Radionuclide Results for SDG 222S20040157 (B1B0R8)
A4 GEA

Customer ID	Sample# R	A#	Analyte	Unit	Standard %	Blank	Result	Det Limit	Count Err
B1B0R8	S04M000259	E	Sr-89/90 Env. Solids	uCi/g	101	<6.53e-04	0.958	1.10E-03	1.1
B1B0R8	S04M000259	E	Pu-239/240 by TRU-SPEC Resin	uCi/g	101	<2.32e-03	0.042	2.80E-03	2.4
B1B0R8	S04M000259	E	Pu-238 by TRU-SPEC Resin IonEx	uCi/g	n/a	<2.44e-03	<2.89e-03	2.90E-03	10
B1B0R8	S04M000259	E	Sodium-22 by GEA	uCi/g	n/a	<1.98e-05	<7.55e-05	7.60E-05	n/a
B1B0R8	S04M000259	E	Sodium-24 by GEA	uCi/g	n/a	<1.63e-05	<6.19e-05	6.20E-05	n/a
B1B0R8	S04M000259	E	Potassium-40 by GEA	uCi/g	n/a	<5.04e-04	<1.59e-03	1.60E-03	n/a
B1B0R8	S04M000259	E	Cobalt-56 by GEA	uCi/g	n/a	<1.42e-05	<2.77e-04	2.80E-04	n/a
B1B0R8	S04M000259	E	Cobalt-57 by GEA	uCi/g	n/a	<7.61e-06	<6.63e-04	6.60E-04	n/a
B1B0R8	S04M000259	E	Cobalt-60 by GEA	uCi/g	n/a	<1.91e-05	<7.05e-05	7.10E-05	n/a
B1B0R8	S04M000259	E	Selenium-75 by GEA	uCi/g	n/a	<1.51e-05	<1.49e-03	1.50E-03	n/a
B1B0R8	S04M000259	E	Strontium-85 by GEA	uCi/g	n/a	<1.63e-05	<1.33e-03	1.30E-03	n/a
B1B0R8	S04M000259	E	Yttrium-88 by GEA	uCi/g	n/a	<1.32e-05	<4.79e-05	4.80E-05	n/a
B1B0R8	S04M000259	E	Niobium-94 by GEA	uCi/g	n/a	<1.55e-05	<2.28e-04	2.30E-04	n/a
B1B0R8	S04M000259	E	Zr/Nb-95 by GEA	uCi/g	n/a	<6.08e-05	<1.59e-03	1.60E-03	n/a
B1B0R8	S04M000259	E	Ruthenium-103 by GEA	uCi/g	n/a	<1.49e-05	<1.49e-03	1.50E-03	n/a
B1B0R8	S04M000259	E	Ru/Rh-106 by GEA	uCi/g	n/a	<2.92e-04	<0.0172	0.017	n/a
B1B0R8	S04M000259	E	Cadmium-109 by GEA	uCi/g	n/a	<1.74e-04	<0.0145	0.015	n/a
B1B0R8	S04M000259	E	Tin-113 by GEA	uCi/g	n/a	<1.79e-05	<2.06e-03	2.10E-03	n/a
B1B0R8	S04M000259	E	Antimony-125 by GEA	uCi/g	n/a	<3.73e-05	<5.26e-03	5.30E-03	n/a
B1B0R8	S04M000259	E	Iodine-131 by GEA	uCi/g	n/a	<1.33e-05	<1.47e-03	1.50E-03	n/a
B1B0R8	S04M000259	E	Cesium-134 by GEA	uCi/g	n/a	<1.41e-05	<8.68e-04	8.70E-04	n/a
B1B0R8	S04M000259	E	Cesium-137 by GEA	uCi/g	n/a	<2.48e-05	5.61	n/a	0.12
B1B0R8	S04M000259	E	Ce/Pr-144 by GEA	uCi/g	n/a	<1.15e-04	<0.0105	0.011	n/a
B1B0R8	S04M000259	E	Europium-152 by GEA	uCi/g	n/a	<2.27e-05	<2.01e-03	2.00E-03	n/a
B1B0R8	S04M000259	E	Europium-154 by GEA	uCi/g	n/a	<5.77e-05	<2.19e-04	2.20E-04	n/a
B1B0R8	S04M000259	E	Europium-155 by GEA	uCi/g	n/a	<2.14e-05	<1.65e-03	1.70E-03	n/a
B1B0R8	S04M000259	E	Mercury-203 by GEA	uCi/g	n/a	<1.07e-05	<1.11e-03	1.10E-03	n/a
B1B0R8	S04M000259	E	Thallium-208 by GEA	uCi/g	n/a	<1.46e-04	<0.0143	0.014	n/a
B1B0R8	S04M000259	E	Bismuth-212 by GEA	uCi/g	n/a	<2.30e-04	<5.21e-03	5.20E-03	n/a
B1B0R8	S04M000259	E	Lead-212 by GEA	uCi/g	n/a	<2.22e-05	<0.0484	0.048	n/a
B1B0R8	S04M000259	E	Bismuth-214 by GEA	uCi/g	n/a	<3.81e-05	<1.90e-03	1.90E-03	n/a
B1B0R8	S04M000259	E	Lead-214 by GEA	uCi/g	n/a	<3.28e-05	<3.17e-03	3.20E-03	n/a
B1B0R8	S04M000259	E	Radium-224 by GEA	uCi/g	n/a	<2.35e-04	<0.0211	0.021	n/a
B1B0R8	S04M000259	E	Radium-226 by GEA	uCi/g	n/a	<2.55e-04	<0.0240	0.024	n/a
B1B0R8	S04M000259	E	Actinium-228 by GEA	uCi/g	n/a	<7.51e-05	<6.81e-04	6.80E-04	n/a
B1B0R8	S04M000259	E	Thorium-228 by GEA	uCi/g	n/a	<6.34e-04	<0.292	0.29	n/a
B1B0R8	S04M000259	E	Thorium-229 by GEA	uCi/g	n/a	<2.52e-05	<2.11e-03	2.10E-03	n/a
B1B0R8	S04M000259	E	Uranium/Thorium-233 by GEA	uCi/g	n/a	<7.83e-03	<0.760	0.76	n/a
B1B0R8	S04M000259	E	Protactinium-233 by GEA	uCi/g	n/a	<2.37e-05	<2.60e-03	2.60E-03	n/a
B1B0R8	S04M000259	E	Protactinium-234m by GEA	uCi/g	n/a	<2.80e-03	<0.0150	0.015	n/a
B1B0R8	S04M000259	E	Thorium-234 by GEA	uCi/g	n/a	<2.37e-04	<0.0130	0.013	n/a
B1B0R8	S04M000259	E	Uranium-235 by GEA	uCi/g	n/a	<1.52e-05	<1.45e-03	1.40E-03	n/a
B1B0R8	S04M000259	E	Neptunium-237 by GEA	uCi/g	n/a	<5.73e-05	<0.0298	0.03	n/a
B1B0R8	S04M000259	E	Neptunium-239 by GEA	uCi/g	n/a	<2.60e-05	<2.32e-03	2.30E-03	n/a
B1B0R8	S04M000259	E	Plutonium-239 by GEA	uCi/g	n/a	<0.100	<9.17	9.2	n/a
B1B0R8	S04M000259	E	Americium-241 by GEA	uCi/g	n/a	<2.27e-05	<1.38e-03	1.40E-03	n/a
B1B0R8	S04M000259	E	Americium-243 by GEA	uCi/g	n/a	<1.74e-05	<8.47e-03	8.50E-03	n/a

