10/99)

ERC Radiological Counting Facility Analysis Report

RCF Number RCF6873

Sample Date & Time 12/7/99 1115

Project ID: 105-DR SAF Number: B00-013 Date Analyzed 12/7/99 2:55:1

Sample ID: B0X4N5

Gamma Energy Analysis

B0X5Y7, B0X5Y8

B0X5Y9

Nuclide		Activity (pCi/g)		Error (pCi/g)	MDC (pCi/g)
K-40	<	1.6E+02			1.6E+02
Co-60	<	1.4E+01			1.4E+01
Cs-137	<	1.9E+01			1.9E+01
Eu-152	<	4.7E+01			4.7E+01
Eu-154		3.5E+01	+/-	2.3E+01	2.9E+01
Eu-155	<	7.8E+01			7.8E+01
Th-232D	<	4.3E+01			4.3E+01
U-235	<	1.5E+02			1.5E+02
U-238	<	2.7E+03			2.7E+03
U-238D		1.5E+02	+/-	3.9E+01	4.6E+01
Am-241	<	4.1E+01			4.1E+01

COPY

Total GEA (pCi/g)	1.9E+02	+/-	6.1E+01

	Activity (pCi/g)		Error (pCi/g)
Gross Alpha**	1.3E+00	+/-	5.9E-01
Gross Beta	1.2E+01	+/-	1.3E+00

Alpha MDC (pCi/g) 6.1E-01

Beta MDC (pCi/g) 6.8E+00

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 12/8/99

Report To JASON ADLER Fax 373-7719

Report Printed: Wednesday, December 08, 1999

Figure 1

SAMPLE CHECK-IN LIST

Date/Time Received: 12-20 0840 SG#: W02980

Work Order Number: J9L200121 SAF #: B00-013 B00-010

Shipping Container ID: 99-005 Chain of Custody # B00-013-52 B00-010-02 B00-011-02

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature on ice
5. Vermiculite/packing materials is Wet [ ] Dry [✓] n/a
6. Number of samples in shipping container: 9
7. Sample holding times exceeded? Yes [ ] No [✓]

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

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

10. Where any anomalies identified in sample receipt? Yes [ ] No [✓]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: [illegible] Date: 12-20-99

Telephoned To: _____ On _____ By _____

Quanterra
Environmental Services

020498

Login No.: F9L230207
W02980

Condition Upon Receipt Variance Report
St. Louis Laboratory

Client: Richland
Project No: 33811
Shipper/No: Airborne 4012574915

Date: 12-22-99 Time: 0900
Initiated by: J Smith
RFA/COC Numbers: B00-01352

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°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) Jennifer Smith Date: 12-22-99

Project Management Review: Sheila Fournier Date: 12-28-99

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE

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

SAMPLE SUMMARY

F9L200157

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
D6LQ3	001	B0X5M4	12/16/99	08:30
D6LQK	002	B0X5M5	12/16/99	08:58
D6LQL	003	B0X5M6	12/16/99	09:15
D6LQM	004	B0X5M7	12/16/99	09:15
D6LQN	005	B0X5M8	12/16/99	09:47
D6LQP	006	B0X5M9	12/16/99	10:05
D6LQV	007	B0X5N0	12/16/99	12:23
D6LQW	008	B0X5N1	12/16/99	12:47
D6LQX	009	B0X5N2	12/16/99	13:00
D6LR0	010	B0X5N3	12/16/99	13:12
D6LR1	011	B0X5N4	12/16/99	13:23
D6LR2	012	B0X5N5	12/16/99	13:40

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SAMPLE SUMMARY

F9L230207

WO #	SAMPLE#	CLIENT SAMPLE ID	DATE	TIME
D6TCG	001	B0X5Y7	12/17/99	13:22
D6TD3	002	B0X5Y8	12/17/99	13:34
D6TDP	003	B0X5Y9	12/17/99	13:46

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

METHODS SUMMARY

F9L200157

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3050B
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A	SW846 7471A
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD
PCBs by SW-846 8082	SW846 8082	SW846 3541
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3050B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

PCBs Daynes 1/24/2000

~~SEMI-VOLATILE ORGANICS~~

BECHTEL HANFORD, INC.

