0077029

FIELD SCREENING
FINAL DATA DELIVERABLE COVER SHEET

Date: **Thursday, December 07, 2006**

Sample Authorization Form (SAF) Number: F06-001

SDG Number (assigned by Sample Management): FP0376 Daynes 12/12/06

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

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

Total number of pages (including cover sheet): ~~32~~ 29 MAB 1/9/07

Comments:
200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater - PNNL Analysis for Tc-99 and U 238 (C4970)

THESE TESTS WERE CONDUCTED USING QC-2

JAN 2007 RECEIVED

Analyst Signature — Date 12/7/06

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)

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200-UP-1 Remedial Investigation Sampling and Analysis - GW
C4970 / 299-W22-72
SAF: F06-001
LOGBOOK: HNF-N-314 3

		PNNL Analysis				Sample EQL:				Instrument EQL:			
Hels	PNNL Analysis Date	Tc 99 (ug/l)	Tc 99 (pCi/l)	U 238 (ug/l)	U 238 (pCi/l)	Tc 99 (ug/l)	Tc 99 (pCi/l)	U 238 (ug/l)	U 238 (pCi/l)	Tc 99 (ug/l)	Tc 99 (pCi/l)	U 238 (ug/l)	U 238 (pCi/l)
B1H2J7	3/1/2006	(0.008)	(134)	0.718	0.241	<0.020	<339	<0.010	<0.003	<0.010	<170	<0.005	<0.002
B1H2J8	3/1/2006	(0.006)	(105)	0.892	0.300	<0.020	<339	<0.010	<0.003	<0.010	<170	<0.005	<0.002
B1H2J9	3/1/2006	(0.004)	(67.9)	1.10	0.372	<0.020	<339	<0.010	<0.003	<0.010	<170	<0.005	<0.002
B1HT51	3/1/2006	<0.020	<339	1.23	0.414	<0.020	<339	<0.010	<0.003	<0.010	<170	<0.005	<0.002
B1H2K0	3/1/2006	(0.001)	(13.6)	1.37	0.460	<0.020	<339	<0.010	<0.003	<0.010	<170	<0.005	<0.002
B1H3D8	3/1/2006	(0.001)	(17.0)	1.35	0.455	<0.020	<339	<0.010	<0.003	<0.010	<170	<0.005	<0.002
B1HTJ2	3/1/2006	(0.001)	(10.2)	1.12	0.377	<0.020	<339	<0.010	<0.003	<0.010	<170	<0.005	<0.002

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 re
(###) Reparted value is below Estimated Quantification Limit
Sample EQL = Instrument EQL x Sample dilution factor.

200-UP-1 Remedial Investigation Sampling and Analysis - GW
C4970 / 299-W22-72
SAF: F06-001
LOGBOOK: HNF-N-314 3

Hels	Sampler	Sample Date	Sample Time	PNNL - Chain #	Logbook Page	Depth (ft)
B1H2J7	ROM	2/23/2006	11:30	F06-001-041	79	251
B1H2J8	ROM/LCP	2/24/2006	9:05	F06-001-044	81	270
B1H2J9	ROM/LCP	2/24/2006	11:57	F06-001-047	82	290
B1HT51	ROM	2/27/2006	10:25	F06-001-089	83	310
B1H2K0	ROM/LCP	2/28/2006	8:45	F06-001-050	85	320
B1H3D8	ROM	2/28/2006	8:45	F06-001-083	85	320
B1HTJ2	ROM	2/28/2006	15:45	F06-001-092	87	357.75

00000002

200-UP-1 C4970 HNF-N-3143
TMJohansen | TMJohansen F06-001

Due to the loss of the original logbook, this page was recreated from the original electronic logbook page and verified by field notes and the well log.

200-UP-1 OU Groundwater Well Drilling
SAF: F06-001 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-314 3
200 West - 299-W22-72/C4970

Sample Date: 2/23/06
Sampler(s): RO Mahood

Procedures:

HNF-PRO-10863, Notebooks and Logbooks
GRP-EE-01-3.0, Chain of Custody
GRP-EE-01-3.1, Sample Packaging and Shipping
GRP-EE-01-4.0, Soil and Sediment Sampling
GRP-EE-01-4.1, Groundwater Sampling
GRP-EE-01-4.2, Sample Storage and Shipping Facility
GRP-EE-01-4.5, Sample Compositing
GRP-EE-01-7.3, Calibration Requirements of Field Measurement Equipment
HNF-20635, Groundwater Remediation Project Quality Assurance Project Plan (GRP-QA-001)

