0072484

FIELD SCREENING
FINAL DATA DELIVERABLE COVER SHEET

Date: Monday, November 20, 2006

Sample Authorization Form (SAF) Number: F04-014

SDG Number (assigned by Sample Management): FP0359 Daynes 11/22/06

Attachments (check all that apply or N/A):

X	Test Results
N/A	Narrative Summary
N/A	Chain of Custody(s)
X	Logbook Pages
N/A	Anomaly Report

Total number of pages (including cover sheet): ~~22~~ 43 TMT 11/22/06

Comments:
200-UP-1 OU GW C4)99

UNABLE TO LOCATE CHAINS OF CUSTODY.
ORIGINIALLY THE DATA WAS NOT TO BE ENTERED INTO HEIS
THESE TESTS WERE CONDUCTED USING QC-2

JAN 2007 RECEIVED

Analyst Signature — Date 11/20/06

Reviewer's Signature — Date 1/9/07

Distribution: CPP Sample Management A0-21
Project (Specify)

Requires distribution to listed project personnel by Sample Management (check if applicable)

RECEIVED MAR 21 2007 EDMC

200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater
C4200/699-35-70B
SAF: F04-014
Logbook: HNF-N-384 1

Hels	Trip Blank	Sampler	Sample Date	Sample Time	PNNL - Chain #	logbook Page	Depth (ft)
B19J05	B19176	DJA/PMG	8/18/2004	10:05	F04-014-105	6, 7, 8, 9	275
B19J06	B19177	DJA	8/31/2004	13:28	F04-014-106	14, 15	305
B19J07	B19178	PMG/ROM	9/9/2004	9:15	F04-014-107	26, 27	340
B19J08	B19179	DJA	9/14/2004	11:20	F04-014-108	33, 34, 35	375
B19J09	B19180	DJA/ROM	9/24/2004	7:40	F04-014-109	54, 55, 56	420

200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater
C4298/699-36-708
SAF: F04-014
Logbook: HNF-N-384 1

Hole	PNNL Analysis Date	PNNL Analysis			Sample EQL:			Instrument EQL:		
		Tc 99(ug/l)	Tc 99 (pCi/l)	U 238 (ug/l)	Tc 99(ug/l)	Tc 99 (pCi/l)	U 238 (ug/l)	Tc 99(ug/l)	Tc 99 (pCi/l)	U 238 (ug/l)
B19J05	9/7/2004	0.009	153	1.13	<0.003	<50.9	<0.003	<0.001	<17.0	<0.001
B19J06	9/7/2004	<0.003	<50.9	0.204	<0.003	<50.9	<0.003	<0.001	<17.0	<0.001
B19J07	9/15/2004	(0.001)	(17.0)	0.159	<0.030	<509	<0.015	<0.010	<170	<0.005
B19J08	9/23/2004	0.002	(32.0)	0.803	<0.002	<33.9	<0.002	<0.001	<17.0	<0.001
B19J09	9/28/2004	<0.010	<170	0.065	<0.010	<170	<0.010	<0.005	<84.8	<0.005

ICPMS Summary
Technical Procedure: PNNL-AGG-415, rev 0
Analyzed by Keith Geiszler
Reviewed by CFB
Sample Set #NA
EQL = Estimated Quantification limit.
< = Instrument returned a zero or negative number. <Sample EQL is reported result.
(###) Reported value is below Estimated Quantification Limit
Sample EQL = Instrument EQL x Sample dilution factor.

ICPMS Summary for B19J05 and B19J06 Samples
Technical Procedure: PNNL-AGG-415, rev 0
Analyzed by Keith Geiszler
Reviewed by CFB
Sample Set #NA
Samples submitted for analysis 09-02-04
EQL: = Estimated Quantification limit.
< = Instrument returned a zero or negative number. <Sample EQL is reported result.
Sample EQL = Instrument EQL x Sample dilution factor.
Analyst Note: Summary page is color coated for EQL determination. Final copy must be printed with a color copi

	Tc 99	Tc 99	U 238
Instrument EQL:	<0.001	<17.0	<0.001
Sample EQL:	<0.003	<50.9	<0.003
Sample ID	µg/l	pCi/L	µg/l
UP-1 B19J05	0.009	153	1.13
UP-1 B19J06	<0.003	<50.9	0.204

ICPMS Dilutions for Stuart Lutrell
Analyzed by KNG
Samples submitted for analysis on 09-02-04

Indicates values used to calculate final concentration.

Sample ID	Dilution	Instr. Reading	Conc ug/l	Dilution	Reading	ug/l	Average ug/l	STDEV	% Difference	%RSD	Final ug/l
Tc 99											
UP-1 B19J05	3	0.0031	0.01	5	0.0018	0.01	0.009	0	5	4	0.009
UP-1 B19J06	3	0.0000	0.00	5	0.0000	0.00	0.000	0	8	5	0.000
U 238											
UP-1 B19J05	3	0.3737	1.12	5	0.2282	1.14	1.131	0	2	1	1.13
UP-1 B19J06	3	0.0663	0.20	5	0.0417	0.21	0.204	0	5	3	0.204

ICP-MS Spike Recoveries for Stuart Lutrell
Submitted for Analysis on 09-02-04
Analyzed by Keith Geiszler
Successful spike recoveries
Unsuccessful spike recoveries

Sample ID	Dilution	Unspiked Reading ug/l	Spike ug/l	Spiked Reading ug/l	% Recovery
Tc 99					
UP-1 B19J05	5	0.0018	0.050	0.0467	90
UP-1 B19J05	5	0.0018	0.200	0.1902	94
UP-1 B19J06	5	0.0000	0.050	0.0493	99
UP-1 B19J06	5	0.0000	0.300	0.4772	159
U 238					
UP-1 B19J05	5	0.2282	0.050	0.2711	86
UP-1 B19J05	5	0.2282	0.200	0.4134	93
UP-1 B19J06	5	0.0417	0.050	0.0893	95
UP-1 B19J06	5	0.0417	0.300	0.5170	158

Summary by Sample

	Tc99	U238	Tl205
blank 1			
blank 2			
0.01 ppb (58640-26)			
0.025 ppb (58640-26)			
0.05 ppb (58640-26)	0.0501	0.0500	
0.1 ppb (58640-26)	0.1025	0.1005	
0.25 ppb (58640-26)	0.2443	0.2502	
0.5 ppb (58640-26)	0.5002	0.4988	
1.0 ppb (58640-26)	0.9996	1.0030	
5.0 ppb (58640-26)	5.0029	5.0012	
Blank 3	0.0020	0.0043	
Blank 4	0.0013	0.0037	
0.001 ppb check	0.0022	0.0046	
0.005 ppb check	0.0058	0.0083	
0.01 ppb check	0.0106	0.0131	
0.025 ppb check	0.0249	0.0286	
0.05 ppb check	0.0479	0.0512	
0.1 ppb IND check	0.1054	0.1040	
0.25 ppb check	0.2433	0.2512	
0.5 ppb check	0.4885	0.4879	
1.0 ppb IND check	1.0752	1.0577	
5.0 ppb check	4.9182	4.9569	
Blank 5	0.0019	0.0044	
Blank 6	0.0013	0.0039	
3x UP-1 B19J05	0.0043	0.3775	
3x UP-1 B19J06	0.0013	0.0700	
5x UP-1 B19J05	0.0030	0.2320	
5x UP-1 B19J05 +0.05	0.0479	0.2748	
5x UP-1 B19J05 +0.2	0.1915	0.4171	
5x UP-1 B19J06	0.0013	0.0454	
5x UP-1 B19J06 +0.05	0.0505	0.0930	
5x UP-1 B19J06 +0.3	0.4785	0.5207	
5x 404 1month	0.0605	6.1566	
5x 404D 1month	0.0491	4.6095	
Blank 7	0.0013	0.0053	
0.10 ppb IND check	0.1032	0.1033	
1.0 ppb IND check	1.0753	1.0631	
Blank 8	0.0015	0.0041	
5x 405 1month	0.0374	3.9349	
5x 405D 1month	0.0419	4.6256	
5x 404 SWE6B	0.0629	0.2741	
5x 405 SWE6B	0.0432	0.2515	
Blank 9	0.0012	0.0041	
Blank 10	0.0012	0.0038	
0.001 ppb check	0.0021	0.0047	
0.005 ppb check	0.0057	0.0083	
0.01 ppb check	0.0108	0.0131	
0.025 ppb check	0.0243	0.0271	
0.05 ppb check	0.0473	0.0507	
0.1 ppb IND check	0.1038	0.1039	
0.25 ppb check	0.2362	0.2494	
0.5 ppb check	0.4785	0.4873	
1.0 ppb IND check	1.0539	1.0505	
5.0 ppb check	4.7819	4.9101	
Blank 11	0.0021	0.0044	

9/8/2004 8:04

MS090704 ICPMS

Sample ID	Tc99	U238	
blank 1			
blank 2			
0.01 ppb (58640-26)			
0.025 ppb (58640-26)			
0.05 ppb (58640-26)	0.0501	0.0500	
0.1 ppb (58640-26)	0.1025	0.1005	
0.25 ppb (58640-26)	0.2443	0.2502	
0.5 ppb (58640-26)	0.5002	0.4988	
1.0 ppb (58640-26)	0.9996	1.0030	
5.0 ppb (58640-26)	5.0029	5.0012	
Blank 3	0.0020	0.0043	
Blank 4	0.0013	0.0037	
0.001 ppb check	0.0009	0.0009	
0.005 ppb check	0.0045	0.0046	
0.01 ppb check	0.0093	0.0094	
0.025 ppb check	0.0236	0.0249	
0.05 ppb check	0.0467	0.0475	**Data is blank corrected to correct for**
0.1 ppb IND check	0.1041	0.1003	**matrix and improve data quality.**
0.25 ppb check	0.2420	0.2475	
0.5 ppb check	0.4872	0.4842	
1.0 ppb IND check	1.0739	1.0540	
5.0 ppb check	4.9169	4.9532	
Blank 5	0.0006	0.0007	
Blank 6	0.0001	0.0002	
3x UP-1 B19J05	0.0031	0.3737	
3x UP-1 B19J06	0.0000	0.0663	
5x UP-1 B19J05	0.0018	0.2282	
5x UP-1 B19J05 +0.05	0.0467	0.2711	
5x UP-1 B19J05 +0.2	0.1902	0.4134	
5x UP-1 B19J06	0.0000	0.0417	
5x UP-1 B19J06 +0.05	0.0493	0.0893	
5x UP-1 B19J06 +0.3	0.4772	0.5170	
5x 404 1month	0.0592	6.1529	Samples not part of data set.
5x 404D 1month	0.0479	4.6058	Samples not part of data set.
Blank 7	0.0000	0.0016	
0.10 ppb IND check	0.1019	0.0996	
1.0 ppb IND check	1.0740	1.0594	
Blank 8	0.0002	0.0004	
5x 405 1month	0.0361	3.9312	Samples not part of data set.
5x 405D 1month	0.0406	4.6219	Samples not part of data set.
5x 404 SWE6B	0.0616	0.2704	Samples not part of data set.
5x 405 SWE6B	0.0419	0.2478	Samples not part of data set.
Blank 9	-0.0001	0.0004	
Blank 10	-0.0001	0.0001	
0.001 ppb check	0.0009	0.0009	
0.005 ppb check	0.0046	0.0046	
0.01 ppb check	0.0096	0.0094	
0.025 ppb check	0.0232	0.0234	
0.05 ppb check	0.0462	0.0470	
0.1 ppb IND check	0.1027	0.1002	
0.25 ppb check	0.2350	0.2457	
0.5 ppb check	0.4753	0.4836	
1.0 ppb IND check	1.0527	1.0468	
5.0 ppb check	4.7807	4.9064	
Blank 11	0.0008	0.0006	

9/8/2004 8:04

3x UP-1 B19J05	0.0031	0.3737
3x UP-1 B19J06	0.0000	0.0663
5x UP-1 B19J05	0.0018	0.2282
5x UP-1 B19J06	0.0000	0.0417
5x UP-1 B19J05 +0.05	0.0467	0.2711
5x UP-1 B19J05 +0.2	0.1902	0.4134
5x UP-1 B19J06 +0.05	0.0493	0.0893
5x UP-1 B19J06 +0.3	0.4772	0.5170

HNF-N-384-1

00000008

200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-013 (200-UP-1 Remedial Investigation Sampling and Analysis - Soil)
F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-384 1
200 West - 699-36-70B/C4299

DJAlexander 8/18/04

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Sample Date: 8/18/2004
Sampler(s): Deb Alexander & Philip Gent
Procedures:
CP-CPP-EE-01, 1.5, Rev 4.0, Field Logbooks
CP-CPP-EE-01, 3.0, Rev. 4.0, Chain of Custody
CP-CPP-EE-01, 3.1, Rev. 3.0, Sample Packaging and Shipping
CP-CPP-EE-01, 1.0, Rev. 3.0, Soil and Sediment Sampling
CP-CPP-EE-01, 4.5, Rev. 0, Sample Compositing
CP-CPP-QA-03, 5.1, Rev. 3.0, Field Sampling, Quality Assurance Program Plan

Time	Description
7:00	On site at C4299 to take water samples.
7:30-9:30	Getting pump set and trying to get water to clear up for sampling.
10:55	Started taking water sample sets.
11:56	Delivered sample sets to WSCF labs.
13:50	Logged remaining sample sets into Refrigerator #1 at MO-026 for off-site shipment.