Client Sample ID: B0X5M4

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...: F9L200157-001 **Work Order #...:** D6LQ3108 **Matrix.....:** SOLID
Date Sampled...: 12/16/99 **Date Received..:** 12/17/99
Prep Date.....: 12/29/99 **Analysis Date..:** 12/30/99
Prep Batch #...: 9364258
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**510**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	54	(15 - 168)
Decachlorobiphenyl	103	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5M5

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...:	F9L200157-002	**Work Order #...:**	D6LQK104	**Matrix.....:**	SOLID
Date Sampled...:	12/16/99	**Date Received..:**	12/17/99		
Prep Date.....:	12/29/99	**Analysis Date..:**	01/03/00		
Prep Batch #...:	9364258				
Dilution Factor:	5	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	160	ug/kg
Aroclor 1221	ND	160	ug/kg
Aroclor 1232	ND	160	ug/kg
Aroclor 1242	ND	160	ug/kg
Aroclor 1248	ND	160	ug/kg
Aroclor 1254	ND	160	ug/kg
Aroclor 1260	**970**	**160**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	105	(15 - 168)
Decachlorobiphenyl	73	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5M6

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...:	F9L200157-003	**Work Order #...:**	D6LQL104	**Matrix.....:**	SOLID
Date Sampled...:	12/16/99	**Date Received..:**	12/17/99		
Prep Date.....:	12/29/99	**Analysis Date..:**	01/03/00		
Prep Batch #...:	9364258				
Dilution Factor:	5	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	160	ug/kg
Aroclor 1221	ND	160	ug/kg
Aroclor 1232	ND	160	ug/kg
Aroclor 1242	ND	160	ug/kg
Aroclor 1248	ND	160	ug/kg
Aroclor 1254	ND	160	ug/kg
Aroclor 1260	**830**	**160**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	80	(15 - 168)
Decachlorobiphenyl	82	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5M7

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...: F9L200157-004 Work Order #...: D6LQM104 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
Prep Date.....: 12/29/99 Analysis Date..: 01/03/00
Prep Batch #...: 9364258
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**280**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	24	(15 - 168)
Decachlorobiphenyl	61	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5M8

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...: F9L200157-005 **Work Order #...:** D6LQN104 **Matrix.....:** SOLID
Date Sampled...: 12/16/99 **Date Received..:** 12/17/99
Prep Date.....: 12/29/99 **Analysis Date..:** 12/30/99
Prep Batch #...: 9364258
Dilution Factor: 1 **Method.....:** SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**350**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	76	(15 - 168)
Decachlorobiphenyl	206	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5M9

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...: F9L200157-006 Work Order #...: D6LQP104 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
Prep Date.....: 12/29/99 Analysis Date..: 12/30/99
Prep Batch #...: 9364258
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**230**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	65	(15 - 168)
Decachlorobiphenyl	144	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5N0

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...:	F9L200157-007	**Work Order #...:**	D6LQV104	**Matrix.....:**	SOLID
Date Sampled...:	12/16/99	**Date Received..:**	12/17/99		
Prep Date.....:	12/29/99	**Analysis Date..:**	12/30/99		
Prep Batch #...:	9364258				
Dilution Factor:	1	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**290**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(15 - 168)
Decachlorobiphenyl	60	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5N1

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...: F9L200157-008 Work Order #...: D6LQW104 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
Prep Date.....: 12/29/99 Analysis Date..: 12/30/99
Prep Batch #...: 9364258
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**240**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	68	(15 - 168)
Decachlorobiphenyl	65	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5N2

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...: F9L200157-009 Work Order #...: D6LQX104 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
Prep Date.....: 12/29/99 Analysis Date..: 12/30/99
Prep Batch #...: 9364258
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**280**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	44	(15 - 168)
Decachlorobiphenyl	25	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5N3

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...:	F9L200157-010	**Work Order #...:**	D6LR0104	**Matrix.....:**	SOLID
Date Sampled...:	12/16/99	**Date Received..:**	12/17/99		
Prep Date.....:	12/29/99	**Analysis Date..:**	01/03/00		
Prep Batch #...:	9364258				
Dilution Factor:	1	**Method.....:**	SW846 8082		