Tamara Johansen 8/20/06

Time	Description
8:42	Calibrate pH meter (S/N 16285M) and other instruments at MO-612. Slope of pH meter (Mettler/Toledo M129) 99 - acceptable. Conductivity meter S/N 55148/1581310/0422 67522 with 1415 uS/cm standard - acceptable. Turbidity meter S/N 980600018371 with Gelex standards 0-10 NTU = 5.67, 0-100 NTU = 48.5, 0-1000 NTU = 519 - acceptable.
10:45	At C4970 estimated water level is 230 ft based on moist cuttings. Borehole at 250 but no water in casing, continue drilling.
10:55	Borehole at 251 ft 9ft of water in casing, (at 242 ft) will collect sample with KABIS sampler. Drilling stopped at 10:11 to allow water to enter casing.
11:30	Collect water sample B1H2J7 with KABIS sampler lowered to 251 ft. Two KABIS runs necessary for volume. VOAs from first KABIS after opened, decant from sampler into bottles.
11:39 ①	Measure field parameters from second KABIS run. Turbidity - 254 NTU, Specific conductance - 0.244 mS/cm, Temperature - 18.6°C, pH - 7.78, Dissolved oxygen - 9.5 mg/l.
13:40	Relinquished activity scan sample B1H2J7 to WSCF. ① mS mAB 8/31/06

HEIS Number		B1H2J7		
Chain of Custody Number		F06-001-042	F06-001-040	F06-001-041
Laboratory		WSCF	Field	PNNL 325
Sample Time		11:30		
Sample Date		2/23/2006		
Depth		251 ft		
Activity Scan	Jar Size	20 mL		
	Preservative	none		
	Lot Number	none		
VOA - 8260B (TCL)	Jar Size		(3 ea) 40 mL aGs*	
	Preservative		HCl to pH <2, Cool ≤ 4C	
	Lot Number		HA 529802	
Tc-99/Uranium	Jar Size			1000 mL poly
	Preservative			HNO3, pH < 2
	Lot Number			010365
		Samples not filtered		

TMJohansen | TMJohansen 8/20/06

Reviewed AUG 31 2006
By: M.A. Baechler
M.A. Baechler

200-UP-1 C4970 HNF-N-3143
TMJohansen / TMJohansen F06-001

Due to the loss of the original logbook, this page was recreated from the original electronic logbook page and verified by field notes and the well log.

200-UP-1 OU Groundwater Well Drilling
SAF: F06-001 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-314 3
200 West - 299-W22-72/C4970

Sample Date: 2/24/06
Sampler(s): RO Mahood/ LC Peterson

Procedures:

HNF-PRO-10863, Notebooks and Logbooks
GRP-EE-01-3.0, Chain of Custody
GRP-EE-01-3.1, Sample Packaging and Shipping
GRP-EE-01-4.0, Soil and Sediment Sampling
GRP-EE-01-4.1, Groundwater Sampling
GRP-EE-01-4.2, Sample Storage and Shipping Facility
GRP-EE-01-4.5, Sample Compositing
GRP-EE-01-7.3, Calibration Requirements of Field Measurement Equipment
HNF-20635, Groundwater Remediation Project Quality Assurance Project Plan (GRP-QA-001)

Tamara J. Johansen 8/30/06

Time	Description
7:55	Pumping at C4970. Static water level 237 ft. Flow rate 7.5 GPM by throttling with the ball valve.
8:15	Calibrate pH meter (S/N 16285M) and other instruments at M0-612. Slope of pH meter 98 - acceptable. Conductivity meter S/N 55148/1581310/0422 67522 with 1415 uS/cm standard - acceptable. Turbidity meter S/N 980600018371 with Gelex standards 0-10 NTU = 5.65, 0-100 NTU = 48.7, 0-1000 NTU = 519 - acceptable.
8:20	Receive samples B1H2J8-FB, B1H2J8-K from M0-612 refrigerator.
8:38	At C4970.
8:40	Turbidity - 34.8 NTU, Specific conductance - 0.268 mS/cm, Temperature - 16.6°C, pH - 7.84, Dissolved oxygen - 10.7 mg/l. Lots of entrained air in water. ①
8:45	Turbidity - 41.7 NTU, Specific conductance - 0.240 mS/cm, Temperature - 18.3°C, pH - 7.77, Dissolved oxygen - 9.4 mg/l. ①
8:50	Turbidity - 27.3 NTU, Specific conductance - 0.238 mS/cm, Temperature - 18.5°C, pH - 7.74, Dissolved oxygen - 10.5 mg/l. ①
8:55	Turbidity - 22.3 NTU, Specific conductance - 0.239 mS/cm, Temperature - 18.3°C, pH - 7.74, Dissolved oxygen - 10.9 mg/l. ①
9:00	Turbidity - 21.1 NTU, Specific conductance - 0.239 mS/cm, Temperature - 13.2°C, pH - 7.87, Dissolved oxygen - 10.7 mg/l, @ 13.4 °C. ①
9:05	Collect sample B1H2J8, filtered to < 0.45 microns.
9:53	Relinquish sample B1H2J8, B1H2J8-FB, B1H2J8-K to M0-612 refrigerator.
10:25	Perform nitrate analysis with Reflectoquant of sample B1H2J8 - 4.4 mg/L NO3-N