HEIS NUMBER		B19J18	B19176	B19162	B19156	B19156	B19J03	B19150
DEPTH		275 ft	TRIP BLANK	275 ft	275 ft	275 ft	275 ft	275 ft
Chain of Custody Number		F04-014-072	F04-014-026	F04-014-015	F04-014-010	F04-014-010	F04-014-105	F04-014-005
Media		Water	Water	Water	Water	Water	Water	Water
Laboratory		Field Analysis	WSCF	WSCF	Eberline	Lionville (Recra)	PNL - 325	WSCF
Sample Time		10:05	10:05	10:05	10:05	10:05	10:05	10:05
VOA by Field GC; Conductivity, Temperature, Turbidity, Color_TKFLD:Iron-II Ion (Iron-II Ion)	Jar Size	(3 ea) 40 mL aGs*						(4 ea) 40 mL aGs*
	Preservative	Cool 4C						HCL to pH<2; Cool 4C
	Lot Number	B 303404O						HA 3321040
Conductivity, Temperature, Turbidity, Color_TKFLD:Iron-II Ion (Iron-II Ion)	Jar Size	60 mL aG						
	Preservative	Cool 4C						
	Lot Number	G/2 0207010						
VOA - 8260A(TCL); VOA-8260A (Add-On) (1-Butanol)	Jar Size		(4 ea) 40 mL aGs*					
	Preservative		Cool 4C					
	Lot Number		B 303404O					
Activity Scan	Jar Size			125 mL-Poly				
	Preservative			None				
	Lot Number			L/4 2143060				
Carbon 14	Jar Size				125 mL Poly			
	Preservative				None			
	Lot Number				L/4 2143060			
Isotopic Fractionation	Jar Size				1000 mL Poly			
	Preservative				HNO3 to pH <2			
	Lot Number				C 3079020			
Iodine-129	Jar Size				(4ea) 1000 mL Poly			
	Preservative				None			
	Lot Number				C 3079020			
Selenium-79	Jar Size				1000 mL Poly			
	Preservative				HNO3 to pH <2			
	Lot Number				C 3079020			
RSK175_VOA (Methane)	Jar Size					(3ea) 40 mL aGs*		
	Preservative					Cool 4C		
	Lot Number					HA 3321040		

Reviewed By [illegible] 8/18/04

200-UP-1 / C4244
DJAlexander / DJAlexander

DJAlexander / DJAlexander 8/18/04

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200-UP-1 / C4299
JD Alexander / PJ Alexander

200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-013 (200-UP-1 Remedial Investigation Sampling and Analysis - Soil)/
F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-384-1
200 West - 699-36-70B/C4299

Sample Date: 8/18/2004
Sampler(s): Deb Alexander & Philip Gent
Procedures:
CP-GPP-EE-01, 1.5, Rev 4.0, Field Logbooks
CP-GPP-EE-01, 3.0, Rev. 4.0, Chain of Custody
CP-GPP-EE-01, 3.1, Rev. 3.0, Sample Packaging and Shipping
CP-GPP-EE-01, 4.0, Rev. 3.0, Soil and Sediment Sampling
CP-GPP-EE-01, 4.5, Rev. 0, Sample Compositing
CP-GPP-QA-02, 5.1, Rev. 3.0, Field Sampling Quality Assurance Program Plan

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Time	Description
7:00	On site at C4299 to take water samples.
7:30-9:30	Getting pump set and trying to get water to clear up for sampling.
10:55	Started taking water sample sets.
11:56	Delivered sample sets to WSCF labs.
13:50	Logged remaining sample sets into Refrigerator #1 at MO-026 for off-site shipment.

HEIS NUMBER		B193H8	B19176	B19162	B19156	B19156	B19J05	B19150
DEPTH		275 ft	TRIP BLANK	275 ft	275 ft	275 ft	275 ft	275 ft
Chain of Custody Number		F04-014-072	F04-014-026	F04-014-015	F04-014-010	F04-014-010	F04-014-105	F04-014-005
Media		Water	Water	Water	Water	Water	Water	Water
Laboratory		Field Analysis	WSCF	WSCF	Eberline	Lionville (Recra)	PNL - 325	WSCF
Sample Time		10:05	10:05	10:05	10:05	10:05	10:05	10:05
NO2/NO3 - 353.2	Jar Size					500 mL Poly		
	Preservative					H2SO4 to pH<2; Cool 4C		
	Lot Number					L 4044070		
Sulfides - 9030	Jar Size					500 mL Poly		
	Preservative					ZnAc+NaOH to pH>9;Cool 4C		
	Lot Number					L 4044070		
Alkalinity - 310.1	Jar Size					250 mL Poly		
	Preservative					Cool 4C		
	Lot Number					L/2 3223020		
TIC - 415.1M	Jar Size					120 mL aG		
	Preservative					Cool 4C		
	Lot Number					O 3007020		
TOC - 415.1	Jar Size					500 mL aG		
	Preservative					HCL to pH <2; Cool 4C		
	Lot Number					W 3069020		
Tc-99 by ICPMS (Technetium-99)	Jar Size						1000 mL Poly	
	Preservative						HNO3 to pH <2	
	Lot Number						C 3079020	
Alcohols, Glycols & Ketones - 8015 (Diyl Acetate)	Jar Size							(3 ea) 40 mL aGs*
	Preservative							Cool 4C
	Lot Number							B 3034040
Semi-VOA - 8270A (TCL); Semi-VOA--8270A (Add-on) (2,4,6 Trichlorophenol, 3+4 Methylphenol (cresol, m+p), 3-Methylphenol (cresol, m-))	Jar Size							(4 ea) 1000 mL aG
	Preservative							Cool 4C
	Lot Number							C 3079020

Reviewed By [illegible] 8/26/04

JD Alexander / PJ Alexander 8/18/04

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HNF-N-384-1

200-UP-1 / C4299
DJ Alexander / GS / DJ Alexander

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200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-013 (200-UP-1 Remedial Investigation Sampling and Analysis - Soil)/
F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-384 1
200 West - 699-36-70B/C4299

DJ Alexander 8/18/04

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Sample Date: 8/18/2004
Sampler(s): Deb Alexander & Philip Gent
Procedures:

CP-GPP-EE-01, 1.5, Rev 4.0, Field Logbooks
CP-GPP-EE-01, 3.0, Rev. 4.0, Chain of Custody
CP-GPP-EE-01, 3.1, Rev. 3.0, Sample Packaging and Shipping
CP-GPP-EE-01, 4.0, Rev. 3.0, Soil and Sediment Sampling
CP-GPP-EE-01, 4.5, Rev. 0, Sample Compositing
CP-GPP-QA-02, 5.1, Rev. 3.0, Field Sampling, Quality Assurance Program Plan

Time	Description
7:00	On site at C4299 to take water samples.
7:30-9:30	Getting pump set and trying to get water to clear up for sampling.
10:55	Started taking water sample sets.
11:56	Delivered sample sets to WSCF labs.
13:50	Logged remaining sample sets into Refrigerator #1 at MO-026 for off-site shipment.

HEIS NUMBER		B193H8	B19176	B19162	B19156	B19156	B19J05	B19130
DEPTH		275 ft	TRIP BLANK	275 ft	275 ft	275 ft	275 ft	275 ft
Chain of Custody Number		F04-014-072	F04-014-026	F04-014-015	F04-014-010	F04-014-010	F04-014-105	F04-014-005
Media		Water	Water	Water	Water	Water	Water	Water
Laboratory		Field Analysis	WSCF	WSCF	Eberline	Lionville (Recra)	PNL - 325	WSCF
Sample Time		10:05	10:05	10:05	10:05	10:05	10:05	10:05
ICP/MS - 200.8 (TAL) [Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc]; ICP/MS-200.8 (Add on) [Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Thallium, Tin, Uranium]; 200.9_HG-ICPMS; ICP Metals - 6010A (TAL) [Aluminum, Calcium, Iron, Magnesium, Potassium, Sodium]; ICP Metals - 6010A (Add-on) [Boron, Lithium, Phosphorus, Silicon]	Jar Size							500 mL Poly
	Preservative							HNO3 to pH <2
	Lot Number							L 4044070
IC Anions - 300.0 [Chloride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate]	Jar Size							125 mL Poly
	Preservative							Cool 4C
	Lot Number							L/4 21 43060
Cations (IC) - 300.7 [Nitrogen in ammonium]	Jar Size							500 mL Poly
	Preservative							H2SO4 to pH <4
	Lot Number							L 4044070
pH-150.1	Jar Size							125 mL Poly
	Preservative							None
	Lot Number							L/4 21 43060
Chromium Hex - 7196	Jar Size							500 mL Poly
	Preservative							Cool 4C
	Lot Number							L 4044070
Total Cyanide - 9010	Jar Size							1000 mL Poly
	Preservative							NaOH to pH >=12; Cool 4C
	Lot Number							C 3079020
Gamma Spectroscopy [Cesium-137, Cobalt-60]	Jar Size							1000 mL Poly
	Preservative							HNO3 to pH <2
	Lot Number							C 3079020

DJ Alexander / DJ Alexander 8/18/04

Reviewed By [illegible] 8/20/04

HNF-N-384-1

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200-UP-1 / C4299
D Alexander / ES / 8/18/04 D Alexander

200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-013 (200-UP-1 Remedial Investigation Sampling and Analysis - Soil)/
F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-384-1
200 West - 699-36-70H/C4299

D Alexander 8/18/04

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Sample Date: 8/18/2004

Sampler(s): Deb Alexander & Philip Gent

Procedures:

CP-GPP-EE-01, 1.5, Rev 4.0, Field Logbooks
CP-GPP-EE-03, 3.8, Rev. 4.0, Chain of Custody
CP-GPP-EE-01, 3.1, Rev. 3.0, Sample Packaging and Shipping
CP-GPP-EE-01, 4.8, Rev. 3.0, Soil and Sediment Sampling
CP-GPP-EE-01, 1.3, Rev. 0, Sample Compositing
CP-GPP-QA-03, 3.1, Rev. 3.0, Field Sampling, Quality Assurance Program Plan

Time	Description
7:00	On site at C4299 to take water samples.
7:30-9:30	Getting pump set and trying to get water to clear up for sampling.
10:55	Started taking water sample sets.
11:56	Delivered sample sets to WSCF labs.
13:50	Logged remaining sample sets into Refrigerator #1 at MO-026 for off-site shipment.

HEIS NUMBER		B193H8	B19176	B19162	B19156	B19156	B19J05	B19150
DEPTH		275 ft	TRIP BLANK	275 ft	275 ft	275 ft	275 ft	275 ft
Chain of Custody Number		F04-014-072	F04-014-026	F04-014-015	F04-014-010	F04-014-010	F04-014-105	F04-014-005
Media		Water	Water	Water	Water	Water	Water	Water
Laboratory		Field Analysis	WSCF	WSCF	Eberline	Lionville (Recra)	PNL - 325	WSCF
Sample Time		10:05	10:05	10:05	10:05	10:05	10:05	10:05
Neptunium - 237	Jar Size							1000 mL Poly
	Preservative							HNO3 to pH <2
	Lot Number							C 3079020
Strontium - 89,90- Total Sr	Jar Size							(2ea) 1000 mL Poly
	Preservative							HNO3 to pH <2
	Lot Number							C 3079020
Technetium-99	Jar Size							(2ea) 1000 mL Poly
	Preservative							HCL to pH <2
	Lot Number							C 3079020
Tritium - H3	Jar Size							500 mL Poly
	Preservative							None
	Lot Number							L4044070
TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons-diesel range, Total petroleum hydrocarbons-kerosene range)	Jar Size							1000 mL aG
	Preservative							HCl to pH <2
	Lot Number							H 4249060

Field Analysis Data - continued on next page (p. 10).

Samples picked up from WSCF on 8/26/04 and stored in the MO-026 Fridge until shipment.

Reviewed By D A Alexander 8/26/04

00000011

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200-UP-1/C4299
HNF-N-3841

DJ Alexander/GS/DJ Alexander

200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
F04-013 (200-UP-1 Remedial Investigation Sampling and Analysis - Soil)
LOGBOOK: HNF-N-384 1
200 West - 699-36-70E/C4299

Sample Date: 8/31/04
Sampler(s): DJ Alexander
Procedures:

CP-GFP-EE-01, 1.5, Rev 4.0, Field Logbooks
CP-GFP-EE-01, 3.8, Rev. 4.0, Chain of Custody
CP-GFP-EE-01, 3.1, Rev. 3.8, Sample Packaging and Shipping
CP-GFP-EE-01, 4.0, Rev. 3.0, Soil and Sediment Sampling
CP-GFP-EE-01, 4.5, Rev. 8, Sample Compositing
CP-GFP-QA-02, 5.1, Rev. 3.8, Field Sampling, Quality Assurance Program Plan

DJ Alexander 9/7/2004

Page 1 of 2

Time	Description
9:30	DJ Alexander arrives at M0-026 to collect Trip Blank (B19177). VOA vials filled with deionized water and placed in cooler to be transported with samples.
10:15	DJ Alexander on site at C4299 to take water samples. Read site HASP and signed all necessary documents.
13:28	DJ Alexander collects samples with a Bailer. Pump is unable to continue running due to clogging. Samples are not filtered and not preserved due to excessive sediment.
15:30	DJ Alexander attempts to deliver samples to WSCF. WSCF declines samples due to sediment. Samples are transported to the M0-026 shipping facility. Samples for WSCF will be filtered at the shipping facility and delivered to WSCF.
19:58	Delivered samples to M0-026. Samples relinquished to Refrigerator #1.
13:00 (09-01-04)	WSCF samples relinquished to Kevin Beebe at the WSCF facility.

HEIS NUMBER		B193H9, B193J0 (Dup)	B19177	B19157	B19157	B19J06	B19151/B19152
DEPTH		305 Feet	TRIP BLANK	305 Feet	305 Feet	305 Feet	305 Feet
Chain of Custody Number		F04-014-073	F04-014-027	F04-014-011	F04-014-011	F04-014-106	F04-014-006
Media		Water	Water	Water	Water	Water	Water
Laboratory		Field Analysis	WSCF	Eberline	Lionville (Kearn)	FNL - 3720	WSCF
Sample Time		13:28	9:30	13:28	13:28	13:28	13:28
VOA by Field GC; Conductivity, Temperature, Turbidity, Color, TKN,Dclron-II Ion [Iron-II Ion]	Jar Size	(4 ea) 40 mL sGr*					
	Preservative	Cool 4C					
	Lot Number	B 3034040					
Conductivity, Temperature, Turbidity, Color, TKN,Dclron-II Ion [Iron-II Ion]	Jar Size	60 mL sG					
	Preservative	Cool 4C					
	Lot Number	G/2 0207010					
VOA - 8260A(TCE); VOA-8260A (Add-On) [1-Butanol]	Jar Size		(4 ea) 40 mL sGr*				
	Preservative		HCL to pH <2; Cool 4C				
	Lot Number		HA 3175170				
Carbon-14	Jar Size			125 mL Poly			
	Preservative			None			
	Lot Number			L/4 2143060			
Iodine-129	Jar Size			1000 mL Poly			
	Preservative			HNO3 to pH <2			
	Lot Number			C 3079020			
Iodine-129	Jar Size			(4ea) 1000 mL Poly			
	Preservative			None			
	Lot Number			C 3079020			
Selenium-79	Jar Size			1000 mL Poly			
	Preservative			HNO3 to pH <2			
	Lot Number			C 3079020			
8015/75_VOA (Methane)	Jar Size				(3ea) 40 mL sGr*		
	Preservative				Cool 4C		
	Lot Number				HA 3321040		
NO2/NO3 - 353.1	Jar Size				500 mL Poly		
	Preservative				H2SO4 to pH<2; Cool 4C		
	Lot Number				L 4044070		
Sulfide - 9030	Jar Size				500 mL Poly		
	Preservative				ZnAc+NaOH to pH>9;Cool 4C		
	Lot Number				L 4044070		
Alkalinity - 310.1	Jar Size				250 mL Poly		
	Preservative				Cool 4C		
	Lot Number				L/2 3220020		
TIC - 415.1M	Jar Size				120 mL sG		
	Preservative				Cool 4C		
	Lot Number				G 3007020		
TOC - 415.1	Jar Size				500 mL sG		
	Preservative				H_2SO_4 to pH <2; Cool 4C		
	Lot Number				W 3069020		

DJ Alexander/DJ Alexander
9/7/04

Reviewed by: TM Mansen/TM Mansen
9/28/04

00000012

200-UP-1 / C4299
HNF-N-3841

DJ Alexander/GS/DJ Alexander

200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
F04-013 (200-UP-1 Remedial Investigation Sampling and Analysis - Soil)
LOGBOOK: HNF-N-384 1
200 West - 699-36-70B/C4299

Sample Date: 8/31/04
Sampler(s): DJ Alexander
Procedures:

CP-GFP-EE-01, 1.5, Rev 4.0, Field Logbooks
CP-GFP-EE-01, 3.0, Rev. 4.0, Chain of Custody
CP-GFP-EE-01, 3.1, Rev. 3.0, Sample Packaging and Shipping
CP-GFP-EL-01, 4.0, Rev. 3.0, Soil and Sediment Sampling
CP-GFP-EE-01, 4.3, Rev. 2, Sample Compositing
CP-GFP-QA-03, 5.1, Rev. 3.0, Field Sampling, Quality Assurance Program Plan

DJ Alexander
9/7/2004

Page 2 of 2

Time	Description
9:30	DJ Alexander arrives at M0-026 to collect Trip Blank (B19177). VOA vials filled with deionized water and placed in cooler to be transported with samples.
10:15	DJ Alexander on site at C4299 to take water samples. Read site HASP and signed all necessary documents.
13:28	DJ Alexander collects samples with a Bailer. Pump is unable to continue running due to clogging. Samples are not filtered and not preserved due to excessive sediment.
15:30	DJ Alexander attempts to deliver samples to WSCF. WSCF declines samples due to sediment. Samples are transported to the M0-026 shipping facility. Samples for WSCF will be filtered at the shipping facility and delivered to WSCF.
19:58	Delivered samples to M0-026. Samples relinquished to Refrigerator #1.
15:00 (09-01-04)	WSCF samples relinquished to Kevin Beebe at the WSCF facility.

