W01749

Quanterra
Environmental Services

Quanterra Incorporated
13715 Rider Trail North
Earth City, Missouri 63045

314 298-8566 Telephone
314 298-8757 Fax

# CERTIFICATE OF ANALYSIS

0048943

Bechtel Hanford Incorporated
3350 George Washington Way
Richland, Washington 99352

July 24, 1997

Attention: Joan Kessner

| | | |
|---|---|---|
| Project number | : | 550.232 |
| Date Received by Lab | : | June 27, 1997 |
| Number of Samples | : | Two (2) |
| Sample Type | : | Soil |
| SDG Number | : | W01749 |
| Data Deliverable | : | Summary |

## I. Introduction

On June 27, 1997, two (2) soil samples were received by Quanterra, St. Louis for chemical analysis. Upon receipt, the samples were given the following laboratory ID numbers to correspond with the specific client IDs:

| St. Louis ID | BHI ID | Richland ID | Matrix | Date of Receipt |
|---|---|---|---|---|
| 15202-001 | B0L942 | 70635501 | Soil | 06/27/97 |
| 15202-002 | B0L941 | 70635502 | Soil | 06/27/97 |

## II. Analytical Results/ Methodology

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

Analyses requested: Semivolatiles by EPA Method 8270. PCBs by EPA Method 8080. ICP Metals (As,Tl) by EPA Method 6010.

## III. Quality Control

A Laboratory Control Sample and Method Blank were analyzed with each preparation batch. A Matrix Spike and Matrix Spike Duplicate were performed per the protocol for each analyte in this SDG.

IV. Definitions

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

QCBLK- Quality Control Blank, Method Blank
QCLCS- Quality Control Laboratory Control Sample, Blank Spike

V. Comments

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

Volatiles
There are no comments or nonconformances associated with this analysis.

Semivolatiles
Sample 15202-001MS gave a high recovery for phenol-d5 surrogate at 116% (UCL=113%). All spike recoveries were in-control. In addition, phenol-d5 is not a surrogate of interest for the requested analyte list.

Pesticide/PCBs
There are no comments or nonconformances associated with this analysis.

Metals
There are no comments or nonconformances associated with this analysis.

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

Reviewed and approved:

Wade H. Price
Project Manager
e:\\price$\hanford\hanw11749.nar

Quanterra July 02, 1997 11:50 am

Account: 10722 Project: 550.232 Quanterra-Richland QAS No. 550.232 Rev. 0

Master Sample Login: 15202

Project Manager: W. Price

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

Sample Header Template:

| Sample No. | Client ID | C-Matrix | Date: Collected | Received | Due | Shipper | Rad Category | Rad Sample No. |
|---|---|---|---|---|---|---|---|---|
| Comments | | | | | | | | |
| # Container Type | Analysis | Class | Preservative | Anal. Due Date | Hold Date | Site | (Container Numbers:% Filled) | |
| Data: | | | | | | | | |
| 15202-001 | B0L942 | Soil | 20-JUN-97 13:25 | 27-JUN-97 16:00 | 11-JUL-97 | AIR BORNE | 1 | Screening not Required |
| RICHLAND I.D. 70635501//SEE QAS FOR TARGET LISTS. | | | | | | | | |
| 1 GW - Glass Jar-4oz | BNA/8270/Q4 | S | COLD | 09-JUL-97 | 04-JUL-97 | S6J | (312032:97) | |
| 1 | PCB/8080/Q4 | S | COLD | 09-JUL-97 | 04-JUL-97 | S6J | (312033:96) | |
| 1 GW - Glass Jar-2oz | ICAP/6010/Q4 | S | COLD | 09-JUL-97 | 17-DEC-97 | S6J | (312034:95) | |
| 1 | PM/IT/Q4 | S | COLD | 09-JUL-97 | 17-DEC-97 | S6J | (312034:95) | |
| 15202-001MS | B0L942 | Soil | 20-JUN-97 13:25 | 27-JUN-97 16:00 | 11-JUL-97 | AIR BORNE | 1 | Screening not Required |
| RICHLAND I.D. 70635501//SEE QAS FOR TARGET LISTS. | | | | | | | | |
| 1 GW - Glass Jar-4oz | BNA/8270/Q4 | S | COLD | 09-JUL-97 | 04-JUL-97 | S6J | (312032:97) | |
| 1 | PCB/8080/Q4 | S | COLD | 09-JUL-97 | 04-JUL-97 | S6J | (312033:96) | |
| 1 GW - Glass Jar-2oz | ICAP/6010/Q4 | S | COLD | 09-JUL-97 | 17-DEC-97 | S6J | (312034:95) | |
| 15202-001MSD | B0L942 | Soil | 20-JUN-97 13:25 | 27-JUN-97 16:00 | 11-JUL-97 | AIR BORNE | 1 | Screening not Required |
| RICHLAND I.D. 70635501//SEE QAS FOR TARGET LISTS. | | | | | | | | |
| 1 GW - Glass Jar-4oz | BNA/8270/Q4 | S | COLD | 09-JUL-97 | 04-JUL-97 | S6J | (312032:97) | |
| 1 | PCB/8080/Q4 | S | COLD | 09-JUL-97 | 04-JUL-97 | S6J | (312033:96) | |
| 1 GW - Glass Jar-2oz | ICAP/6010/Q4 | S | COLD | 09-JUL-97 | 17-DEC-97 | S6J | (312034:95) | |
| 15202-002 | B0L941 | Soil | 20-JUN-97 11:05 | 27-JUN-97 16:00 | 11-JUL-97 | AIR BORNE | 1 | Screening not Required |
| RICHLAND I.D. 70635502//SEE QAS FOR TARGET LISTS. | | | | | | | | |
| 1 GW - Glass Jar-4oz | BNA/8270/Q4 | S | COLD | 09-JUL-97 | 04-JUL-97 | S6J | (312035:97) | |
| 1 | PCB/8080/Q4 | S | COLD | 09-JUL-97 | 04-JUL-97 | S6J | (312036:96) | |
| 1 GW - Glass Jar-2oz | ICAP/6010/Q4 | S | COLD | 09-JUL-97 | 17-DEC-97 | S6J | (312037:95) | |
| 1 | PM/IT/Q4 | S | COLD | 09-JUL-97 | 17-DEC-97 | S6J | (312037:95) | |