① mS MAB 8/31/06

HEIS Number		B1H2J8		
Chain of Custody Number		F06-001-045	F06-001-043	F06-001-044
Laboratory		WSCF	Field	PNNL 325
Sample Time		9:05		
Sample Date		2/24/2006		
Depth		270 ft		
Activity Scan	Jar Size	20 mL		
	Preservative	none		
	Lot Number	none		
VOA - 8260B (TCL)	Jar Size		(3 ea) 40 mL aGe*	
	Preservative		HCl to pH <2, Cool ≤ 4C	
	Lot Number		HA 529802	
Tc-99/Uranium	Jar Size			1000 mL poly
	Preservative			HNO3, pH < 2
	Lot Number			010365
		Samples filtered to ≤ 0.45 microns.		

Reviewed
By: M.A. Baechler
AUG 31 2006
M. A. Baechler

TMJohansen / TMJohansen 8/30/06

200-UP-1 C4970 HNF-N-314.3
TMJohansen/TMJohansen FOL-001

Due to the loss of the original logbook, this page was recreated from the original electronic logbook page and verified by field notes and the well log.

200-UP-1 OU Groundwater Well Drilling
SAF: F06-001 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-314 3
200 West - 299-W22-72/C4970

Sample Date: 2/24/06
Sampler(s): RO Mahood/ LC Peterson

Procedures:

HNF-PRO-10863, Notebooks and Logbooks
GRP-EE-01-3.0, Chain of Custody
GRP-EE-01-3.1, Sample Packaging and Shipping
GRP-EE-01-4.0, Soil and Sediment Sampling
GRP-EE-01-4.1, Groundwater Sampling
GRP-EE-01-4.2, Sample Storage and Shipping Facility
GRP-EE-01-4.5, Sample Compositing
GRP-EE-01-7.3, Calibration Requirements of Field Measurement Equipment
HNF-20635, Groundwater Remediation Project Quality Assurance Project Plan (GRP-QA-001)

Johansen 8/30/06

Time	Description
11:41	Pumping begins. Flow rate measured at 11:41 and is 30 gpm. 594 gallons would equal three borehole volumes.
11:45	Turbidity >1000 NTU, 0.249 uS/cm Specific Conductance, 19.1°C, pH 7.85, Dissolved Oxygen 7.2 mg/L.
11:47	Turbidity > 1000 NTU, 0.250 uS/cm Specific Conductance, 18.5°C, pH 7.85, Dissolved Oxygen 7.2 mg/L.
11:49	Turbidity 741 NTU, 0.243 uS/cm Specific Conductance, 18.2°C, pH 7.81, Dissolved Oxygen 7.7 mg/L.
11:56	Turbidity 247 NTU, 0.245 uS/cm Specific Conductance, 18.3°C, pH 7.75, Dissolved Oxygen 8.0 mg/L.
11:57	Collect sample B1H2J9, filtered to <0.45 microns. No KABIS sample see note.
12:33	Relinquish sample B1H2J9 to MO-612 refrigerator.
15:05	Perform nitrate analysis with Reflectoquant of sample B1H2J9 - 3.7 and 4.4 mg/L NO3-N, (4.0 mg/L NO3-N = 17.8 mg/L NO3).
NOTE:	**No Kabis sample collected b efore interval 3 due to miscommunication between driller, Geiologist, C. Wright. Sampler told geologist to collect Kabis but driller was not aware of plan. C Wright told driller to proceed without Kabis.**

① mS MAB 8/31/06

HEIS Number		B1H2J9		
Chain of Custody Number		F06-001-048	F06-001-046	F06-001-047
Laboratory		WSCF	Field	PNNL 325
Sample Time		11:57		
Sample Date		2/24/2006		
Depth		290 ft		
Activity Scan	Jar Size	20 mL		
	Preservative	none		
	Lot Number	none		
VOA - 8260B (TCL)	Jar Size		(3 ea) 40 mL aGs*	
	Preservative		HCl to pH <2, Cool ≤ 4C	
	Lot Number		HA 529802	
Tc-99/Uranium	Jar Size			1000 mL poly
	Preservative			HNO3, pH < 2
	Lot Number			010365
		Sample filtered to ≤ 0.45 microns.		

TMJ 8/30/06

00000005

Reviewed AUG 31 2006
By: M.A. Baechler
M.A. Baechler

TMJohansen/TMJohansen 8/30/06

200-UP-1 C4970 HNF-N-3143
Tmanansen | Jmanansen F06-001

Due to the loss of the original logbook, this page was recreated from the original electronic logbook page and verified by field notes and the well log.