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NOV 18 2004

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AUG 22 2005
EDMC

F04-014

00000001

facsimile transmittal

To:	Steve Trent or Doris Ayres	**Fax:**	(866)-252-5816
From:	Ruth Bushaw	**Date:**	8/2/2004
Re:	216-A-4 Borehole Sample	**Pages:**	4
CC:			

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Steve,

The attached is the receipt paperwork for the sample B1B0R8 from the 216-A-4 Char. Borehole. The sample was received at the laboratory on 8/2/04. The SDG number is 222S20040157. I was under the impression that we were receiving 2 g or soil. The lab has begun the prep and indicated that there was about 7 g of soil delivered. Due to the high activity of the samples the three requested analyses will be performed on the environmental digest.

Ruth

REQUEST FOR SAMPLE ANALYSIS (RSA)

Group ID No. (For lab use only)

1. Sample Origin	2. Date Sampled	4. Requestor's Name	6. CACN/COA	7. Cost Center
216-A-4 Char. Borehole	07/28/2004	SJ Trent	N/A	

Customer/Project Code	3. Submitted By	5. Requestor's Phone/MSIN/FAX
	P Gent	373-5869 A0-21

8. Customer ID No.	9. Laboratory Sample No.	10. Volume of Sample	11. Matrix of Sample	12. Requested Analyses	13. Expected Rang
B1B0R8		20 ml	soil	GEA screening, isotopic Pu, Sr-90	
				345 mR/hr deep; 1570 mR/hr shallow	

14. Sample Disposition
- ☒ Return to Customer
- ☐ Samples found to contain PCBs will be returned to the customer
- ☐ Dispose of per facility procedures with applied charges for analyses and disposal

Sample(s) Dose Rate at Contact

HPT Signature

15. QC Required ☒ Per 222-S Laboratory Quality Assurance Plan (HNF-SD-CP-QAPP-016)

☒ Other (list reference document or attach) rapid turnaround GEA, iso-Pu, Sr-90

16. Special Instructions (Special Storage Requirements, Reporting format, holding times, etc.)

rad screen by GEA, iso-Pu and Sr-90 analysis.
EFAX results to Steve Trent at 1-(866)-252-5816 as soon as available.