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**130**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	79	(15 - 168)
Decachlorobiphenyl	46	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5N4

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...: F9L200157-011 Work Order #...: D6LR1104 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
Prep Date.....: 12/29/99 Analysis Date..: 01/03/00
Prep Batch #...: 9364258
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**260**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	91	(15 - 168)
Decachlorobiphenyl	64	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5N5

~~GC Semivolatiles~~ PCBs Dayes 1/24/2000

Lot-Sample #...: F9L200157-012 Work Order #...: D6LR2104 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
Prep Date.....: 12/29/99 Analysis Date..: 01/03/00
Prep Batch #...: 9364258
Dilution Factor: 1 Method.....: SW846 8082

PARAMETER	RESULT	REPORTING LIMIT	UNITS
Aroclor 1016	ND	33	ug/kg
Aroclor 1221	ND	33	ug/kg
Aroclor 1232	ND	33	ug/kg
Aroclor 1242	ND	33	ug/kg
Aroclor 1248	ND	33	ug/kg
Aroclor 1254	ND	33	ug/kg
Aroclor 1260	**590**	**33**	**ug/kg**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	100	(15 - 168)
Decachlorobiphenyl	79	(10 - 207)

BECHTEL HANFORD, INC.

Client Sample ID: B0X5M4

TOTAL Metals

Lot-Sample #...: F9L200157-001 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 22

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	0.040	0.033	mg/kg	SW846 7471A	01/10/00	D6LQ3105
		Dilution Factor: 1		MDL.....: 0.0070		
Prep Batch #...: 0011206						
Chromium	87.9	1.0	mg/kg	SW846 6010B	01/11/00	D6LQ310E
		Dilution Factor: 1		MDL.....: 0.30		
Lead	23.0	0.30	mg/kg	SW846 6010B	01/11/00	D6LQ3102
		Dilution Factor: 1		MDL.....: 0.15		

BECHTEL HANFORD, INC.

Client Sample ID: B0X5M5

TOTAL Metals

Lot-Sample #...: F9L200157-002 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 12

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	0.10	0.033	mg/kg	SW846 7471A	01/10/00	D6LQK103
		Dilution Factor: 1		MDL.....: 0.0070		
Prep Batch #...: 0011206						
Chromium	92.0	1.0	mg/kg	SW846 6010B	01/11/00	D6LQK10A
		Dilution Factor: 1		MDL.....: 0.30		
MW 3-17-00						
~~Chromium~~	~~92.0~~	~~1.0~~	~~mg/kg~~	~~SW846 6010B~~	~~01/11/00~~	~~D6LQK10C~~
		Dilution Factor: 1		MDL.....: 0.30		
Lead	12.7	0.30	mg/kg	SW846 6010B	01/11/00	D6LQK102
		Dilution Factor: 1		MDL.....: 0.15		

BECHTEL HANFORD, INC.

Client Sample ID: B0X5M6

TOTAL Metals

Lot-Sample #...: F9L200157-003 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 16

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	0.077	0.033	mg/kg	SW846 7471A	01/10/00	D6LQL103
		Dilution Factor: 1		MDL.....: 0.0070		
Prep Batch #...: 0011206						
Chromium	36.0	1.0	mg/kg	SW846 6010B	01/11/00	D6LQL105
		Dilution Factor: 1		MDL.....: 0.30		
Lead	17.5	0.30	mg/kg	SW846 6010B	01/11/00	D6LQL102
		Dilution Factor: 1		MDL.....: 0.15		

BECHTEL HANFORD, INC.

Client Sample ID: B0X5M7

TOTAL Metals

Lot-Sample #...: F9L200157-004 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 16

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	**0.094**	**0.033**	**mg/kg**	**SW846 7471A**	**01/10/00**	**D6LQM103**
		Dilution Factor: 1		MDL.....: 0.0070		
Prep Batch #...: 0011206						
Chromium	**37.6**	**1.0**	**mg/kg**	**SW846 6010B**	**01/11/00**	**D6LQM105**
		Dilution Factor: 1		MDL.....: 0.30		
Lead	**21.5**	**0.30**	**mg/kg**	**SW846 6010B**	**01/11/00**	**D6LQM102**
		Dilution Factor: 1		MDL.....: 0.15		

BECHTEL HANFORD, INC.