200-UP-1 OU Groundwater Well Drilling
SAF: F06-001 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-3143
200 West - 299-W22-72/C4970

Tamar Jonansen 8/20/06

Sample Date: 2/27/06
Sampler(s): RO Mahood

Procedures:

HNF-PRO-10963, Notebooks and Logbooks
GRP-EE-01-3.8, Chain of Custody
GRP-EE-01-3.1, Sample Packaging and Shipping
GRP-EE-01-4.0, Soil and Sediment Sampling
GRP-EE-01-4.1, Groundwater Sampling
GRP-EE-01-4.2, Sample Storage and Shipping Facility
GRP-EE-01-4.5, Sample Compositing
GRP-EE-01-7.3, Calibration Requirements of Field Measurement Equipment
HNF-20435, Groundwater Remediation Project Quality Assurance Project Plan (GRP-QA-001)

Time	Description
8:40	Calibrate pH meter (S/N 16285M) and other instruments at MO-612. Slope of pH meter 100 - acceptable. Conductivity meter S/N 55148/1581310/0422 67522 with 1419 uS/cm standard - acceptable. Turbidity meter S/N 980600018371 with Gelex standards 0-10 NTU = 5.65, 0-100 NTU = 48.6, 0-1000 NTU = 522 - acceptable.
9:06	At C4970. Borehole at 310 ft. Borehole was evacuated with rig air but had not recovered to static water level at 09:20. Chris Wright has directed Robin Henderson to allow water to recover until 10:00 then we will collect KABIS sample. 09:33 water level was at 264 ft static level was 237.1 ft at 07:30 AM. blownout)
10:25	Collect sample B1HT51 with KABIS sampler. Sampler lowered to 276 ft. Approximately 33 ft of heaving sand inside casing.
10.49	Turbidity - >1000 NTU, Specific conductance - 0.297 mS/cm, Temperature - 16.6°C, pH - 8.16, Dissolved oxygen - 3.6 mg/l.
11:22	Relinquish sample B1HT51, and I-4 KABIS to MO-612 Refrigerator.
11:30	Receive sample B1H2J8 and B1H2J9 (Activity Scans) from MO-612 Refrigerator.
11:55	Relinquish sample B1H2J8 and B1H2J9 (Activity Scan) and B1HT51 to WSCF.
15:55	Analyze B1HT51 for Nitrate by Reflectoquant 12 mg/L Nitrate.

HEIS Number		B1HT51		
Chain of Custody Number		F06-001-090	F06-001-088	F06-001-089
Laboratory		WSCF	Field	PNNL 325
Sample Time		10:25		
Sample Date		2/27/2006		
Depth		310 ft		
Activity Scan	Jar Size	20 mL		
	Preservative	none		
	Lot Number	none		
VOA - 8260B (TCL)	Jar Size		(3 ea) 40 mL aGs*	
	Preservative		HCl to pH <2, Cool ≤ 4C	
	Lot Number		HA 529802	
Tc-99/Uranium	Jar Size			1000 mL poly
	Preservative			HNO3, pH < 2
	Lot Number			010365
		Samples not filtered.		

TMJ 8/20/06

Reviewed AUG 31 2006
By: M.A. Baechler
M.A. Baechler

Tmanansen | Jmanansen 8/20/06

200-UP-1 C4970 HNF-N-3143
Mahnunsen/Mahnunsen F06-001

Due to the loss of the original logbook, this page was recreated from the original electronic logbook page and verified by field notes and the well log.

200-UP-1 OU Groundwater Well Drilling
SAF: F06-001 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-314 3
200 West - 299-W22-72/C4970

Jamar Mahnsen 8/20/06

Sample Date: 2/28/06
Sampler(s): RO Mahood, L Petersen

Procedures:
HNF-PRO-10863, Notebooks and Logbooks
GRP-EE-01-3.0, Chain of Custody
GRP-EE-01-3.1, Sample Packaging and Shipping
GRP-EE-01-4.0, Soil and Sediment Sampling
GRP-EE-01-4.1, Groundwater Sampling
GRP-EE-01-4.2, Sample Storage and Shipping Facility
GRP-EE-01-4.5, Sample Compositing
GRP-EE-01-7.3, Calibration Requirements of Field Measurement Equipment
HNF-20635, Groundwater Remediation Project Quality Assurance Project Plan (GRP-QA-001)