*=Sample has not been rad screened.



000005

S 6 J

[redacted]

Temp 4°c cur# 11535/11486
ST Blue

# Chain of Custody Record

Quanterra Environmental Services

QUA 4124-1

Client: Becktel

Project Manager: Jodi Carnes

Date: 6-27-97

Chain Of Custody Number: 64625

Address:

Telephone Number (Area Code) Fax Number:

Lab Number:

Page 1 of 1

City | State | Zip Code | Site Contact | Lab Contact

Project Name: SAF B97-120

Carrier/Waybill Number:

Contract Purchase Order Quote No:

**Analysis** (Attach list if more space is needed)

SEE COC

Special Instructions/ Conditions of Receipt

| Sample I.D. No. and Description (Containers for each sample may be combined on one line) | Date | Time | Matrix: Aqueous | Matrix: Sed | Matrix: Soil | Containers & Preservatives: Unpres | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | ZnAc NaOH |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 166355501 BOL942 ↓ 2 ↓ 941 | Chemical Analysis Bottles | | | | | | | | | | |

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

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

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other VPH 7-11-97

QC Requirements (Specify) SDG WO1749

| | | | | | |
|---|---|---|---|---|---|
| 1 Relinquished By: Heidelberg Quanterra | Date: 6-27-97 | Time: 16:00 | 1 Received By: [signature] | Date: 6-28-97 | Time: 1100 |
| 2 Relinquished By | Date | Time | 2 Received By | Date | Time |
| 3 Relinquished By | Date | Time | 3 Received By | Date | Time |

Comments

900009

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

# CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B97-120-02 | Page 1 of 1

| | | | |
|---|---|---|---|
| **Collector** Doug Bowers/Bob Fahlberg | **Company Contact** Frank Gustafson | **Telephone No.** 373-5904 | **Project Coordinator** Koerner, CC | **Data Turnaround** 15 Days |
| **Project Designation** 300-FF-1 Process Trenches Verification/Screening Sampling | **Sampling Location** 300 FF-1 | | **SAF No.** B97-120 | |
| **Ice Chest No.** | **Field Logbook No.** EFL 1133-4 | | **Method of Shipment** Gov vehicle | |
| **Shipped To** Quanterra | **Offsite Property No.** | | **Bill of Lading/Air Bill No.** | |

**POSSIBLE SAMPLE HAZARDS/REMARKS**
Possible radioactive

**Special Handling and/or Storage**
cool 4C

SDG W01749

**SAMPLE ANALYSIS** 706355

| Sample No. | Matrix * | Sample Date | Sample Time | Preservation | None | None | None | Cool 4C | Cool 4C | None | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Type of Container | P | P | aG | aG | aG | aG | | | | |
| | | | | No. of Container(s) | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| | | | | Volume | 20ml | 20ml | 60ml | 120ml | 120ml | 1000ml | | | | |
| | | | | | Activity Scan | Isotopic Uranium 706356 | ICP Metals - 6010A (Add-on) (Arsenic, Thallium) | PCBs - 8080 | Semi-VOA - 8270A (TCL) (Benzo(a)pyrene, Chrysene) | Gamma Spectroscopy (Cobalt-60) 706356 | | | | |
| ~~B0L940~~ | S | 6/20/97 | 0940 | | X | X | X | X | X | X | | | B0L970 RS | |
| B0L942 01 | S | 6/20/97 | 1325 | | X | X | X | X | X | X | | | B0L972 | |
| ~~B0L943~~ | S | 6/20/97 | 1426 | | X | X | X | X | X | X | | | B0L973 RE | |
| B0L941 02 | S | 6/20/97 | 1105 | | X | X | X | X | X | X | | | B0L971 | |
| | | | | | | | | | | | | | | |
| | | | | | | | 100 | 100 | 100% | | | | | |
| | | | | | | | | | Recv | 6-27-97 | | | | |

**CHAIN OF POSSESSION**

| Relinquished By | Date/Time | Received By | Date/Time |
|---|---|---|---|
| R Fahlberg IRFahlberg | 6-26-97 1345 | Karen Nielsen | 6/26/97 1345 |
| Karen Nielsen | 6/26/97 1415 | [illegible] | 6-26-97 1415 |
| | | LIDEX-PDQ | |
| | | | |

**SPECIAL INSTRUCTIONS**

**Matrix ***

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

**LABORATORY SECTION** Received By ____ Title ____ Date/Time ____

**FINAL SAMPLE DISPOSITION** Disposal Method ____ Disposed By ____ Date/Time ____

0080