Client Sample ID: B0X5M8

TOTAL Metals

Lot-Sample #...: F9L200157-005 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 21

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	ND	0.033	mg/kg	SW846 7471A	01/10/00	D6LQN103
		Dilution Factor: 1		MDL.....: 0.0070		
Prep Batch #...: 0011206						
Chromium	**26.3**	**1.0**	**mg/kg**	**SW846 6010B**	**01/11/00**	**D6LQN105**
		Dilution Factor: 1		MDL.....: 0.30		
Lead	**19.0**	**0.30**	**mg/kg**	**SW846 6010B**	**01/11/00**	**D6LQN102**
		Dilution Factor: 1		MDL.....: 0.15		

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BECHTEL HANFORD, INC.

Client Sample ID: B0X5M9

TOTAL Metals

Lot-Sample #...: F9L200157-006 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 22

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	0.019 B	0.033	mg/kg	SW846 7471A	01/10/00	D6LQP103
		Dilution Factor: 1		MDL.....: 0.0070		
Prep Batch #...: 0011206						
Chromium	32.0	1.0	mg/kg	SW846 6010B	01/11/00	D6LQP105
		Dilution Factor: 1		MDL.....: 0.30		
Lead	2.3	0.30	mg/kg	SW846 6010B	01/11/00	D6LQP102
		Dilution Factor: 1		MDL.....: 0.15		

NOTE(S):

B Estimated result. Result is less than RL.

Results and reporting limits have been adjusted for dry weight.

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BECHTEL HANFORD, INC.

Client Sample ID: B0X5N0

TOTAL Metals

Lot-Sample #...: F9L200157-007 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 22

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	5.9	0.33	mg/kg	SW846 7471A	01/10/00	D6LQV103
		Dilution Factor: 10		MDL.....: 0.070		
Prep Batch #...: 0011206						
Chromium	11.5	1.0	mg/kg	SW846 6010B	01/11/00	D6LQV105
		Dilution Factor: 1		MDL.....: 0.30		
Lead	7.5	0.30	mg/kg	SW846 6010B	01/11/00	D6LQV102
		Dilution Factor: 1		MDL.....: 0.15		

BECHTEL HANFORD, INC.

Client Sample ID: B0X5N1

TOTAL Metals

Lot-Sample #...: F9L200157-008 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 14

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	0.32	0.033	mg/kg	SW846 7471A	01/10/00	D6LQW103
		Dilution Factor: 1		MDL.....: 0.0070		
Prep Batch #...: 0011206						
Chromium	37.6	1.0	mg/kg	SW846 6010B	01/11/00	D6LQW105
		Dilution Factor: 1		MDL.....: 0.30		
Lead	134	0.30	mg/kg	SW846 6010B	01/11/00	D6LQW102
		Dilution Factor: 1		MDL.....: 0.15		

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BECHTEL HANFORD, INC.

Client Sample ID: B0X5N2

TOTAL Metals

Lot-Sample #...: F9L200157-009 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 10

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	15.4	0.33	mg/kg	SW846 7471A	01/10/00	D6LQX103
		Dilution Factor: 10		MDL.....: 0.070		
Prep Batch #...: 0011206						
Chromium	73.8	1.0	mg/kg	SW846 6010B	01/11/00	D6LQX105
		Dilution Factor: 1		MDL.....: 0.30		
Lead	218	0.30	mg/kg	SW846 6010B	01/11/00	D6LQX102
		Dilution Factor: 1		MDL.....: 0.15		

BECHTEL HANFORD, INC.

Client Sample ID: B0X5N3

TOTAL Metals

Lot-Sample #...: F9L200157-010 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 18

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	0.52	0.033	mg/kg	SW846 7471A	01/10/00	D6LR0103
		Dilution Factor: 1		MDL.....: 0.0070		
Prep Batch #...: 0011206						
Chromium	37.0	1.0	mg/kg	SW846 6010B	01/11/00	D6LR0105
		Dilution Factor: 1		MDL.....: 0.30		
Lead	4.0	0.30	mg/kg	SW846 6010B	01/11/00	D6LR0102
		Dilution Factor: 1		MDL.....: 0.15		

BECHTEL HANFORD, INC.