17. Requested Turnaround Time
- ☐ 2 Weeks ☐ 4 Weeks
- ☒ Other 2days/7days

18. Sample Received By: [signature] Date 8-2-04 Time 1110

19. Chain of Custody
- ☐ No ☒ Yes

Number:

A-8002-365 (03/02

GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number _____ CACN/COA 119144/ES20 Customer Identification Number SAF F04-015

2. List generator knowledge or description of process that produced sample. Or list description of sample source:

Characterization samples collected from a characterization borehole drilled near the 216-A-4 waste site

MSDS Available? ☐ No ☒ Yes Hanford MSDS No. _____

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?

By checking "unknown" the customer understands that no knowledge is available following a careful search.

	List Federal Waste Code(s):	List Constituent(s):			
P Codes:			☐ Yes	☒ No	☐ Unknown
U Codes:			☐ Yes	☒ No	☐ Unknown
K Codes:			☐ Yes	☒ No	☐ Unknown
F Codes:			☐ Yes	☒ No	☐ Unknown

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

D001:	☐ FP <100°F	☐ FP ≥100 <140°F	☐ DOT Oxidizer	☐ Yes	☒ No	☐ Unknown
D002:	☐ pH ≤2	☐ pH ≥12.5	☐ Solid Corrosive (WSC2)	☐ Yes	☒ No	☐ Unknown
D003:	☐ Cyanide	☐ Sulfide	☐ Water Reactive	☐ Other _____	☐ Yes	☒ No	☐ Unknown
D004-D043 (Identify applicable waste codes and concentrations):				(i.e., peroxide former, explosive, air reactive)	☐ Yes	☒ No	☐ Unknown

N/A

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):

N/A

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):

N/A

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated)

WT01:	☐ Yes	☒ No	☐ Unknown
WT02:	☐ Yes	☒ No	☐ Unknown
W001:	☐ Yes	☒ No	☐ Unknown

(*State mixture rule for ignitability)

WP01:	☐ Yes	☒ No	☐ Unknown
WP02:	☐ Yes	☒ No	☐ Unknown
WP03:	☐ Yes	☒ No	☐ Unknown
F003:*	☐ Yes	☒ No	☐ Unknown

List constituents and concentrations:

N/A

4. Is this material TSCA regulated for PCBs? ☐ Yes ☒ No ☐ Unknown ☐ Analysis Requested

List concentration if applicable: _____

If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

☐ PCB Liquid Waste ☐ PCB Bulk Product Waste ☐ PCB Transformer ≥500 ppm ☐ Unknown
☐ PCB Remediation Waste ☐ PCB R&D Waste ☐ PCB contaminated electrical equipment (capacitor/ballast) <500 ppm
☐ PCB Spill Material ☐ PCB Item ☐ Other PCB Waste (list) _____

5. Is this material TRU? ☐ Yes ☒ No ☐ Unknown

6 ACCURACY OF INFORMATION

Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign RA Bushaw for Steve Trent on telecon Date 7/22/04

RA Bushaw

FLUOR Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-019-007	PAGE 1 OF 1

COLLECTOR Pope/Pfister/Hughes/Wiberg	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** TRENT, SJ
SAMPLING LOCATION ~~216-U-3~~ 8DR 7/29/04 216-A-4 crib	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Waste Management		**SAF NO.** F04-019
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Govt. Vehicle
SHIPPED TO 222-S Lab Operations	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 80 **DATA TURNAROUND** ~~60 Days~~ / ~~60 Days~~ 7 days 8DR 7/29/04

AIR QUALITY ☐

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	20mL
SAMPLE ANALYSIS	Rad Screen; iso-Pu, Sr-90

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1B0R8	SOIL	8/2/04	1000	X

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J.S. Pope	8-2-04 1110	RL Chambers RL Chambers	8-2-04 1110

SPECIAL INSTRUCTIONS

The laboratory will also analyize for Iso Pu and Sr-90.

Rad screen by GEA due in 2 business days. Isotopic Pu (Pu-238, 239/240) and Sr-90 due in 7 days or as soon as possible.

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(03/03)

08/02/2004 15:17 FAX 509 373 4884 FH QA PROGRAMS 004

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