HEIS NUMBER		B193H9, B193J0 (Dup)	B19177	B19157	B19157	B19J06	B19151 / B19152
DEPTH		305 Feet	TRIP BLANK	305 Feet	305 Feet	305 Feet	305 Feet
Chain of Custody Number		F04-014-073	F04-014-027	F04-014-011	F04-014-011	F04-014-106	F04-014-006
Media		Water	Water	Water	Water	Water	Water
Laboratory		Field Analysis	WSCF	Eberline	Lionville (Recra)	PNL - 3720	WSCF
Tc99 by ICPMS (Technetium-99)	Jar Size					1000 mL Poly	
	Preservative					HNO3 to pH <2	
	Lot Number					C 3079020	
ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc); ICP/MS-200.8 (Add-on) (Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Thallium, Tin, Uranium); 200.8_HG-ICPMS; ICP Metals - 6010A (TAL) (Aluminum, Calcium, Iron, Magnesium, Potassium, Sodium); ICP Metals - 6010A (Add-on) (Boron, Lithium, Phosphorus, Silicon)	Jar Size						500 mL Poly
	Preservative						HNO3 to pH <2
	Lot Number						L 4044070
Total Cyanide - 9010	Jar Size						1000 mL Poly
	Preservative						NaOH to pH >=12; Cool 4C
	Lot Number						C 3079020
Gamma Spectroscopy (Cesium-137, Cobalt-60)	Jar Size						1000 mL Poly
	Preservative						HNO3 to pH <2
	Lot Number						C 3079020
Neptunium - 237	Jar Size						1000 mL Poly
	Preservative						HNO3 to pH <2
	Lot Number						C 3079020
Strontium - 89,90--Total Sr	Jar Size						(2ea) 1000 mL Poly
	Preservative						HNO3 to pH <2
	Lot Number						C 3079020
Technetium-99	Jar Size						(2ea) 1000 mL Poly
	Preservative						HCL to pH <2
	Lot Number						C 3079020
Tritium - 3H	Jar Size						500 mL Poly
	Preservative						None
	Lot Number						L4044070
TPH-Diesel Range-- WTPH-D (Total petroleum hydrocarbon-diesel range, Total petroleum hydrocarbon-kerosene range)	Jar Size						1000 mL aG
	Preservative						HCl to pH <2
	Lot Number						H 4249060

DJA

DJ Alexander/DJ Alexander
9/7/04

Reviewed by: TMatinson/TMatinson
9/28/04

200-UP-1 / C4299
HNF-N-3841

MJ Hanson / MS Hanson
Page 1 of 2

200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-384 1
200 West - (699-36-70B) - C4299

Page 1 of 2

Janna Hanson
9/27/04

Sample Date: 9/9/04
Sampler(s): PM Gent & RO Mahood
Procedures:

CP-CPP-XX-01, 1.0, Rev 4.0, Field Logbooks
CP-CPP-XX-01, 3.0, Rev. 4.0, Chain of Custody
CP-CPP-XX-01, 3.4, Rev. 3.0, Sample Packaging and Shipping
CP-CPP-XX-01, 4.0, Rev. 2.0, Soil and Sediment Sampling
CP-CPP-XX-01, 4.5, Rev. 0, Sample Compositing
CP-CPP-OA-01, 5.1, Rev. 2.0, Field Sampling, Quality Assurance Project Plan

Time	Description
6:30	PM Gent & RO Mahood arrives at M0-026 to collect Trip Blank (B19178). VOA vials filled with deionized water and placed in cooler to be transported with samples
9.00	PM Gent & RO Mahood on site at C4299 to take water samples. Read site HASP and signed all necessary documents.
9:15	PM Gent & RO Mahood filter samples through a 0.45 um filter. Samples were placed in buckets by PM Gent & RO Mahood on 9/8/04 in order for sediment to settle.
12:45	Delivered samples to WSCF (Kevin Beebe).
16:00	Delivered remaining samples to M0-026. Samples relinquished to Refrigerator #1.

HEIS NUMBER		B193J1	B19178	B19164	B19153	B19159	B19159	B19J07
DEPTH		340 ft	TRIP BLANK	340 ft	340 ft	340 ft	340 ft	340 ft
Chain of Custody Number		F04-014-074	F04-014-029	F04-014-017	F04-014-007	F04-014-012	F04-014-012	F04-014-107
Media		Water	Water	Water	Water	Water	Water	Water
Laboratory		Field Analysis	WSCF	WSCF	WSCF	Eberline	Lionville (Recra)	PNL - 3720
Sample Time		9:15	6:30	9:15	9:15	9:15	9:15	9:15
VOA by Field GC (Conductivity, Temperature, Turbidity, Color_TKFLDiiron-II ion (iron-II ion)	Jar Size	(4 ea) 40 mL nGr*						
	Preservative	Cool 4C						
	Lot Number	B 3034040						
Conductivity, Temperature, Turbidity, Color_TKFLDiiron-II ion (iron-II ion)	Jar Size	60 mL nG						
	Preservative	Cool 4C						
	Lot Number	G/2 0207010						
Tc-99 by ICPMS (Technetium-99)	Jar Size							1000 mL Poly
	Preservative							HNO3 to pH <2
	Lot Number							C 3079020
VOA - 8260A(TCL); VOA-8260A (Add-On) (1-Butanol)	Jar Size		(4 ea) 40 mL nGr*		(4 ea) 40 mL nGr*			
	Preservative		HCL to pH <2; Cool 4C		HCL to pH <2; Cool 4C			
	Lot Number		HA 3175170		HA 3175170			
Alkalinity-Total	Jar Size			120 mL Poly				
	Preservative			None				
	Lot Number			L/4 2143060				
Carbon-14	Jar Size					120 mL Poly		
	Preservative					None		
	Lot Number					L/4 2143060		
Isotopic Plutonium	Jar Size					1000 mL Poly		
	Preservative					HNO3 to pH <2		
	Lot Number					C 3079020		
Iodine-129	Jar Size					(4ea) 1000 mL Poly		
	Preservative					None		
	Lot Number					C 3079020		
Molybdenum-99	Jar Size					1000 mL Poly		
	Preservative					HNO3 to pH <2		
	Lot Number					C 3079020		
RESULTS_VOA (Methanol)	Jar Size						(3ea) 40 mL nGr*	
	Preservative						HCL to pH <2; Cool 4C	
	Lot Number						HA 3321040	
NO2/NO3 - 353.2	Jar Size						500 mL Poly	
	Preservative						H2SO4 to pH<2; Cool 4C	
	Lot Number						L 4044070	
Sulfide - 9030	Jar Size						500 mL Poly	
	Preservative						ZnAc+NaOH to pH>9;Cool 4C	
	Lot Number						L 4044070	
Alkalinity - 310.1	Jar Size						250 mL Poly	
	Preservative						Cool 4C	
	Lot Number						L/2 3223020	
TIC - 415.1M	Jar Size						120 mL nG	
	Preservative						Cool 4C	
	Lot Number						G 3037020	
TOC - 415.1	Jar Size						500 mL nG	
	Preservative						H_2SO_4 to pH <2; Cool 4C	
	Lot Number						W 3069020	

MJ 9-27-04

MJ Hanson / MS Hanson 9/27/04
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200-UP-1 C4299
HNF-N-3841

MMarnsen/GS Barnhanse
Page 2 of 2

200-UP-1 OU Groundwater Well Drilling Waste Designation
SAP#: F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-384 1
200 West - (699-36-70B) - C4299

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Sample Date: 2/9/04
Sampler(s): PM Gent & RO Mahood
Procedures:
CP-CPP-XZ-01, 1.5, Rev 4.0, PDA Logbooks
CP-CPP-EE-01, 2.0, Rev. 4.0, Chain of Custody
CP-CPP-ED-01, 3.1, Rev. 2.0, Sample Packaging and Shipping
CP-CPP-EE-01, 4.0, Rev. 2.0, Soil and Sediment Sampling
CP-CPP-EE-01, 4.0, Rev. 0, Sample Compositing
CP-CPP-QA-01, 5.1, Rev. 2.0, Field Sampling, Quality Assurance Program Plan

Time	Description
6:30	PM Gent & RO Mahood arrives at M0-026 to collect Trip Blank (B19178). VOA vials filled with deionized water and placed in cooler to be transported with samples.
9:00	PM Gent & RO Mahood on site at C4299 to take water samples. Read site HASP and signed all necessary documents.
9:15	PM Gent & RO Mahood filter samples through a 0.45 um filter. Samples were placed in buckets by PM Gent & RO Mahood on 9/8/04 in order for sediment to settle.
12:45	Delivered samples to WSCF (Kevin Beebe).
16:00	Delivered remaining samples to M0-026. Samples relinquished to Refrigerator #1.

HEIS NUMBER		B19J11	B19178	B19164	B19153	B19159	B19159	B19J07
DEPTH		340 ft	TRIP BLANK	340 ft	340 ft	340 ft	340 ft	340 ft
Chain of Custody Number		F04-014-074	F04-014-029	F04-014-017	F04-014-007	F04-014-012	F04-014-012	F04-014-107
Media		Water	Water	Water	Water	Water	Water	Water
Laboratory		Field Analysis	WSCF	WSCF	WSCF	Eberline	Lionville (Recra)	PNL - 3720
Sample Time		9:15	6:30	9:15	9:15	9:15	9:15	9:15
Alkalinity, Cyanide, & Ketones - 310.5 (Ethyl acetate)	Jar Size				(2 ea) 40 mL aGlass			
	Preservative				Cool 4C			
	Lot Number				B 3034060			
Semi-VOA - 8270A (TCL); Semi-VOA--8270A (Add-on) FLAG-Tributylamine, 2-4-6 Methylphenol (cresol, sum), 3-Methylphenol (cresol, m-)]	Jar Size				(4 ea) 1000 mL aG			
	Preservative				Cool 4C			
	Lot Number				C 3079020			
ICPMS - 200.8 (TAL) [Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Molybdenum, Nickel, Silver, Vanadium, Zinc]; ICPMS-200.8 (Add-on) [Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Thallium, Tin, Uranium]; 200.8_HG-ICPMS ICP Metals - 6020A (TAL) [Aluminum, Calcium, Iron, Magnesium, Potassium, Sodium]; ICP Metals - 6020A (Add-on) [Boron, Lithium, Phosphorus, Silicon]	Jar Size				500 mL Poly			
	Preservative				None			
	Lot Number				L 4044070			
IC Anions - 300.0 [Chloride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate]	Jar Size				120 mL Poly			
	Preservative				Cool 4C			
	Lot Number				L/# 2143060			
Cyanide (IC) - 300.7 [Nitrogen in ammonia]	Jar Size				500 mL Poly			
	Preservative				None			
	Lot Number				L 4044070			
pH-150.1	Jar Size				120 mL Poly			
	Preservative				None			
	Lot Number				L/# 2143060			
Chromium Hex - 7196	Jar Size				500 mL Poly			
	Preservative				Cool 4C			
	Lot Number				L 4044070			
Total Cyanide - 9010	Jar Size				1000 mL Poly			
	Preservative				None			
	Lot Number				C 3079020			
TPH-Diesel Range - W-TPH-D [Total petroleum hydrocarbons-diesel range, Total petroleum hydrocarbons-heavy range]	Jar Size				(2ea) 1000 mL aG			
	Preservative				None			
	Lot Number				H 4249060			
Gamma Spectroscopy [Cesium-137, Cobalt-60]	Jar Size				1000 mL Poly			
	Preservative				None			
	Lot Number				C 3079020			
Strontium - 337	Jar Size				1000 mL Poly			
	Preservative				None			
	Lot Number				C 3079020			
Uranium - 8320--Total Ur	Jar Size				(2ea) 1000 mL Poly			
	Preservative				None			
	Lot Number				C 3079020			
Technetium-99	Jar Size				(2ea) 1000 mL Poly			
	Preservative				None			
	Lot Number				C 3079020			
Tritium - 3H	Jar Size				500 mL Poly			
	Preservative				None			
	Lot Number				L4044070			

MMarnsen/BMarnsen 9/27/04

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200-UP-1 / C4299
HNF-N-3841

Transmitted to Laboratory

200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
F04-013 (200-UP-1 Remedial Investigation Sampling and Analysis - Soil)
LOGBOOK: HNF-N-384 1
100 West - 699-36-70B/C4299

Sample Date: 9/14/04
Sampler(s): DJ Alexander
Procedures:

CP-GFP-ES-01, 1.5, Rev 4.0, Field Logbooks
CP-GFP-ES-01, 1.8, Rev. 3.0, Chain of Custody
CP-GFP-ES-01, 1.1, Rev. 3.0, Sample Packaging and Shipping
CP-GFP-ES-01, 2.6, Rev. 3.0, Drill and Bailment Sampling
CP-GFP-ES-01, 4.5, Rev. 5, Sample Compositing
CP-GFP-QA-03, 5.7, Rev. 2.0, Field Sampling, Quality Assurance Program Plan