Client Sample ID: B0X5N4

TOTAL Metals

Lot-Sample #...: F9L200157-011 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 20

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	0.078	0.033	mg/kg	SW846 7471A	01/10/00	D6LR1103
		Dilution Factor: 1		MDL.....: 0.0070		
Prep Batch #...: 0011206						
Chromium	88.7	1.0	mg/kg	SW846 6010B	01/11/00	D6LR1105
		Dilution Factor: 1		MDL.....: 0.30		
Lead	6.3	0.30	mg/kg	SW846 6010B	01/11/00	D6LR1102
		Dilution Factor: 1		MDL.....: 0.15		

BECHTEL HANFORD, INC.

Client Sample ID: B0X5N5

TOTAL Metals

Lot-Sample #...: F9L200157-012 Matrix.....: SOLID
Date Sampled...: 12/16/99 Date Received..: 12/17/99
% Moisture.....: 14

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0010413						
Mercury	0.96	0.033	mg/kg	SW846 7471A	01/10/00	D6LR2103
		Dilution Factor: 1		MDL.....: 0.0070		
Prep Batch #...: 0011206						
Chromium	33.6	1.0	mg/kg	SW846 6010B	01/11/00	D6LR2105
		Dilution Factor: 1		MDL.....: 0.30		
Lead	6.0	0.30	mg/kg	SW846 6010B	01/11/00	D6LR2102
		Dilution Factor: 1		MDL.....: 0.15		

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BECHTEL HANFORD, INC.

Client Sample ID: B0X5Y7

TOTAL Metals

Lot-Sample #...: F9L230207-001 Matrix.....: SOLID
Date Sampled...: 12/17/99 Date Received..: 12/20/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0007336						
Chromium	22.5	1.0	mg/kg	SW846 6010B	01/07-01/10/00	D6TCG103
		Dilution Factor: 1		MDL.....: 0.30		
Lead	6.4	0.30	mg/kg	SW846 6010B	01/07-01/10/00	D6TCG101
		Dilution Factor: 1		MDL.....: 0.15		
Prep Batch #...: 0010413						
Mercury	0.11	0.033	mg/kg	SW846 7471A	01/10/00	D6TCG102
		Dilution Factor: 1		MDL.....: 0.0070		

BECHTEL HANFORD, INC.

Client Sample ID: B0X5Y8

TOTAL Metals

Lot-Sample #...: F9L230207-002 Matrix.....: SOLID
Date Sampled...: 12/17/99 Date Received..: 12/20/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0007336						
Chromium	17.0	1.0	mg/kg	SW846 6010B	01/07-01/10/00	D6TD3103
		Dilution Factor: 1		MDL.....: 0.30		
Lead	4.5	0.30	mg/kg	SW846 6010B	01/07-01/10/00	D6TD3101
		Dilution Factor: 1		MDL.....: 0.15		
Prep Batch #...: 0010413						
Mercury	0.17	0.033	mg/kg	SW846 7471A	01/10/00	D6TD3102
		Dilution Factor: 1		MDL.....: 0.0070		

BECHTEL HANFORD, INC.

Client Sample ID: B0X5Y9

TOTAL Metals

Lot-Sample #...: F9L230207-003 Matrix.....: SOLID
Date Sampled...: 12/17/99 Date Received..: 12/20/99
% Moisture.....:

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 0007336						
Chromium	20.9	1.0	mg/kg	SW846 6010B	01/07-01/10/00	D6TDP103
		Dilution Factor: 1		MDL.....: 0.30		
Lead	11.6	0.30	mg/kg	SW846 6010B	01/07-01/10/00	D6TDP101
		Dilution Factor: 1		MDL.....: 0.15		
Prep Batch #...: 0010413						
Mercury	0.40	0.033	mg/kg	SW846 7471A	01/10/00	D6TDP102
		Dilution Factor: 1		MDL.....: 0.0070		