Time	Description
7:30	Calibrate pH meter (Mettler/Toledo) S/N 16285M and other instruments at MO-612. Slope of pH meter acceptable. Conductivity meter S/N 55148/1581310/0422 67522 with 1415 uS/cm standard - acceptable. Turbidity meter S/N 980600018371 with Gelex standards 0-10 NTU = 5.60, 0-100 NTU = 48.5, 0-1000 NTU = 521 - acceptable.
~8:20	At C4969. Borehole at 319-320 ft. Static water level at 237.1 ft bgs. Pump intake at 296 1/2 ft. Pumping began at 07:30 at 33 gpm.
8:25	Turbidity 10.6 NTU, 0.301 mS/cm Specific Conductance, 18.7°C, pH 7.82, Dissolved Oxygen 7.6 mg/L.
8:30	Turbidity 4.61 NTU, 0.300 mS/cm Specific Conductance, 18.2°C, pH 7.74, Dissolved Oxygen 8.8 mg/L.
8:35	Turbidity 5.56 NTU, 0.298 mS/cm Specific Conductance, 17.8°C, pH 7.75, Dissolved Oxygen 7.9 mg/L.
8:40	Readings stabilized. Turbidity 5.16 NTU, 0.299 mS/cm Specific Conductance, 18.1°C, pH 7.75, Dissolved Oxygen 7.7 mg/L. ① ① MAB 9/5/06
8:45	Collect samples B1H2K0 and B1H3D8 (Duplicate) filtered to ≤ 0.45 microns.
12:12	Relinquish sample B1H2K0 and B1H3D8 to MO-612 refrigerator.

HEIS Number		B1H2K0			B1H3D8 (Duplicate)	
Chain of Custody Number		F06-001-051	F06-001-049	F06-001-050	F06-001-082	F06-001-083
Laboratory		WSCF	Field	PNNL 325	Field	PNNL 325
Sample Time		8:45				
Sample Date		2/28/2006				
Depth		320 ft				
Activity Scan	Jar Size	20 mL				
	Preservative	none				
	Lot Number	none				
VOA - 8260B (TCL)	Jar Size		(3 ea) 40 mL aGs*		(3 ea) 40 mL aGs*	
	Preservative		HCl to pH <2, Cool ≤ 4C		HCl to pH <2, Cool ≤ 4C	
	Lot Number		HA 529802		HA 529802	
Tc-99/Uranium	Jar Size			1000 mL poly		1000 mL poly
	Preservative			HNO3, pH < 2		HNO3, pH < 2
	Lot Number			010365		010365
		Samples filtered to ≤ 0.45 microns.				

Mahnunsen/Mahnunsen 8/20/06

Reviewed
By: M.A. Baechler SEP 0 5 2006
M. A. Baechler

200-UP-1 C4970 HNF-N-3143
Tmahansen | Tmahansen 8/20/06

Due to the loss of the original logbook, this page was recreated from the original electronic logbook page and verified by field notes and the well log.

200-UP-1 OU Groundwater Well Drilling
SAF: F06-001 (200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater)
LOGBOOK: HNF-N-314 3
200 West - 299-W22-72/C4970

Sample Date: 2/28/06
Sampler(s): RO Mahood

Tamara Hansen 8/20/06

Procedures:
HNF-PRO-10863, Notebooks and Logbooks
GRP-EE-01-3.0, Chain of Custody
GRP-EE-01-3.1, Sample Packaging and Shipping
GRP-EE-01-4.0, Soil and Sediment Sampling
GRP-EE-01-4.1, Groundwater Sampling
GRP-EE-01-4.2, Sample Storage and Shipping Facility
GRP-EE-01-4.5, Sample Compositing
GRP-EE-01-7.3, Calibration Requirements of Field Measurement Equipment
HNF-20625, Groundwater Remediation Project Quality Assurance Project Plan (GRP-QA-001)

Time	Description
NOTE	See page 86 for Calibration from previous interval.
15:00	Start pumping at 30 gpm. At that rate of pumping 3 borehole volumes will have been pumped by 15:45.
15:10	Turbidity 26.0 NTU, 0.310 ① uS/cm Specific Conductance, 17.8°C, pH 7.86, Dissolved Oxygen 7.8 mg/L.
15:15	Turbidity 10.8 NTU, 0.305 ① uS/cm Specific Conductance, 19.0°C, pH 7.73, Dissolved Oxygen 7.6 mg/L.
15:20	Turbidity 11.9 NTU, 0.307 ① uS/cm Specific Conductance, 18.5°C, pH 7.71, Dissolved Oxygen 7.6 mg/L.
15:25	Turbidity 7.31 NTU, 0.312 ① uS/cm Specific Conductance, 18.2°C, pH 7.74, Dissolved Oxygen 7.7 mg/L.
15:30	Turbidity 4.20 NTU, 0.319 ① uS/cm Specific Conductance, 17.6°C, pH 7.69, Dissolved Oxygen 8.0 mg/L.
15:35	Turbidity 4.17 NTU, 0.307 ① uS/cm Specific Conductance, 18.3°C, pH 7.64, Dissolved Oxygen 6.9 mg/L.
15:40	Turbidity 3.58 NTU, 0.313 ① uS/cm Specific Conductance, 17.8°C, pH 7.70, Dissolved Oxygen 8.0 mg/L.
15:45	Collect sample B1HTJ2 ① filtered to ≤ 0.45 microns.
16:42	Relinquish sample ~~B1HPJ2~~ ①, ~~B1HPJ2-K~~ ①, ~~B1HPJ2-FB~~ ①, B1HXL9, B1HM01, and B1H2K0 to MO-612 refrigerator. B1HTJ2, B1HTJ2-K, B1HTJ2-FB
17:00	Analyze samples B1HTJ2 and B1H2K0 for Nitrate by Reflectoquant; B1HTJ2 - 9 mg/L Nitrate, B1H2K0 - 10.8 mg/L Nitrate.