Page 1 of 3

Time	Description
9:30	DJ Alexander arrives at M0-026 to collect Trip Blank (B19179). VOA vials filled with deionized water and placed in cooler to be transported with samples.
10:45	DJ Alexander on site at C4299 to take water samples. Read site HASP and signed all necessary documents.
11:20	DJ Alexander collects water sample at 375 ft. All samples filtered through a 0.45 um filter except ICP metals.
14:55	DJ Alexander relinquishes samples to Kevin Beebe at the WSCF facility.
15:30	Returned to C4299 to collect 375-380 ft soil sample. Partial sample collected for PNL and Shaw.
18:00	Delivered samples to M0-026. Samples relinquished to Refrigerator #1

HEIS NUMBER		B19312	B19179	B19165	B19154	B19160	B19160	B19108	B19144	B19139
DEPTH		375 ft	TRIP BLANK	375 ft	375 ft	375 ft	375 ft	375 ft	375-380 ft	375-380 ft
Chain of Custody Number		F04-014-075	F04-014-030	F04-014-018	F04-014-006	F04-014-013	F04-014-013	F04-014-108	F04-013-026	F04-013-020
Media		Water	Water	Water	Water	Water	Water	Water	Soil	Soil
Laboratory		Field Analysis	WSCF	WSCF	WSCF	Eberline	Lionville (Recs)	PNL - 3720	Shaw	PNL-3720
Sample Time		11:20	9:30	11:20	11:20	11:20	11:20	11:20	15:30	15:30
VOA by Field GC, Conductivity, Temperature, Turbidity, Color_TKFLD:Iron-II Ion (Iron-II Ion)	Jar Size	(4 ea) 40 mL sGs*	(4 ea) 40 mL sGs*							
	Preservative	Cool 4C	HCL to pH <2; Cool 4C							
	Lot Number	B 3034040	B 3034040							
Conductivity, Temperature, Turbidity, Color_TKFLD:Iron-II Ion (Iron-II Ion)	Jar Size	60 mL sG								
	Preservative	Cool 4C								
	Lot Number	G/I 0207010								
Activity Scan	Jar Size			120 mL Poly						
	Preservative			None						
	Lot Number			L/4 2143060						
Tc-99 by ICP/MS (Technetium-99)	Jar Size							1000 mL Poly		
	Preservative							HNO3 to pH <2		
	Lot Number							C 3079020		
Bulk Density - D2937; Particle Size (Dry Sieve); Calcium Carbonate Content; Saturated Hydraulic Conductivity; Particle Density - D854									Liner Pre-weight: 583	
									Cap Pre-weigh total: 30g	
									Liner + Caps: 3.0 kg	
Bulk Density - D2937; Particle Size (Dry Sieve); Calcium Carbonate Content; Saturated Hydraulic Conductivity; Particle Density - D854									(1 ea) Liners	
									Liner Pre-weight: 583	
									Cap Pre-weigh total: 30g	
									Liner + Caps: 3.0 kg	
Microbiology-XRD; KD-Batch	Jar Size									Split Spoon Liner
	Preservative									None
	Lot Number									N/A
Carbon-14	Jar Size					120 mL Poly				
	Preservative					None				
	Lot Number					L/4 2143060				
Isotopic Plutonium	Jar Size					1000 mL Poly				
	Preservative					HNO3 to pH <2				
	Lot Number					C 3079020				
Iodine-129	Jar Size					(4ea) 1000 mL Poly				
	Preservative					None				
	Lot Number					C 3079020				
Selenium-79	Jar Size					1000 mL Poly				
	Preservative					HNO3 to pH <2				
	Lot Number					C 3079020				
HMX/TE_VOA (Methane)	Jar Size						(2ea) 40 mL sGs*			
	Preservative						Cool 4C			
	Lot Number						HA 3321040			
NO2/NO3 - 353.1	Jar Size						500 mL Poly			
	Preservative						H2SO4 to pH<2; Cool 4C			
	Lot Number						L 4044070			

Transmitted to Laboratory

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200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
F04-013 (200-UP-1 Remedial Investigation Sampling and Analysis - Soil)
LOGBOOK: HNF-N-384 1
200 West - 699-36-70B/C4299

Sample Date: 9/14/04
Sampler(s): DJ Alexander
Procedures:

CP-GPP-EE-04, 1.0, Rev 4.0, Field Logbooks
CP-GPP-EE-01, 3.0, Rev. 4.0, Chain of Custody
CP-GPP-EE-02, 2.1, Rev. 3.0, Sample Packaging and Shipping
CP-GPP-EE-01, 4.0, Rev. 2.0, Soil and Sediment Sampling
CP-GPP-EE-04, 4.0, Rev. 0, Sample Compositing
CP-GPP-QA-03, 5.1, Rev. 1.0, Field Sampling, Quality Assurance Program Plan

Page 2 of 3

Time	Description
9:30	DJ Alexander arrives at M0-026 to collect Trip Blank (B19179). VOA vials filled with deionized water and placed in cooler to be transported with samples.
10.45	DJ Alexander on site at C4299 to take water samples. Read site HASP and signed all necessary documents.
11.20	DJ Alexander collects water sample at 375 ft. All samples filtered through a 0.45 um filter except ICP metals.
14:55	DJ Alexander relinquishes samples to Kevin Buebe at the WSCF facility.
15.30	Returned to C4299 to collect 375-380 ft soil sample. Partial sample collected for PNL and Shaw.
18:00	Delivered samples to M0-026. Samples relinquished to Refrigerator #1.

ITEM NUMBER		B19312	B19179	B19165	B19154	B19160	B19160	B19308	B19144	B19139
DEPTH		375 ft	TRIP BLANK	375 ft	375 ft	375 ft	375 ft	375 ft	375-380 ft	375-380 ft
Chain of Custody Number		F04-014-075	F04-014-030	F04-014-018	F04-014-008	F04-014-013	F04-014-013	F04-014-108	F04-013-026	F04-013-020
Media		Water	Water	Water	Water	Water	Water	Water	Soil	Soil
Laboratory		Field Analysis	WSCF	WSCF	WSCF	Eberline	Lionville (Recra)	PNL - 3720	Shaw	PNL-3720
Sample Time		11:20	9:30	11:20	11:20	11:20	11:20	11:20	15:30	15:30
Sulfate - 300	Jar Size						500 mL Poly			
	Preservative						ZnAc+NaOH to pH>9,Cool 4C			
	Lot Number						L 4044070			
Alkalinity - 310.1	Jar Size						250 mL Poly			
	Preservative						Cool 4C			
	Lot Number						L/J 3223020			
TIC - 415.1M	Jar Size						120 mL sG			
	Preservative						Cool 4C			
	Lot Number						G 3007020			
TOC - 415.1	Jar Size						500 mL sG			
	Preservative						H_2SO_4 to pH <2; Cool 4C			
	Lot Number						W 3069020			
VOA - 8260A(TCL); VOA-8260A (Add-on) [1-Butanol]	Jar Size				(4 oz) 40 mL sGs*					
	Preservative				HCL to pH <2; Cool 4C					
	Lot Number				HA 3175178					
Alcohols, Glycols, & Ketones - 8015 (Dipropylene ketone)	Jar Size				(3 oz) 40 mL sGs*			1000 mL Poly		
	Preservative				Cool 4C			HNO3 to pH <2		
	Lot Number				B 3034040			C 3079020		
Semi-VOA - 8270A (TCL); Semi-VOA -8270A (Add-on) [2,4,6-Trichlorophenol, 3-4 Methylphenol (cresol mix), 3-Methylbenzoic (cresol), m-Si	Jar Size				(4 oz) 1000 mL sG					
	Preservative				Cool 4C					
	Lot Number				C 3079020					
ICP/MS - 200.8 (TAL) [Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc]; ICP/MS-200.8 (Add-on) [Arsenic, Beryllium, Lead, Molybdenum, Selenium, Strontium, Thallium, Tin, Uranium]; 200.8_BD-ICP/MS; ICP Metals - 6010A (TAL) [Aluminum, Calcium, Iron, Magnesium, Potassium, Sodium]; ICP Metals - 6010A (Add-on) [Boron, Lithium, Phosphorus, Silicon]	Jar Size				500 mL Poly					
	Preservative				HNO3 to pH<2; Cool 4C					
	Lot Number				L 4044070					
IC Anions - 300.0 [Chloride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate]	Jar Size				120 mL Poly					
	Preservative				Cool 4C					
	Lot Number				L/J 2143060					
Cyanide (IC) - 335.2 (Nitrogen in ammonia)	Jar Size				500 mL Poly					
	Preservative				H2SO4 to pH<2; Cool 4C					
	Lot Number				L 4044070					
pH-150.1	Jar Size				120 mL Poly					
	Preservative				None					
	Lot Number				L/J 2143060					

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200-UP-1 / C4299
HNF-N-384-1

Transferred to Groundwater

Transferred to Groundwater 9/28/04

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Initials/Date

200-UP-1 / C4299
HNF-N-3841

200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
F04-013 (200-UP-1 Remedial Investigation Sampling and Analysis - Soil)
LOGBOOK: HNF-N-384 1
200 West - 699-36-70B/C4299

Sample Date: 9/14/04
Sampler(s): DJ Alexander
Procedures:

CP-GPP-EE-01, 1.5, Rev 4.0, Field Logbooks
CP-GPP-EE-06, 1.0, Rev. 4.0, Chain of Custody
CP-GPP-EE-04, 3.1, Rev. 3.0, Sample Packaging and Shipping
CP-GPP-EE-05, 1.0, Rev 3.0, Soil and Sediment Sampling
CP-GPP-EE-01, 4.5, Rev. 0, Sample Compositing
CP-GPP-QA-02, 5.2, Rev. 3.0, Field Sampling, Quality Assurance Program Plan

Page 3 of 3

Time	Description
9:30	DJ Alexander arrives at M0-026 to collect Trip Blank (B19179). VOA vials filled with deionized water and placed in cooler to be transported with samples.
10:45	DJ Alexander on site at C4299 to take water samples. Read site HASP and signed all necessary documents.
11:20	DJ Alexander collects water sample at 375 ft. All samples filtered through a 0.45 um filter except ICP metals.
14:55	DJ Alexander relinquishes samples to Kevin Becks at the WSCF facility.
15:30	Returned to C4299 to collect 375-380 ft soil sample. Partial sample collected for PNL and Shaw.
18:00	Delivered samples to M0-026. Samples relinquished to Refrigerator #1.

HEIS NUMBER		B19312	B19179	B19165	B19154	B19160	B19160	B19108	B19144	B19139
DEPTH		375 ft	TRIP BLANK	375 ft	375 ft	375 ft	375 ft	375 ft	375-380 ft	375-380 ft
Chain of Custody Number		F04-014-075	F04-014-030	F04-014-018	F04-014-008	F04-014-013	F04-014-013	F04-014-108	F04-013-026	F04-013-020
Media		Water	Water	Water	Water	Water	Water	Water	Soil	Soil
Laboratory		Field Analysis	WSCF	WSCF	WSCF	Eberline	Lionville (Recra)	PNL - 3720	Shaw	PNL-3720
Sample Time		11:20	9:30	11:20	11:20	11:20	11:20	11:20	15:30	15:30
Gross Alpha - 9310	Jar Size				500 mL Poly					
	Preservative				Cool 4C					
	Lot Number				L 4044070					
Total Cyanide - 9010	Jar Size				1000 mL Poly					
	Preservative				NaOH to pH<12; Cool 4C					
	Lot Number				C 3079020					
TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbon-diesel range, Total petroleum hydrocarbon-heavier range)	Jar Size				(2ea) 1000 mL aG					
	Preservative				HCL to pH <2, Cool 4C					
	Lot Number				H 4245069					
Gamma Spectroscopy (Cesium-137, Cobalt-60)	Jar Size				1000 mL Poly					
	Preservative				HNO3 to pH<2; Cool 4C					
	Lot Number				C 3079020					
Neptunium - 237	Jar Size				1000 mL Poly					
	Preservative				HNO3 to pH<2; Cool 4C					
	Lot Number				C 3079020					
Strontium - 89,90--Total Sr	Jar Size				(2ea) 1000 mL Poly					
	Preservative				HNO3 to pH<2; Cool 4C					
	Lot Number				C 3079020					
Technetium-99	Jar Size				(2ea) 1000 mL Poly					
	Preservative				HCL to pH <2, Cool 4C					
	Lot Number				C 3079020					
Tritium - H3	Jar Size				500 mL Poly					
	Preservative				None					
	Lot Number				L4044070					

Initials/Date/Signature

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200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-384-1
200 West - (699-36-70B) - C4299

Sample Dates: 9/23/04, 9/24/04, & 9/27/04
Sampler(s): DJ Alexander & RO Mahood
Procedures:

CP-CRP-2.3-01, 2.3, Rev 4.0, Field Logbooks
CP-CRP-2.9-01, 2.9, Rev. 4.0, Chain of Custody
CP-CRP-2.2-01, 2.2, Rev. 3.0, Sample Packaging and Shipping
CP-CRP-2.5-01, 2.5, Rev. 2.0, Soil and Sediment Sampling
CP-CRP-2.8-01, 2.8, Rev. 2, Sample Compositing
CP-CRP-7-QA-04, 4.1, Rev. 2.0, Field Sampling, Quality Assurance Project Plan

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Time	Description
12:00	DJ Alexander and RO Mahood arrive at M8-026 to collect Trip Blank (B19180). VOA vials filled with deionized water and placed in cooler to be transported with samples.
12:30	DJ Alexander and RO Mahood (9/23/04) arrive at site C4299 to take water samples from the 420 ft interval. Read site HASP and signed all necessary documents.
12:50	DJ Alexander and RO Mahood (9/23/04) collect partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
6:30	DJ Alexander and RO Mahood (9/24/04) arrive at site C4299 to take additional water samples from the 420 ft interval. Read site HASP and signed all necessary documents.
7:40	DJ Alexander and RO Mahood (9/24/04) collect partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
8:40	DJ Alexander and RO Mahood (9/24/04) collect partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
16:10	Delivered samples to M8-026 (9/24/04). Samples relinquished to Refrigerator #1.
6:45	DJ Alexander (9/27/04) arrives at site C4299 to take additional water samples from the 420 ft interval. Read site HASP and signed all necessary documents.
7:30	DJ Alexander (9/27/04) collects partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
8:15	Delivered samples to WSCF (9/27/04). Kevin Beebe.

HEIS NUMBER		B19313	B19180	B19166	B19155, B1BBY2 (Dup)	B19155	B1BBY2 (Dup)	B19155, B1BBY2 (Dup)	B1BBY3 (Dup)	B1BBY3 (Dup)	B19161	B19161	B19169
DEPTH		420 ft	TRIP BLANK	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft
Date Collected		9/23&24/2004	9/23/2004	9/24/2004	9/23/2004	9/24/2004	9/24/2004	9/27/2004	9/23/2004	9/24/2004	9/23/2004	9/23/2004	9/24/2004
Chain of Custody Number		F04-014-076	F04-014-030	F04-014-019	F04-014-009/ F04-014-117	F04-014-009	F04-014-117	F04-014-009/ F04-014-117	F04-014-119	F04-014-119	F04-014-014	F04-014-014	F04-014-109
Media		Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Laboratory		Field Analysis	WSCF	WSCF	WSCF	WSCF	WSCF	WSCF	Eberline/Livermore	Eberline/Livermore	Livermore	Eberline/Livermore	PNL - 3720
Sample Time		12:30 & 09:30	12:00	7:40	12:50	7:40	8:40	07:40 & 08:40	12:50	8:40	12:50	7:40	7:40
VOA by Field GC; Conductivity, Temperature, Turbidity, Color_TKFLuoride-N Ion (from H Ion) Collected 09/23/04	Jar Size	(4 ea) 40 mL wOb*											
	Preservative	Cool 4C											
	Lot Number	B2G4040											
Conductivity, Temperature, Turbidity, Color_TKFLuoride-N Ion (from H Ion) Collected 09/24/04	Jar Size	40 mL wO											
	Preservative	Cool 4C											
	Lot Number	G3 G3G015											
Activity Gen	Jar Size			120 mL Poly									
	Preservative			None									
	Lot Number			LM 2143060									
Tc-99 by ICP/MS (Technetium-99)	Jar Size												1000 mL Poly
	Preservative												HNO3 to pH <2
	Lot Number												C3079010
Bulk Density - D2937; Particle Size (Dry Sieve); Calcium Carbonate Content; Saturated Hydraulic Conductivity; Particle Density - D854													
Bulk Density - D2937; Particle Size (Dry Sieve); Calcium Carbonate Content; Saturated Hydraulic Conductivity; Particle Density - D854													
Miscellaneous TOC; Mil-Stock	Jar Size												
	Preservative												
	Lot Number												
Cesium-34	Jar Size									120 mL Poly		120 mL Poly	
	Preservative									None		None	
	Lot Number									LM 2143060		LM 2143060	
Strontium Fumarolates	Jar Size									1000 mL Poly		1000 mL Poly	
	Preservative									HNO3 to pH <2		HNO3 to pH <2	
	Lot Number									C3079010		C3079010	
Iodine-129	Jar Size									(Dup) 1000 mL Poly		(Dup) 1000 mL Poly	
	Preservative									None		None	
	Lot Number									C3079010		C3079010	
Ruthenium-106	Jar Size									1000 mL Poly		1000 mL Poly	
	Preservative									HNO3 to pH <2		HNO3 to pH <2	
	Lot Number									C3079010		C3079010	
Technetium-99	Jar Size							(Dup) 1000 mL Poly					
	Preservative							HCL to pH <2					
	Lot Number							C3079010					
8260/VOA (Medium)	Jar Size								(Dup) 40 mL wOb*		(Dup) 40 mL wOb*		
	Preservative								Cool 4C		Cool 4C		
	Lot Number								HA 3031040		HA 3031040		

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DJ Alexander/RO Mahood 9/29/04

DJ Alexander/RO Mahood

200-UP-1/C4299
HNF-N-384-1

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200-UP-1 / C4299
HNF-N-384-1

DJ Alexander / GS / RJ Alexander

200 UP-1 OU Groundwater Well Drilling Waste Designation
SAF's: F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-384-1
200 West - (659-36-70H) - C4299

DJ Alexander 9/29/04

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Sample Dates: 9/23/04, 9/24/04, & 9/27/04
Sampler(s): DJ Alexander & RO Mahood
Procedures:

CP-GW-EG01, 1.1, Rev. 1.0, Field Logbooks
CP-GW-EG01, 1.6, Rev. 1.0, Chain of Custody
CP-GW-EG01, 1.1, Rev. 1.0, Sample Packaging and Shipping
CP-GW-EG01, 4.6, Rev. 1.0, Soil and Sediment Sampling
CP-GW-EG01, 4.6, Rev. 1.0, Sample Compositing
CP-GW-QA 03, 2.1, Rev. 2.0, Field Sampling, Quality Assurance Program Plan

Time	Description
12:00	DJ Alexander and RO Mahood arrive at MO-026 to collect Trip Blank (B19180). VOA vials filled with deionized water and placed in cooler to be transported with samples.
12:30	DJ Alexander and RO Mahood (9/23/04) arrive at site C4299 to take water samples from the 420 ft interval. Read site HASP and signed all necessary documents.
12:50	DJ Alexander and RO Mahood (9/23/04) collect partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
6:30	DJ Alexander and RO Mahood (9/24/04) arrive at site C4299 to take additional water samples from the 420 ft interval. Read site HASP and signed all necessary documents.
7:40	DJ Alexander and RO Mahood (9/24/04) collect partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
8:40	DJ Alexander and RO Mahood (9/24/04) collect partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
16:10	Delivered samples to MO-026 (9/24/04). Samples relinquished to Raftperator #1.
6:45	DJ Alexander (9/27/04) arrives at site C4299 to take additional water samples from the 420 ft interval. Read site HASP and signed all necessary documents.
7:30	DJ Alexander (9/27/04) collects partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
8:15	Delivered samples to WSCF (9/27/04), Kevin Beebe.

HEIS NUMBER		B19J13	B19180	B19144	B19155, B1BBY2 (Dup)	B19155	B1BBY2 (Dup)	B19155, B1BBY2 (Dup)	B1BBY3 (Dup)	B1BBY3 (Dup)	B19161	B19161	B19909
DEPTH		420 ft	TRIP BLANK	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft
Date Collected		9/23&24/2004	9/23/2004	9/24/2004	9/23/2004	9/24/2004	9/24/2004	9/27/2004	9/23/2004	9/24/2004	9/23/2004	9/23/2004	9/24/2004
Chain of Custody Number		F04-014-076	F04-014-030	F04-014-019	F04-014-009/ F04-014-117	F04-014-009	F04-014-117	F04-014-009/ F04-014-117	F04-014-139	F04-014-139	F04-014-014	F04-014-014	F04-014-189
Media		Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Laboratory		Field Analysis	WSCF	WSCF	WSCF	WSCF	WSCF	WSCF	Sherfine/Louville	Sherfine/Louville	Louville	Sherfine/Louville	PNL - 3720
Sample Time		12:50 & 09:30	12:00	7:40	12:50	7:40	8:40	07:40 & 08:40	12:50	8:40	12:50	7:40	7:40
Metals - 9013	Jar Size									500 ml. Poly	500 ml. Poly		
	Preservative									HNO3 to pH<2; Cool 4C	HNO3 to pH<2; Cool 4C		
	Lot Number									L 4044030	L 4044030		
Sulfide - 9030	Jar Size									500 ml. Poly	500 ml. Poly		
	Preservative									ZnAc+NaOH to pH>9; Cool 4C	ZnAc+NaOH to pH>9; Cool 4C		
	Lot Number									L 4044030	L 4044030		
Alkalinity - 310.1	Jar Size									250 ml. Poly	250 ml. Poly		
	Preservative									Cool 4C	Cool 4C		
	Lot Number									L4 3239030	L4 3239030		
TOC - 415.1	Jar Size									120 ml. nO	120 ml. nO		
	Preservative									HCL to pH <2, Cool 4C	Cool 4C		
	Lot Number									G 3069030	G 3069030		
TOC - 415.1	Jar Size									500 mL nO	500 mL nO		
	Preservative									H_2SO_4 to pH <2; Cool 4C	H_2SO_4 to pH <2; Cool 4C		
	Lot Number									W 3069030	W 3069030		
VOA - 8260B (GC/MS) (Volatile Organics by Methods)	Jar Size		(4 ea) 40 mL nOA*		(4 ea) 40 mL nOA*								
	Preservative		HCL pH <2; Cool 4C		HCL to pH <2; Cool 4C								
	Lot Number		H 3059030		HA 3171170								
Alcohols, Glycols, & Ketones - 8015B (Alcohol Ketones)	Jar Size				(2 ea) 40 mL nOA*								
	Preservative				Cool 4C								
	Lot Number				H 3059030								
Semi-VOA - 8270A (TCL); Semi-VOA - 8270A (Acid ed) (2,4,6-Trichlorophenol, 2-4-Methylphenol (cresol, m-p), 2-Methylphenol (cresol, m-p))	Jar Size					(1 ea) 1000 mL nO	(1 ea) 1000 mL nO						
	Preservative					Cool 4C	Cool 4C						
	Lot Number					C 3059030	C 3059030						
ICP/MS - 200.8 (TAL) (Aluminum, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc); ICP/MS-200.8 (Acid ed) (Arsenic, Beryllium, Lead, Molybdenum, Thallium, Uranium, Thallium, Tin, Boronic); 200.8, 245.1/7470A; ICP Metals - 6010A (TAL) (Aluminum, Calcium, Iron, Magnesium, Potassium, Sodium); ICP Metals - 6010A (Acid ed) (Boron, Lithium, Phosphorus, Silicon)	Jar Size					500 mL Poly	500 mL Poly						
	Preservative					HNO3 to pH<2; Cool 4C	HNO3 to pH<2; Cool 4C						
	Lot Number					L 4044030	L 4044030						
IC Anions - 300.0 (Chloride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate)	Jar Size							250 ml. Poly					
	Preservative							Cool 4C					
	Lot Number							L4 2143060					
Cyanide (CN) - 300.0 (Nitrogen in cyanide)	Jar Size					500 ml. Poly	500 ml. Poly						
	Preservative					NaOH to pH>12; Cool 4C	NaOH to pH>12; Cool 4C						
	Lot Number					L 4044030	L 4044030						

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DJ Alexander / RJ Alexander 9/29/04

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200-UP-1 OU Groundwater Well Drilling Waste Designation
SAF#: F04-014 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-384-1
200 West - (E39-36-70B) - C4299

DJ Alexander 9/29/04

Sample Dates: 9/23/04, 9/24/04, & 9/27/04
Sampler(s): DJ Alexander & RO Mahood
Procedures:
GP-GPP-EE-01, 1.5, Rev 4.0, Field Logbooks
GP-GPP-EE-04, 2.0, Rev. 4.0, Chain of Custody
GP-GPP-EE-01, 5.3, Rev. 3.0, Sample Packaging and Shipping
GP-GPP-EE-02, 4.0, Rev. 3.0, Soil and Sediment Sampling
GP-GPP-EE-01, 4.5, Rev. 0, Sample Compositing
GP-GPP-Qa-05, 5.3, Rev. 3.0, Field Sampling, Quality Assurance Program Plan

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Time	Descriptions
12:00	DJ Alexander and RO Mahood arrive at MO-026 to collect Trip Blank (B19189). VOA vials filled with deionized water and placed in cooler to be transported with samples.
12:30	DJ Alexander and RO Mahood (9/23/04) arrive at site C4299 to take water samples from the 420 ft interval. Read site HASP and signed all necessary documents.
12:50	DJ Alexander and RO Mahood (9/23/04) collect partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
6:30	DJ Alexander and RO Mahood (9/24/04) arrive at site C4299 to take additional water samples from the 420 ft interval. Read site HASP and signed all necessary documents.
7:40	DJ Alexander and RO Mahood (9/24/04) collect partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
9:40	DJ Alexander and RO Mahood (9/24/04) collect partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
16:10	Delivered samples to MO-026 (9/24/04). Samples relinquished to Refrigerator #1.
6:45	DJ Alexander (9/27/04) arrives at site C4299 to take additional water samples from the 420 ft interval. Read site HASP and signed all necessary documents.
7:30	DJ Alexander (9/27/04) collects partial water sample at 420 ft. All samples filtered through a 0.45 um filter.
8:15	Delivered samples to WSCF (9/27/04). Kevin Burbe.

HEIS NUMBER		B19333	B19188	B19166	B19155, B1BBY2 (Dup)	B19155	B1BBY2 (Dup)	B19155, B1BBY2 (Dup)	B1BBY3 (Dup)	B1BBY3 (Dup)	B19161	B19161	B19309
DEPTH		420 ft	TRIP BLANK	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft	420 ft
Date Collected		9/23&24/2004	9/27/2004	9/24/2004	9/23/2004	9/24/2004	9/24/2004	9/23/2004	9/23/2004	9/24/2004	9/23/2004	9/23/2004	9/24/2004
Chain of Custody Number		F04-014-076	F04-014-030	F04-014-019	F04-014-009/ F04-014-117	F04-014-009	F04-014-117	F04-014-009/ F04-014-117	F04-014-119	F04-014-119	F04-014-014	F04-014-014	F04-014-109
Media		Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water	Water
Laboratory		Field Analysis	WSCF	WSCF	WSCF	WSCF	WSCF	WSCF	Eberline/Lionville	Eberline/Lionville	Lionville	Eberline/Lionville	PNL - 3720
Sample Time		12:50 & 09:30	12:00	7:40	12:50	7:40	8:40	07:40 & 08:40	12:50	8:40	12:50	7:40	7:40
pH-3162	Jar Size							250 mL Poly					
	Preservative							None					
	Lot Number							LM 2143600					
Chromium Hex - 7199	Jar size							500 mL Poly					
	Preservative							Cool 4C					
	Lot Number							L 4844070					
Total Cyanide - 9014	Jar Size					1000 mL Poly	1000 mL Poly						
	Preservative					NaOH to pH>12; Cool 4C	NaOH to pH>12, Cool 4C						
	Lot Number					C 3079030	C 3079030						
TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons-diesel range, Total petroleum hydrocarbons-heavier range)	Jar Size					(2x) 1000 mL aG	(2x) 1000 mL aG						
	Preservative					HCL to pH <2; Cool 4C	HCL to pH <2; Cool 4C						
	Lot Number					H 4349000	H 4349000						
Gamma Spectroscopy (Cesium-137, Cobalt-60)	Jar Size					1000 mL Poly	1000 mL Poly						
	Preservative					HNO3 to pH<2, Cool 4C	HNO3 to pH<2; Cool 4C						
	Lot Number					C 3079020	C 3079020						
Magnesium - 243	Jar Size					1000 mL Poly	1000 mL Poly						
	Preservative					HNO3 to pH<2; Cool 4C	HNO3 to pH<2; Cool 4C						
	Lot Number					C 3079020	C 3079020						
Strontium - 90,90-Total Sr	Jar Size					(2x) 1000 mL Poly	(2x) 1000 mL Poly						
	Preservative					HNO3 to pH<2; Cool 4C	HNO3 to pH<2; Cool 4C						
	Lot Number					C 3079020	C 3079020						
Technetium-99	Jar Size					(2x) 1000 mL Poly	(2x) 1000 mL Poly						
	Preservative					None	None						
	Lot Number					C 3079020	C 3079020						
Tritium - 3H	Jar Size					500 mL Poly	500 mL Poly						
	Preservative					None	None						
	Lot Number					L 4844070	L 4844070						

DJ Alexander/GS

200-UP-1/C4299
HNF-N-384-1

DJ Alexander/RO Mahood 9/29/04

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ICPMS Summary for B19J07 and B19J00 Samples
Technical Procedure: PNNL-AGG-415, rev 0
Analyzed by Keith Geiszler
Reviewed by CF Brown
Sample Set #NA
Samples submitted for analysis 09-14-04
EQL: = Estimated Quantification limit.
(###) Reported value is below Estimated Quantification Limit
< = Instrument returned a zero or negative number. <Sample EQL is reported result.
Sample EQL = Instrument EQL x Sample dilution factor.
Analyst Note: Summary page is color coded for EQL determination. Final copy must be printed with a color copier.