HEIS Number		B1HTJ2		
Chain of Custody Number		F06-001-093	F06-001-091	F06-001-092
Laboratory		WSCF	Field	PNNL 325
Sample Time		15:45		
Sample Date		2/28/2006		
Depth				
Activity Scan	Jar Size			
	Preservative	none		
	Lot Number	none		
VOA - 8260B (TCL)	Jar Size		(3 ea) 40 mL aGs*	
	Preservative		HCl to pH <2, Cool ≤ 4C	
	Lot Number		HA 529602	
Tc-99/Uranium	Jar Size			1000 mL poly
	Preservative			HNO3, pH < 2
	Lot Number			010365
		Samples filtered to ≤ 0.45 microns.		

① MAB 9/5/06

Tmahansen | Tmahansen 8/20/06

Reviewed
By: M.A. Baggins SEP 1 5 2006
M. A. Baggins

ICPMS Summary for Stuart Luttrell's samples
Technical Procedure: PNNL-AGG-415, rev 1
Analyzed by Eric Clayton
Reviewed by Keith Geiszler
Sample Set #NA
Samples submitted for analysis 03-01-06
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 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	U 238
Instrument EQL:	<0.010	<170	<0.005	<0.002
Sample EQL:	<0.020	<339	<0.010	<0.003
Sample ID	µg/L	pCi/L	µg/L	pCi/L
B1H2J7	(0.008)	(134)	0.718	0.241
B1H2J8	(0.006)	(105)	0.892	0.300
B1H2J9	(0.004)	(67.9)	1.10	0.372
B1H3D8	(0.001)	(17.0)	1.35	0.455
B1H2K0	(0.001)	(13.6)	1.37	0.460
B1HT51	<0.020	<339	1.23	0.414
B1HTJ2	(0.001)	(10.2)	1.12	0.377

ICPMS Dilutions for Stuart Luttrell
Analyzed by ETC
Samples submitted for analysis on 03-01-06

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											
B1H2J7	2	0.004	0.0080	3	0.0026	0.01	0.008	0	3	2	0.008
B1H2J8	2	0.0031	0.0062	3	0.0027	0.01	0.007	0	27	19	0.006
B1H2J9	2	0.002	0.0040								0.004
B1H3D8	2	0.0005	0.0010								0.001
B1H2K0	2	0.0004	0.0008								0.001
B1HT51	2	0	0.0000								0.000
B1HTJ2	2	0.0003	0.0006								0.001
U 238											
B1H2J7	2	0.3409	0.6818	3	0.2511	0.75	0.718	0	10	7	0.718
B1H2J8	2	0.4492	0.8984	3	0.2952	0.88	0.892	0	1	1	0.892
B1H2J9	2	0.5522	1.1044								1.10
B1H3D8	2	0.6784	1.3528								1.35
B1H2K0	2	0.6844	1.3688								1.37
B1HT51	2	0.6159	1.2318								1.23
B1HTJ2	2	0.5607	1.1214								1.12

ICP-MS Spike Recoveries for Stuart Luttrell
Submitted for Analysis on 03-01-06
Analyzed by Eric Clayton

Sample ID	Dilution	Unspiked Reading ug/l	Spike ug/l	Spiked Reading ug/l	% Recovery	
Tc 99						
B1H2J7	3	0.0026	0.010	0.0113	87	Successful spike recoveries
B1H2J7	3	0.0026	0.100	0.0874	85	
B1H2J8	3	0.0027	0.010	0.0121	94	Successful spike recoveries
B1H2J8	3	0.0027	0.100	0.1019	99	
U 238						
B1H2J7	3	0.2511	0.010	0.2517	6	
B1H2J7	3	0.2511	0.100	0.3384	85	Successful spike recoveries
B1H2J8	3	0.2952	0.010	0.3023	71	
B1H2J8	3	0.2952	0.100	0.3987	102	Successful spike recoveries