	Tc 99	Tc 99	U 238
Instrument EQL:	<0.010	<170	<0.005
Sample EQL:	<0.030	<509	<0.015
Sample ID	µg/l	pCi/L	µg/l
B19J07	(0.001)	(17.0)	0.159
B19J00	(0.001)	(17.0)	0.194

ICPMS Dilutions for Stuart Lutrell
Analyzed by KNG
Samples submitted for analysis on 09-14-04
Dilution values for Tc are not valid as all samples are <EQL

Indicates values used to calculate final concentration.

Sample ID	Dilution	Instr. Reading	Conc ug/l	Dilution	Reading	ug/l	Average ug/l	STDEV	% Difference	%RSD	Final ug/l
Tc 99											
B19J07	3	0.0002	0.0005	2	0.0002	0.0004	0.000	0	35	25	0.001
B19J00	3	0.0002	0.0007								0.001
U 238											
B19J07	3	0.0529	0.1587	2	0.0794	0.1588	0.159	0	0	0	0.159
B19J00	3	0.0646	0.1936								0.194

ICP-MS Spike Recoveries for Stuart Lutrell
Submitted for Analysis on 09-14-04
Analyzed by Keith Geiszler
Successful spike recoveries
Unsuccessful spike recoveries

Sample ID	Dilution	Unspiked Reading ug/l	Spike ug/l	Spiked Reading ug/l	% Recovery
Tc 99					
B19J07	2	0.0002	0.050	0.0517	103
U 238					
B19J07	2	0.0794	0.050	0.1269	95

MS091504 ICPMS

Sample ID	Tc99	U238	
blank 1			
blank 2			
0.01 ppb (58640-26)			
0.025 ppb (58640-26)	0.0250		
0.05 ppb (58640-26)	0.0500	0.0500	
0.1 ppb (58640-26)	0.1046	0.1003	
0.25 ppb (58640-26)	0.2424	0.2500	
0.5 ppb (58640-26)	0.4987	0.5000	
1.0 ppb (58640-26)	1.0005	1.0006	
5.0 ppb (58640-26)	5.0048	4.9992	
Blank 3	0.0019	0.0015	
Blank 4	0.0007	0.0004	
0.001 ppb check	0.0012	0.0008	
0.005 ppb check	0.0051	0.0047	
0.01 ppb check	0.0098	0.0099	
0.025 ppb check	0.0240	0.0250	
0.05 ppb check	0.0478	0.0486	
0.1 ppb IND check	0.0996	0.0969	
0.25 ppb check	0.2440	0.2481	
0.5 ppb check	0.5014	0.4949	
1.0 ppb IND check	1.0199	0.9899	
5.0 ppb check	5.0012	5.0035	
Blank 5	0.0019	0.0016	
Blank 6	0.0003	-0.0001	
3x B19J07	0.0002	0.0529	
3x B19J00	0.0002	0.0646	
2x B19J07	0.0002	0.0794	
2x B19J07 +0.05	0.0517	0.1269	
5x S04028-PB 81804-1 WE	0.0001	0.0000	Samples not part of data set.
5x S04028-PB 81804-2 WE	0.0001	0.0004	Samples not part of data set.
5x S04028-7 WE	0.0001	0.1360	Samples not part of data set.
5x S04028-8 WE	0.0001	0.1745	Samples not part of data set.
5x S04028-9 WE	0.0001	0.3470	Samples not part of data set.
5x S04028-10 WE	0.0001	0.4483	Samples not part of data set.
Blank 7	0.0002	0.0000	
0.10 ppb IND check	0.1032	0.0974	
1.0 ppb IND check	1.0461	0.9808	
Blank 8	0.0005	0.0001	
5x S04028-11 WE	0.0001	0.3727	Samples not part of data set.
5x S04028-29 WE	0.0013	1.9029	Samples not part of data set.
5x S04028-32 WE	0.0012	1.5281	Samples not part of data set.
5x S04028-35 WE	0.0031	0.5951	Samples not part of data set.
5x S04028-35 dup WE	0.0031	0.7061	Samples not part of data set.
5x S04028-39 WE	0.0011	0.0854	Samples not part of data set.
5x S04028-41 WE	0.0321	0.1086	Samples not part of data set.
5x S04028-68 WE	0.0009	0.0646	Samples not part of data set.
5x S04028-72 WE	0.0021	0.0643	Samples not part of data set.
5x S04028-74 WE	0.0050	0.0478	Samples not part of data set.
Blank 9	0.0002	-0.0001	
0.10 ppb IND check	0.1060	0.0960	
1.0 ppb IND check	1.0550	0.9814	
Blank 10	0.0006	0.0001	
5x S04028-76 WE	0.0103	0.0557	Samples not part of data set.
5x S04028-78 WE	0.0079	0.0432	Samples not part of data set.
5x S04028-80 WE	0.0060	0.0605	Samples not part of data set.
5x S04028-82 WE	0.0074	0.0511	Samples not part of data set.
5x S04028-84 WE	0.0692	0.0982	Samples not part of data set.
5x S04028-86 WE	0.1028	0.0870	Samples not part of data set.
5x S04028-88 WE	0.0059	0.0300	Samples not part of data set.
5x S04028-90 WE	0.0011	0.0329	Samples not part of data set.
5x S04028-93 WE	0.0054	0.0579	Samples not part of data set.
5x S04028-93 dup WE	0.0085	0.0598	Samples not part of data set.
Blank 11	0.0002	-0.0002	
0.10 ppb IND check	0.1077	0.0965	
1.0 ppb IND check	1.0763	0.9826	

Blank 12	0.0006	0.0001	
5x S04028-103 WE	0.0003	0.0478	Samples not part of data set.
5x S04028-105 WE	0.0001	0.0369	Samples not part of data set.
5x S04028-107 WE	0.0001	0.0310	Samples not part of data set.
Rinse Blank	0.0003	-0.0002	
1000x SAMS 1-1 F	2.2639	0.0076	Samples not part of data set.
1000x SAMS 2-1 F	2.0094	0.0014	Samples not part of data set.
1000x SAMS 1-2 F	0.4944	0.0113	Samples not part of data set.
1000x SAMS 2-2 F	0.3561	0.0016	Samples not part of data set.
100x SAMS 1-3 F	1.2701	0.0726	Samples not part of data set.
100x SAMS 2-3 F	1.1044	0.0324	Samples not part of data set.
10x SAMS 1-4 F	2.3226	0.1764	Samples not part of data set.
Blank 13	0.0009	-0.0002	
0.10 ppb IND check	0.1055	0.0951	
1.0 ppb IND check	1.0606	0.9706	
Blank 14	0.0007	0.0002	
10x SAMS 2-4 F	2.6677	0.4676	Samples not part of data set.
100x SAMS 1-4 I	1.0849	7.7605	Samples not part of data set.
100x SAMS 2-4 I	1.1674	8.2270	Samples not part of data set.
10x Sr7 1-1 F	1.2439	78.1340	Samples not part of data set.
10x Sr7 2-1 F	1.1373	75.8610	Samples not part of data set.
10x Sr7 1-2 F	0.2049	76.8370	Samples not part of data set.
10x Sr7 2-2 F	0.1973	77.1230	Samples not part of data set.
10x Sr7 1-3 F	0.0550	75.8820	Samples not part of data set.
10x Sr7 2-3 F	0.0562	75.7180	Samples not part of data set.
10x Sr7 1-4 F	0.0121	76.6690	Samples not part of data set.
Blank 15	0.0003	0.0359	
0.01 ppb check	0.0093	0.0125	Possible U238 carryover from sample results. Data not used
0.1 ppb IND check	0.0970	0.0954	
1.0 ppb IND check	0.9501	0.9529	
Blank 16	0.0006	0.0006	
10x Sr7 2-4 F	0.0110	74.7070	Samples not part of data set.
1000x Sr7 2-3 I	0.4885	0.8061	Samples not part of data set.
1000x Sr7 1-3 I	0.4893	0.7878	Samples not part of data set.
100x A530E 1-1 F	0.2610	2.9306	Samples not part of data set.
100x A530E 2-1 F	0.2570	2.7119	Samples not part of data set.
100x A530E 1-2 F	0.0463	3.3168	Samples not part of data set.
100x A530E 2-2 F	0.0458	2.8347	Samples not part of data set.
50x A530E 1-3 F	0.0258	5.0199	Samples not part of data set.
50x A530E 2-3 F	0.0281	6.3873	Samples not part of data set.
10x A530E 1-4 F	0.0277	29.1900	Samples not part of data set.
Blank 17	0.0002	0.0076	
0.1 ppb IND check	0.0951	0.0944	
1.0 ppb IND check	0.9583	0.9495	
Blank 18	0.0006	0.0003	
10x A530E 1-4 F	0.0284	32.8310	Samples not part of data set.
10000x A530E 1-2 I	0.1621	0.0852	Samples not part of data set.
10000x A530E 2-2 I	0.1596	0.0824	Samples not part of data set.
100x HPQ 1-1 F	0.9216	0.1243	Samples not part of data set.
100x HPQ 2-1 F	0.9056	0.1196	Samples not part of data set.
100x HPQ 1-2 F	0.1557	0.1256	Samples not part of data set.
100x HPQ 2-2 F	0.1495	0.1116	Samples not part of data set.
50x HPQ 1-3 F	0.0783	0.0722	Samples not part of data set.
50x HPQ 2-3 F	0.0764	0.2104	Samples not part of data set.

50x HPQ 1-4 F	0.0159	0.2366	Samples not part of data set.
Blank 19	0.0002	0.0000	
0.1 ppb IND check	0.0947	0.0948	
1.0 ppb IND check	0.9662	0.9506	
Blank 20	0.0008	0.0003	
50x HPQ 2-4 F	0.0164	0.2535	Samples not part of data set.
10000x HPQ 1-1 I	0.7718	0.0775	Samples not part of data set.
10000x HPQ 2-1 I	0.8017	0.0810	Samples not part of data set.
Rinse Blank	0.0006	-0.0001	
3x S04028-41 WE	0.0493	0.1805	Samples not part of data set.
3x S04028-41 WE +0.05	0.0976	0.2273	Samples not part of data set.
3x S04028-41 WE +0.15	0.1919	0.3141	Samples not part of data set.
3x S04028-76 WE	0.0156	0.0926	Samples not part of data set.
3x S04028-76 WE +0.05	0.0630	0.1374	Samples not part of data set.
3x S04028-78 WE	0.0126	0.0712	Samples not part of data set.
3x S04028-78 WE +0.05	0.0606	0.1170	Samples not part of data set.
Blank 21	0.0002	-0.0001	
0.1 ppb IND check	0.0972	0.0964	
1.0 ppb IND check	0.9590	0.9659	
Blank 22	0.0005	0.0000	
3x S04028-84 WE	0.1046	0.1618	Samples not part of data set.
3x S04028-84 WE +0.05	0.1533	0.2111	Samples not part of data set.
3x S04028-84 WE +0.15	0.2531	0.3054	Samples not part of data set.
3x S04028-86 WE	0.1597	0.1460	Samples not part of data set.
3x S04028-86 WE +0.1	0.2523	0.2398	Samples not part of data set.
3x S04028-93 dup WE	0.0136	0.0985	Samples not part of data set.
3x S04028-93 dup WE +0.05	0.0613	0.1477	Samples not part of data set.
50x SAMS 1-4 F	0.4087	0.0330	Samples not part of data set.
50x SAMS 1-4 F +0.4	0.7827	0.4198	Samples not part of data set.
50x SAMS 2-4 F	0.4638	0.0861	Samples not part of data set.
Blank 23	0.0005	-0.0003	
0.1 ppb IND check	0.0947	0.0940	
1.0 ppb IND check	0.9502	0.9575	
Blank 24	0.0007	0.0002	
50x SAMS 2-4 F +0.4	0.8358	0.4711	Samples not part of data set.
200x SAMS 1-4 I	0.4877	3.8026	Samples not part of data set.
200x SAMS 1-4 I +0.4	0.8959	4.3789	Samples not part of data set.
50x Sr7 1-1 F	0.2175	14.7730	Samples not part of data set.
50x Sr7 1-1 F +0.2	0.4006	14.6570	Samples not part of data set.
10x A530E 2-2 F	0.4502	30.3530	Samples not part of data set.
10x A530E 2-2 F +0.4	0.8207	30.9110	Samples not part of data set.
20x A530E 1-4 F	0.0143	14.6110	Samples not part of data set.
20x A530E 1-4 F +0.05	0.0616	15.0340	Samples not part of data set.
Blank 25	0.0002	0.0074	
Blank 26	0.0001	0.0008	
0.001 ppb check	0.0012	0.0009	
0.005 ppb check	0.0043	0.0046	
0.01 ppb check	0.0092	0.0093	
0.025 ppb check	0.0225	0.0241	
0.05 ppb check	0.0440	0.0463	
0.1 ppb IND check	0.0919	0.0951	
0.25 ppb check	0.2236	0.2414	
0.5 ppb check	0.4514	0.4784	
1.0 ppb IND check	0.9308	0.9482	
5.0 ppb check	4.5622	4.8179	
Blank 27	0.0020	0.0012	

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3x B19J07	0.0002	0.0529
3x B19J00	0.0002	0.0646
2x B19J07	0.0002	0.0794
2x B19J07 +0.05	0.0517	0.1269

Summary by Sample

	In115	Tc99	U238	Tl205
blank 1				
blank 2			DATA NOT USED	
0.01 ppb (58640-26)				
0.025 ppb (58640-26)				
0.05 ppb (58640-26)		0.0500	0.0500	
0.1 ppb (58640-26)		0.1023	0.1003	
0.25 ppb (58640-26)		0.2441	0.2500	
0.5 ppb (58640-26)		0.5004	0.5000	
1.0 ppb (58640-26)		1.0018	1.0006	
5.0 ppb (58640-26)		5.0038	4.9992	
Blank 3		0.0049	0.0015	
Blank 4		0.0036	0.0004	
0.001 ppb check		0.0042	0.0008	
0.005 ppb check		0.0080	0.0047	
0.01 ppb check		0.0127	0.0099	
0.025 ppb check		0.0269	0.0250	
0.05 ppb check		0.0507	0.0486	
0.1 ppb IND check		0.1024	0.0969	
0.25 ppb check		0.2467	0.2481	
0.5 ppb check		0.5040	0.4949	
1.0 ppb IND check		1.0220	0.9899	
5.0 ppb check		5.0002	5.0035	
Blank 5		0.0049	0.0016	
Blank 6		0.0032	-0.0001	
3x B19J07		0.0031	0.0529	
3x B19J00		0.0032	0.0646	
2x B19J07		0.0031	0.0794	
2x B19J07 +0.05		0.0546	0.1269	
5x S04028-PB 81804-1 WE		0.0030	0.0000	
5x S04028-PB 81804-2 WE		0.0030	0.0004	
5x S04028-7 WE		0.0031	0.1360	
5x S04028-8 WE		0.0030	0.1745	
5x S04028-9 WE		0.0030	0.3470	
5x S04028-10 WE		0.0030	0.4483	
Blank 7		0.0031	0.0000	
0.10 ppb IND check		0.1061	0.0974	
1.0 ppb IND check		1.0483	0.9808	
Blank 8		0.0034	0.0001	
5x S04028-11 WE		0.0030	0.3727	
5x S04028-29 WE		0.0042	1.9029	
5x S04028-32 WE		0.0041	1.5281	
5x S04028-35 WE		0.0060	0.5951	
5x S04028-35 dup WE		0.0060	0.7061	
5x S04028-39 WE		0.0040	0.0854	
5x S04028-41 WE		0.0350	0.1086	
5x S04028-68 WE		0.0039	0.0646	
5x S04028-72 WE		0.0051	0.0643	
5x S04028-74 WE		0.0079	0.0478	
Blank 9		0.0031	-0.0001	
0.10 ppb IND check		0.1089	0.0960	