MS030106 ICPMS

Sample ID	99Tc ppb	238U ppb	
Blank 1	0.0008	0.0031	
Blank 2	0.0008	0.0027	
0.01 ppb Std. (58362-37)	0.0105	0.012	
0.025 ppb Std. (58362-37)	0.0248	0.0265	
0.05 ppb Std. (58362-37)	0.0505	0.0516	
0.10 ppb Std. (58362-37)	0.0991	0.1015	
0.250 ppb Std. (58362-37)	0.243	0.2432	
0.50 ppb Std. (58362-37)	0.4904	0.4934	
1.0 ppb Std. (58362-37)	0.9876	0.9913	
5.0 ppb Std. (58362-37)	4.9985	5	
Blank 3	0.0198	0.0205	
Blank 4	0.0066	0.0076	
0.001 ppb Check (58362-37)	0.0029	0.0027	
0.005 ppb Check (58362-37)	0.0056	0.0055	
0.01ppb Check (58362-37)	0.0099	0.009	
0.025 ppb Check (58362-37)	0.0248	0.0246	
0.05 ppb Check (58362-37)	0.0493	0.0469	
0.1 ppb IND Check (58362-19)	0.0972	0.0954	
0.25 ppb Std. (58362-37)	0.2461	0.244	
0.5 ppb Check (58362-37)	0.4876	0.4924	
1.0 ppb IND Check (58362-19)	0.9776	0.9858	
5.0 ppb Check (58362-37)	4.989	5.0524	
10.0 ppb Check (58362-37)	0.0148	9.1357	
Blank 5	0.0079	0.0479	
Blank 6	0.0024	0.0119	
2X 299-W11-25-PB1	0.0013	0.005	Sample not part of data set
2X 299-W11-25-15	0.003	1.4744	Sample not part of data set
2X 299-W11-25-30	0.0065	0.2113	Sample not part of data set
2X 299-W11-25-45	0.008	0.1792	Sample not part of data set
2X 299-W11-25-45 Dup	0.0077	0.1487	Sample not part of data set
2X 299-W11-25-60	0.0125	0.1168	Sample not part of data set
2X 299-W11-25-75	0.0249	0.1141	Sample not part of data set
2X 299-W11-25-90	0.0038	0.2997	Sample not part of data set
2X 299-W11-25-105	0.0014	0.1794	Sample not part of data set
2X 299-W11-25-120	0.0034	1.0364	Sample not part of data set
Blank 7	0.0004	0.0004	
0.1 ppb IND Check (58362-19)	0.0976	0.1002	
1.0 ppb IND Check (58362-19)	0.9766	1.0165	
Blank 8	0.0018	0.002	
2X 299-W11-25-135	0.0035	1.2635	Sample not part of data set
2X 299-W11-25-150	0.0028	0.0753	Sample not part of data set
2X 299-W11-25-165	0.0011	0.0219	Sample not part of data set
2X 299-W11-25-195	0.0009	0.045	Sample not part of data set
2X 299-W11-25-225	0.0001	0.0966	Sample not part of data set
3X 299-W11-60	0.008	0.076	Sample not part of data set
3X 299-W11-60 + .01	0.0178	0.0888	Sample not part of data set
3X 299-W11-60 + .05	0.0583	0.1269	Sample not part of data set
3X 299-W11-75	0.0164	0.0739	Sample not part of data set
3X 299-W11-75 + .01	0.0266	0.0834	Sample not part of data set
Blank 9	0.0001	-0.0001	
0.1 ppb IND Check (58362-19)	0.0959	0.0974	
1.0 ppb IND Check (58362-19)	0.985	1.0042	
Blank 10	0.0014	0.0013	
3X 299-W11-75 + .05	0.0675	0.1281	Sample not part of data set

2X B1H2J7	0.004	0.3409	
2X B1H2J8	0.0031	0.4492	
2X B1H2J9	0.002	0.5522	
2X B1H3D8	0.0005	0.6764	
2X B1H2K0	0.0004	0.6844	
2X B1HT51	0	0.6159	
2X B1HTJ2	0.0003	0.5607	
3X B1H2J7	0.0026	0.2511	
3X B1H2J7 + .01	0.0113	0.2517	
Blank 11	0.0001	0.0008	
0.1 ppb IND Check (58362-19)	0.0988	0.0973	
1.0 ppb IND Check (58362-19)	0.9792	1.007	
Blank 12	0.0008	0.0005	
3X B1H2J7 + .1	0.0874	0.3364	
3X B1H2J8	0.0027	0.2952	
3X B1H2J8 + .01	0.0121	0.3023	
3X B1H2J8 + .1	0.1019	0.3967	
Blank 13	0.001	0.0036	
Blank 14	0	-0.0001	
0.001 ppb Check (58362-37)	0.0011	0.0007	
0.005 ppb Check (58362-37)	0.0053	0.0046	
0.01ppb Check (58362-37)	0.01	0.0091	
0.025 ppb Check (58362-37)	0.0248	0.0247	
0.05 ppb Check (58362-37)	0.0491	0.0494	
0.1 ppb IND Check (58362-19)	0.98	0.6917	Probe went to wrong position, will rerun
0.25 ppb Std. (58362-37)	0.2422	0.2519	
0.1 ppb IND Check (58362-19)	0.099	0.0979	
0.5 ppb Check (58362-37)	0.4949	0.5048	
1.0 ppb IND Check (58362-19)	0.9872	1.0071	
5.0 ppb Check (58362-37)	5.046	5.1689	
Blank 15	0.0053	0.006	