1.0 ppb IND check	1.0571	0.9814
Blank 10	0.0036	0.0001
5x S04028-76 WE	0.0132	0.0557
5x S04028-78 WE	0.0108	0.0432
5x S04028-80 WE	0.0089	0.0605
5x S04028-82 WE	0.0104	0.0511
5x S04028-84 WE	0.0721	0.0982
5x S04028-86 WE	0.1057	0.0870
5x S04028-88 WE	0.0088	0.0300
5x S04028-90 WE	0.0041	0.0329
5x S04028-93 WE	0.0084	0.0579
5x S04028-93 dup WE	0.0115	0.0598
Blank 11	0.0032	-0.0002
0.10 ppb IND check	0.1105	0.0965
1.0 ppb IND check	1.0784	0.9826
Blank 12	0.0035	0.0001
5x S04028-103 WE	0.0032	0.0478
5x S04028-105 WE	0.0030	0.0369
5x S04028-107 WE	0.0030	0.0310
Rinse Blank	0.0032	-0.0002
1000x SAMS 1-1 F	2.2651	0.0076
1000x SAMS 2-1 F	2.0108	0.0014
1000x SAMS 1-2 F	0.4969	0.0113
1000x SAMS 2-2 F	0.3588	0.0016
100x SAMS 1-3 F	1.2720	0.0726
100x SAMS 2-3 F	1.1065	0.0324
10x SAMS 1-4 F	2.3238	0.1764
Blank 13	0.0038	-0.0002
0.10 ppb IND check	0.1084	0.0951
1.0 ppb IND check	1.0627	0.9706
Blank 14	0.0037	0.0002
10x SAMS 2-4 F	2.6686	0.4676
100x SAMS 1-4 I	1.0869	7.7605
100x SAMS 2-4 I	1.1694	8.2270
10x Sr7 1-1 F	1.2458	78.1340
10x Sr7 2-1 F	1.1393	75.8610
10x Sr7 1-2 F	0.2076	76.8370
10x Sr7 2-2 F	0.2001	77.1230
10x Sr7 1-3 F	0.0579	75.8820
10x Sr7 2-3 F	0.0591	75.7180
10x Sr7 1-4 F	0.0150	76.6690
Blank 15	0.0032	0.0359
0.01 ppb check	0.0122	0.0125
0.1 ppb IND check	0.0998	0.0954
1.0 ppb IND check	0.9523	0.9529
Blank 16	0.0035	0.0006
10x Sr7 2-4 F	0.0139	74.7070
1000x Sr7 2-3 I	0.4910	0.8061
1000x Sr7 1-3 I	0.4918	0.7878
100x A530E 1-1 F	0.2638	2.9306
100x A530E 2-1 F	0.2597	2.7119
100x A530E 1-2 F	0.0492	3.3168

100x A530E 2-2 F	0.0487	2.8347
50x A530E 1-3 F	0.0287	5.0199
50x A530E 2-3 F	0.0310	6.3873
10x A530E 1-4 F	0.0307	29.1900
Blank 17	0.0031	0.0076
0.1 ppb IND check	0.0980	0.0944
1.0 ppb IND check	0.9605	0.9495
Blank 18	0.0035	0.0003
10x A530E 1-4 F	0.0313	32.8310
10000x A530E 1-2 I	0.1649	0.0852
10000x A530E 2-2 I	0.1625	0.0824
100x HPQ 1-1 F	0.9238	0.1243
100x HPQ 2-1 F	0.9079	0.1196
100x HPQ 1-2 F	0.1585	0.1256
100x HPQ 2-2 F	0.1523	0.1116
50x HPQ 1-3 F	0.0812	0.0722
50x HPQ 2-3 F	0.0792	0.2104
50x HPQ 1-4 F	0.0188	0.2366
Blank 19	0.0031	0.0000
0.1 ppb IND check	0.0976	0.0948
1.0 ppb IND check	0.9684	0.9506
Blank 20	0.0038	0.0003
50x HPQ 2-4 F	0.0193	0.2535
10000x HPQ 1-1 I	0.7742	0.0775
10000x HPQ 2-1 I	0.8040	0.0810
Rinse Blank	0.0035	-0.0001
3x S04028-41 WE	0.0522	0.1805
3x S04028-41 WE +0.05	0.1005	0.2273
3x S04028-41 WE +0.15	0.1946	0.3141
3x S04028-76 WE	0.0186	0.0926
3x S04028-76 WE +0.05	0.0659	0.1374
3x S04028-78 WE	0.0155	0.0712
3x S04028-78 WE +0.05	0.0635	0.1170
Blank 21	0.0031	-0.0001
0.1 ppb IND check	0.1001	0.0964
1.0 ppb IND check	0.9612	0.9659
Blank 22	0.0034	0.0000
3x S04028-84 WE	0.1075	0.1618
3x S04028-84 WE +0.05	0.1562	0.2111
3x S04028-84 WE +0.15	0.2558	0.3054
3x S04028-86 WE	0.1625	0.1460
3x S04028-86 WE +0.1	0.2550	0.2398
3x S04028-93 dup WE	0.0165	0.0985
3x S04028-93 dup WE +0.05	0.0642	0.1477
50x SAMS 1-4 F	0.4113	0.0330
50x SAMS 1-4 F +0.4	0.7850	0.4198
50x SAMS 2-4 F	0.4664	0.0861
Blank 23	0.0034	-0.0003
0.1 ppb IND check	0.0975	0.0940
1.0 ppb IND check	0.9524	0.9575
Blank 24	0.0036	0.0002
50x SAMS 2-4 F +0.4	0.8380	0.4711

200x SAMS 1-4 I	0.4903	3.8026
200x SAMS 1-4 I +0.4	0.8982	4.3789
50x Sr7 1-1 F	0.2203	14.7730
50x Sr7 1-1 F +0.2	0.4032	14.6570
10x A530E 2-2 F	0.4528	30.3530
10x A530E 2-2 F +0.4	0.8230	30.9110
20x A530E 1-4 F	0.0172	14.6110
20x A530E 1-4 F +0.05	0.0645	15.0340
Blank 25	0.0032	0.0074
Blank 26	0.0031	0.0008
0.001 ppb check	0.0041	0.0009
0.005 ppb check	0.0072	0.0046
0.01 ppb check	0.0121	0.0093
0.025 ppb check	0.0254	0.0241
0.05 ppb check	0.0469	0.0463
0.1 ppb IND check	0.0947	0.0951
0.25 ppb check	0.2264	0.2414
0.5 ppb check	0.4540	0.4784
1.0 ppb IND check	0.9331	0.9482
5.0 ppb check	4.5616	4.8179
Blank 27	0.0049	0.0012
9/16/2004 7:58		

Summary by Sample

	Tc99	U238
blank 1		
blank 2		
0.01 ppb (58640-26)		
0.025 ppb (58640-26)		
0.05 ppb (58640-26)	0.0500	0.0500
0.1 ppb (58640-26)	0.1023	0.1003
0.25 ppb (58640-26)	0.2441	0.2500
0.5 ppb (58640-26)	0.5004	0.5000
1.0 ppb (58640-26)	1.0018	1.0006
5.0 ppb (58640-26)	5.0038	4.9992
Blank 3	0.0049	0.0015
Blank 4	0.0036	0.0004
0.001 ppb check	0.0005	0.0008
0.005 ppb check	0.0044	0.0047
0.01 ppb check	0.0091	0.0099
0.025 ppb check	0.0233	0.0250
0.05 ppb check	0.0471	0.0486
0.1 ppb IND check	0.0988	0.0969
0.25 ppb check	0.2431	0.2481
0.5 ppb check	0.5003	0.4949
1.0 ppb IND check	1.0184	0.9899
5.0 ppb check	4.9966	5.0035
Blank 5	0.0012	0.0016
Blank 6	-0.0004	-0.0001
3x B19J07	-0.0005	0.0529
3x B19J00	-0.0005	0.0646
2x B19J07	-0.0005	0.0794
2x B19J07 +0.05	0.0510	0.1269
5x S04028-PB 81804-1 WE	-0.0006	0.0000
5x S04028-PB 81804-2 WE	-0.0006	0.0004
5x S04028-7 WE	-0.0006	0.1360
5x S04028-8 WE	-0.0006	0.1745
5x S04028-9 WE	-0.0006	0.3470
5x S04028-10 WE	-0.0006	0.4483
Blank 7	-0.0005	0.0000
0.10 ppb IND check	0.1024	0.0974
1.0 ppb IND check	1.0447	0.9808
Blank 8	-0.0002	0.0001
5x S04028-11 WE	-0.0006	0.3727
5x S04028-29 WE	0.0006	1.9029
5x S04028-32 WE	0.0005	1.5281
5x S04028-35 WE	0.0024	0.5951
5x S04028-35 dup WE	0.0024	0.7061
5x S04028-39 WE	0.0003	0.0854
5x S04028-41 WE	0.0314	0.1086
5x S04028-68 WE	0.0002	0.0646
5x S04028-72 WE	0.0014	0.0643
5x S04028-74 WE	0.0042	0.0478
Blank 9	-0.0005	-0.0001
0.10 ppb IND check	0.1052	0.0960

1.0 ppb IND check	1.0535	0.9814
Blank 10	-0.0001	0.0001
5x S04028-76 WE	0.0096	0.0557
5x S04028-78 WE	0.0072	0.0432
5x S04028-80 WE	0.0052	0.0605
5x S04028-82 WE	0.0067	0.0511
5x S04028-84 WE	0.0685	0.0982
5x S04028-86 WE	0.1020	0.0870
5x S04028-88 WE	0.0052	0.0300
5x S04028-90 WE	0.0004	0.0329
5x S04028-93 WE	0.0047	0.0579
5x S04028-93 dup WE	0.0078	0.0598
Blank 11	-0.0005	-0.0002
0.10 ppb IND check	0.1069	0.0965
1.0 ppb IND check	1.0748	0.9826
Blank 12	-0.0001	0.0001
5x S04028-103 WE	-0.0004	0.0478
5x S04028-105 WE	-0.0006	0.0369
5x S04028-107 WE	-0.0006	0.0310
Rinse Blank	-0.0005	-0.0002
1000x SAMS 1-1 F	2.2615	0.0076
1000x SAMS 2-1 F	2.0072	0.0014
1000x SAMS 1-2 F	0.4933	0.0113
1000x SAMS 2-2 F	0.3551	0.0016
100x SAMS 1-3 F	1.2684	0.0726
100x SAMS 2-3 F	1.1029	0.0324
10x SAMS 1-4 F	2.3202	0.1764
Blank 13	0.0001	-0.0002
0.10 ppb IND check	0.1047	0.0951
1.0 ppb IND check	1.0591	0.9706
Blank 14	0.0000	0.0002
10x SAMS 2-4 F	2.6650	0.4676
100x SAMS 1-4 I	1.0833	7.7605
100x SAMS 2-4 I	1.1658	8.2270
10x Sr7 1-1 F	1.2422	78.1340
10x Sr7 2-1 F	1.1357	75.8610
10x Sr7 1-2 F	0.2040	76.8370
10x Sr7 2-2 F	0.1965	77.1230
10x Sr7 1-3 F	0.0542	75.8820
10x Sr7 2-3 F	0.0555	75.7180
10x Sr7 1-4 F	0.0114	76.6690
Blank 15	-0.0004	0.0359
0.01 ppb check	0.0085	0.0125
0.1 ppb IND check	0.0962	0.0954
1.0 ppb IND check	0.9487	0.9529
Blank 16	-0.0001	0.0006
10x Sr7 2-4 F	0.0103	74.7070
1000x Sr7 2-3 I	0.4874	0.8061
1000x Sr7 1-3 I	0.4882	0.7878
100x A530E 1-1 F	0.2601	2.9306
100x A530E 2-1 F	0.2560	2.7119
100x A530E 1-2 F	0.0455	3.3168

100x A530E 2-2 F	0.0450	2.8347
50x A530E 1-3 F	0.0251	5.0199
50x A530E 2-3 F	0.0273	6.3873
10x A530E 1-4 F	0.0270	29.1900
Blank 17	-0.0005	0.0076
0.1 ppb IND check	0.0943	0.0944
1.0 ppb IND check	0.9568	0.9495
Blank 18	-0.0001	0.0003
10x A530E 1-4 F	0.0277	32.8310
10000x A530E 1-2 I	0.1612	0.0852
10000x A530E 2-2 I	0.1588	0.0824
100x HPQ 1-1 F	0.9201	0.1243
100x HPQ 2-1 F	0.9042	0.1196
100x HPQ 1-2 F	0.1549	0.1256
100x HPQ 2-2 F	0.1487	0.1116
50x HPQ 1-3 F	0.0776	0.0722
50x HPQ 2-3 F	0.0756	0.2104
50x HPQ 1-4 F	0.0151	0.2366
Blank 19	-0.0005	0.0000
0.1 ppb IND check	0.0939	0.0948
1.0 ppb IND check	0.9647	0.9506
Blank 20	0.0001	0.0003
50x HPQ 2-4 F	0.0157	0.2535
10000x HPQ 1-1 I	0.7705	0.0775
10000x HPQ 2-1 I	0.8004	0.0810
Rinse Blank	-0.0001	-0.0001
3x S04028-41 WE	0.0486	0.1805
3x S04028-41 WE +0.05	0.0968	0.2273
3x S04028-41 WE +0.15	0.1910	0.3141
3x S04028-76 WE	0.0149	0.0926
3x S04028-76 WE +0.05	0.0623	0.1374
3x S04028-78 WE	0.0119	0.0712
3x S04028-78 WE +0.05	0.0598	0.1170
Blank 21	-0.0005	-0.0001
0.1 ppb IND check	0.0964	0.0964
1.0 ppb IND check	0.9575	0.9659
Blank 22	-0.0002	0.0000
3x S04028-84 WE	0.1038	0.1618
3x S04028-84 WE +0.05	0.1525	0.2111
3x S04028-84 WE +0.15	0.2522	0.3054
3x S04028-86 WE	0.1588	0.1460
3x S04028-86 WE +0.1	0.2514	0.2398
3x S04028-93 dup WE	0.0129	0.0985
3x S04028-93 dup WE +0.05	0.0606	0.1477
50x SAMS 1-4 F	0.4076	0.0330
50x SAMS 1-4 F +0.4	0.7814	0.4198
50x SAMS 2-4 F	0.4628	0.0861
Blank 23	-0.0002	-0.0003
0.1 ppb IND check	0.0939	0.0940
1.0 ppb IND check	0.9487	0.9575
Blank 24	0.0000	0.0002
50x SAMS 2-4 F +0.4	0.8344	0.4711

200x SAMS 1-4 I	0.4867	3.8026
200x SAMS 1-4 I +0.4	0.8945	4.3789
50x Sr7 1-1 F	0.2166	14.7730
50x Sr7 1-1 F +0.2	0.3996	14.6570
10x A530E 2-2 F	0.4492	30.3530
10x A530E 2-2 F +0.4	0.8194	30.9110
20x A530E 1-4 F	0.0136	14.6110
20x A530E 1-4 F +0.05	0.0609	15.0340
Blank 25	-0.0005	0.0074
Blank 26	-0.0006	0.0008
0.001 ppb check	0.0005	0.0009
0.005 ppb check	0.0036	0.0046
0.01 ppb check	0.0085	0.0093
0.025 ppb check	0.0217	0.0241
0.05 ppb check	0.0432	0.0463
0.1 ppb IND check	0.0911	0.0951
0.25 ppb check	0.2227	0.2414
0.5 ppb check	0.4503	0.4784
1.0 ppb IND check	0.9294	0.9482
5.0 ppb check	4.5580	4.8179
Blank 27	0.0012	0.0012
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ICPMS Summary for B19J01 and B19J08 Samples
Technical Procedure: PNNL-AGG-415, rev 0
Analyzed by Keith Geiszler
Reviewed by CF Brown
Sample Set #NA
Samples submitted for analysis 09-23-04
EQL: = Estimated Quantification limit.
< = Instrument returned a zero or negative number. <Sample EQL is reported result.
Sample EQL = Instrument EQL x Sample dilution factor.
Analyst Note: Summary page is color coded for EQL determination. Final copy must be printed with a color copie

	Tc 99	Tc 99	U 238
Instrument EQL:	<0.001	<17.0	<0.001
Sample EQL:	<0.002	<33.9	<0.002
Sample ID	µg/l	pCi/L	µg/l
B19J01	<0.002	<33.9	0.663
B19J08	0.002	(32.0)	0.803

ICPMS Dilutions for Stuart Lutrell
Analyzed by KNG
Samples submitted for analysis on 09-22-04
Dilution values for Tc are not valid as all samples are <EQL

Indicates values used to calculate final concer

Sample ID	Dilution	Instr. Reading	Conc ug/l	Dilution
Tc 99				
B19J01	2	0.0002	0.0005	3
B19J08	2	0.0010	0.0020	3
U 238				
B19J01	2	0.3308	0.6615	3
B19J08	2	0.4014	0.8029	3

ICP-MS Spike Recoveries for Stuart Lutrell
Submitted for Analysis on 09-22-04
Analyzed by Keith Geiszler

Sample ID	Dilution	Unspiked Reading ug/l	Spike ug/l	Spiked Reading ug/l	% Recovery
Tc 99					
B19J01	3	0.0001	0.005	0.0048	94
B19J01	3	0.0001	0.050	0.0510	102
B19J01	3	0.0001	0.200	0.2046	102
B19J08	3	0.0006	0.050	0.0509	101
B19J08	3	0.0006	0.200	0.2027	101
U 238					
B19J01	3	0.2216	0.005	0.2227	22
B19J01	3	0.2216	0.050	0.2669	91
B19J01	3	0.2216	0.200	0.4123	95
B19J08	3	0.2618	0.050	0.3138	104
B19J08	3	0.2618	0.200	0.4602	99

ıtration.

Reading	ug/l	Average ug/l	STDEV	% Difference	%RSD	Final ug/l
0.0001	0.0004	0.000	0	19	13	0.000
0.0006	0.0018	0.002	0	13	9	0.002
0.2216	0.6648	0.663	0	0	0	0.663
0.2618	0.7855	0.794	0	2	2	0.794

Summary by Sample

	Tc99	U238
blank 1		
blank 2		
0.01 ppb		
0.025 ppb		
0.05 ppb	0.0501	0.0498
0.1 ppb	0.1022	0.0999
0.25 ppb	0.2444	0.2503
0.5 ppb	0.4988	0.4999
1.0 ppb	1.0053	1.0010
Blank 3	-0.0011	0.0014
Blank 4	-0.0017	0.0009
0.001 ppb check	-0.0008	0.0018
0.005 ppb check	0.0033	0.0056
0.01 ppb check	0.0082	0.0106
0.025 ppb check	0.0233	0.0250
0.05 ppb check	0.0472	0.0501
0.1 ppb IND check	0.1014	0.0993
0.25 ppb check	0.2456	0.2504
0.5 ppb check	0.4968	0.4979
1.0 ppb IND check	1.0303	0.9866
5.0 ppb check	5.0779	4.9417
Blank 5	-0.0011	0.0013
Blank 6	-0.0016	0.0011
2x B19J01	-0.0014	0.3317
2x B19J08	-0.0007	0.4024
3x B19J01	-0.0015	0.2225
3x B19J01 +0.05	0.0493	0.2679
3x B19J08	-0.0011	0.2628
3x B19J08 +0.05	0.0492	0.3147
3x B19J01 +0.2	0.2029	0.4132
3x B19J08 +0.2	0.2011	0.4612
rinse blank	-0.0014	0.0011
3x B19J01 +0.005	0.0032	0.2236
Blank 7	-0.0015	0.0011
Blank 8	-0.0016	0.0009
0.001 ppb check	-0.0007	0.0018
0.005 ppb check	0.0029	0.0058
0.01 ppb check	0.0078	0.0105
0.025 ppb check	0.0222	0.0249
0.05 ppb check	0.0454	0.0486
0.1 ppb IND check	0.0953	0.0967
0.25 ppb check	0.2331	0.2420
0.5 ppb check	0.4743	0.4835
1.0 ppb IND check	0.9794	0.9574
5.0 ppb check	4.8420	4.8335
Blank 9	0.0010	0.0031

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MS092304 ICPMS

Sample ID	Tc99	U238
blank 1		
blank 2		
0.01 ppb		
0.025 ppb		
0.05 ppb	0.0501	0.0498
0.1 ppb	0.1022	0.0999
0.25 ppb	0.2444	0.2503
0.5 ppb	0.4988	0.4999
1.0 ppb	1.0053	1.0010
Blank 3	-0.0011	0.0014
Blank 4	-0.0017	0.0009
0.001 ppb check	0.0009	0.0009
0.005 ppb check	0.0049	0.0046
0.01 ppb check	0.0099	0.0096
0.025 ppb check	0.0250	0.0241
0.05 ppb check	0.0488	0.0491
0.1 ppb IND check	0.1030	0.0984
0.25 ppb check	0.2473	0.2494
0.5 ppb check	0.4985	0.4970
1.0 ppb IND check	1.0320	0.9856
5.0 ppb check	5.0796	4.9408
Blank 5	0.0005	0.0003
Blank 6	0.0001	0.0001
2x B19J01	0.0002	0.3308
2x B19J08	0.0010	0.4014
3x B19J01	0.0001	0.2216
3x B19J01 +0.05	0.0510	0.2669
3x B19J08	0.0006	0.2618
3x B19J08 +0.05	0.0509	0.3138
3x B19J01 +0.2	0.2046	0.4123
3x B19J08 +0.2	0.2027	0.4602
rinse blank	0.0002	0.0001
3x B19J01 +0.005	0.0048	0.2227
Blank 7	0.0001	0.0001
Blank 8	0.0001	0.0000
0.001 ppb check	0.0010	0.0009
0.005 ppb check	0.0046	0.0046
0.01 ppb check	0.0095	0.0095
0.025 ppb check	0.0238	0.0240
0.05 ppb check	0.0471	0.0476
0.1 ppb IND check	0.0970	0.0958
0.25 ppb check	0.2348	0.2411
0.5 ppb check	0.4760	0.4826
1.0 ppb IND check	0.9810	0.9565
5.0 ppb check	4.8437	4.8326
Blank 9	0.0027	0.0021

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2x B19J01	0.0002	0.3308
2x B19J08	0.0010	0.4014
3x B19J01	0.0001	0.2216
3x B19J08	0.0006	0.2618
3x B19J01 +0.005	0.0048	0.2227
3x B19J01 +0.05	0.0510	0.2669
3x B19J01 +0.2	0.2046	0.4123
3x B19J08 +0.05	0.0509	0.3138
3x B19J08 +0.2	0.2027	0.4602

Data is blank corrected to correct for matrix and improve data quality.

ICPMS Summary for B19J09 Sample
Technical Procedure: PNNL-AGG-415, rev 0
Analyzed by Keith Geiszler
Reviewed by CF Brown
Sample Set #NA
Samples submitted for analysis 09-28-04
EQL: = Estimated Quantification limit.
< = Instrument returned a zero or negative number. <Sample EQL is reported result.
Sample EQL = Instrument EQL x Sample dilution factor.
Analyst Note: Summary page is color coded for EQL determination. Final copy must be printed with a color copier.

	Tc 99	Tc 99	U 238
Instrument EQL:	<0.005	<84.8	<0.005
Sample EQL:	<0.010	<170	<0.010
Sample ID	µg/l	pCi/L	µg/l
B19J09	<0.010	<170	0.065

ICPMS Dilutions for Stuart Lutrell
Analyzed by KNG
Samples submitted for analysis on 09-28-04
Dilution values for Tc are not valid as all samples are <EQL
Indicates values used to calculate final concentration.

Sample ID	Dilution	Instr. Reading	Conc ug/l	Dilution	Reading	ug/l	Average ug/l	STDEV	% Difference	%RSD	Final ug/l
Tc 99											
B19J09	2	0.0002	0.00	3	0.0001	0.00	0.000	0	68	47	0.000
U 238											
B19J09	2	0.0330	0.07	3	0.0212	0.06	0.065	0	4	3	0.065

ICP-MS Spike Recoveries for Stuart Lutrell
Submitted for Analysis on 09-28-04
Analyzed by Keith Gelszler

Sample ID	Dilution	Unspiked Reading ug/l	Spike ug/l	Spiked Reading ug/l	% Recovery	
Tc 99						
B19J09	3	0.0001	0.005	0.0050	100	Successful spike recoveries
B19J09	3	0.0001	0.050	0.0501	100	
U 238						
B19J09	3	0.0212	0.005	0.0267	109	Successful spike recoveries
B19J09	3	0.0212	0.050	0.0705	99	Successful spike recoveries

Summary by Sample

	Tc99	U238
blank 1		
blank 2		
0.01 ppb		
0.025 ppb		
0.05 ppb	0.0500	0.0499
0.1 ppb	0.0999	0.0995
0.25 ppb	0.2498	0.2503
0.5 ppb	0.5004	0.5012
1.0 ppb	1.0011	0.9988
Blank 3	0.0011	-0.0013
Blank 4	0.0008	-0.0015
0.001 ppb check	0.0019	0.0011
0.005 ppb check	0.0057	0.0048
0.01 ppb check	0.0107	0.0098
0.025 ppb check	0.0258	0.0247
0.05 ppb check	0.0502	0.0503
0.1 ppb old cal check	0.1106	0.0944
0.1 ppb IND check	0.0952	0.0925
0.25 ppb check	0.2492	0.2480
0.5 ppb check	0.4967	0.4903
1.0 ppb IND check	0.9494	0.9592
5.0 ppb check	5.1282	4.9984
Blank 5	0.0020	-0.0007
Blank 6	0.0010	-0.0014
2x B19J09	0.0010	0.0330
3x B19J09	0.0009	0.0212
3x B19J09 +0.005	0.0059	0.0267
3x B19J09 +0.05	0.0509	0.0705
Blank 7	0.0010	-0.0016
Blank 8	0.0008	-0.0016
0.001 ppb check	0.0020	0.0008
0.005 ppb check	0.0056	0.0047
0.01 ppb check	0.0106	0.0097
0.025 ppb check	0.0249	0.0242
0.05 ppb check	0.0497	0.0478
0.1 ppb IND check	0.0942	0.0909
0.25 ppb check	0.2499	0.2424
0.5 ppb check	0.4918	0.4826
1.0 ppb IND check	0.9377	0.9373
5.0 ppb check	4.9780	4.8846
Blank 9	0.0027	-0.0003

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MS092804 ICPMS

Sample ID	Tc99	U238
blank 1		
blank 2		
0.01 ppb		
0.025 ppb		
0.05 ppb	0.0500	0.0499
0.1 ppb	0.0999	0.0995
0.25 ppb	0.2498	0.2503
0.5 ppb	0.5004	0.5012
1.0 ppb	1.0011	0.9988
Blank 3	0.0011	-0.0013
Blank 4	0.0008	-0.0015
0.001 ppb check	0.0010	0.0011
0.005 ppb check	0.0049	0.0048
0.01 ppb check	0.0099	0.0098
0.025 ppb check	0.0248	0.0247
0.05 ppb check	0.0493	0.0503
0.1 ppb old cal check	0.1097	0.0944
0.1 ppb IND check	0.0944	0.0925
0.25 ppb check	0.2484	0.2480
0.5 ppb check	0.4959	0.4903
1.0 ppb IND check	0.9486	0.9592
5.0 ppb check	5.1274	4.9984
Blank 5	0.0012	-0.0007
Blank 6	0.0002	-0.0014
2x B19J09	0.0002	0.0330
3x B19J09	0.0001	0.0212
3x B19J09 +0.005	0.0050	0.0267
3x B19J09 +0.05	0.0501	0.0705
Blank 7	0.0002	-0.0016
Blank 8	0.0000	-0.0016
0.001 ppb check	0.0012	0.0008
0.005 ppb check	0.0048	0.0047
0.01 ppb check	0.0098	0.0097
0.025 ppb check	0.0241	0.0242
0.05 ppb check	0.0489	0.0478
0.1 ppb IND check	0.0934	0.0909
0.25 ppb check	0.2491	0.2424
0.5 ppb check	0.4910	0.4826
1.0 ppb IND check	0.9368	0.9373
5.0 ppb check	4.9772	4.8846
Blank 9	0.0019	-0.0003

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2x B19J09	0.0002	0.0330
3x B19J09	0.0001	0.0212
3x B19J09 +0.005	0.0050	0.0267
3x B19J09 +0.05	0.0501	0.0705

Data is blank corrected to correct for matrix and improve data quality.