2X B1H2J7	0.004	0.3409
2X B1H2J8	0.0031	0.4492
2X B1H2J9	0.002	0.5522
2X B1H3D8	0.0005	0.6764
2X B1H2K0	0.0004	0.6844
2X B1HT51	0	0.6159
2X B1HTJ2	0.0003	0.5607
3X B1H2J7	0.0026	0.2511
3X B1H2J7 + .01	0.0113	0.2517
3X B1H2J7 + .1	0.0874	0.3364
3X B1H2J8	0.0027	0.2952
3X B1H2J8 + .01	0.0121	0.3023
3X B1H2J8 + .1	0.1019	0.3967

Run	Label	TimeStamp	89Y	99Tc	115In	205Tl	232Th	238U
			ppb	ppb	ppb	ppb	ppb	ppb
-95			1	1	1	1	1	1
-90			106	120	341	289	283	286
1	Blank 1	3/1/2006 10:11	0.954	0.0007	0.948	0.949	0.998	0.0027
2	Blank 1	3/1/2006 10:12	0.955	0.0008	0.949	0.969	0.964	0.0029
3	Blank 1	3/1/2006 10:12	0.945	0.0007	0.953	0.986	0.967	0.0033
	Mean of Blank 1	3/1/2006 10:11	0.954	0.0008	0.948	0.949	0.998	0.0031
	SD of Blank 1		n/a	0.0001	n/a	n/a	n/a	0.0003
	%RSD of Blank 1		n/a	10.323	n/a	n/a	n/a	9.2902
1	Blank 2	3/1/2006 10:16	0.9	0.0009	0.907	0.917	0.919	0.003
2	Blank 2	3/1/2006 10:16	0.903	0.0008	0.906	0.916	0.907	0.0029
3	Blank 2	3/1/2006 10:16	0.917	0.0006	0.895	0.915	0.893	0.0025
	Mean of Blank 2	3/1/2006 10:16	0.9	0.0008	0.907	0.917	0.919	0.0027
	SD of Blank 2		n/a	0.0001	n/a	n/a	n/a	0.0002
	%RSD of Blank 2		n/a	8.7135	n/a	n/a	n/a	8.5808
1	0.01 ppb Std. (58362-37)	3/1/2006 10:20	1.002	0.0102	1.007	0.99	1.013	0.0123
2	0.01 ppb Std. (58362-37)	3/1/2006 10:20	1.005	0.0109	0.991	1.012	0.99	0.0115
3	0.01 ppb Std. (58362-37)	3/1/2006 10:21	0.993	0.0103	1.002	0.998	0.997	0.0123
	Mean of 0.01 ppb Std. (58362-37)	3/1/2006 10:20	1.002	0.0105	1.007	0.99	1.013	0.012
	SD of 0.01 ppb Std. (58362-37)		n/a	0.0004	n/a	n/a	n/a	0.0005
	%RSD of 0.01 ppb Std. (58362-37)		n/a	3.6354	n/a	n/a	n/a	3.9647
1	0.025 ppb Std. (58362-37)	3/1/2006 10:24	0.998	0.0248	0.971	1.003	1.032	0.0271
2	0.025 ppb Std. (58362-37)	3/1/2006 10:25	1.002	0.025	0.988	0.993	0.985	0.0253
3	0.025 ppb Std. (58362-37)	3/1/2006 10:25	0.999	0.0245	0.981	0.993	0.97	0.027
	Mean of 0.025 ppb Std. (58362-37)	3/1/2006 10:24	0.998	0.0248	0.971	1.003	1.032	0.0265
	SD of 0.025 ppb Std. (58362-37)		n/a	0.0003	n/a	n/a	n/a	0.001
	%RSD of 0.025 ppb Std. (58362-37)		n/a	1.0437	n/a	n/a	n/a	3.822
1	0.05 ppb Std. (58362-37)	3/1/2006 10:29	1.016	0.0483	0.999	1.004	1.02	0.0538
2	0.05 ppb Std. (58362-37)	3/1/2006 10:29	1.008	0.053	0.995	0.994	0.98	0.0512
3	0.05 ppb Std. (58362-37)	3/1/2006 10:30	1.03	0.0501	0.997	0.996	0.981	0.0498
	Mean of 0.05 ppb Std. (58362-37)	3/1/2006 10:29	1.016	0.0505	0.999	1.004	1.02	0.0516
	SD of 0.05 ppb Std. (58362-37)		n/a	0.0024	n/a	n/a	n/a	0.002
	%RSD of 0.05 ppb Std. (58362-37)		n/a	4.7412	n/a	n/a	n/a	3.8918
1	0.10 ppb Std. (58362-37)	3/1/2006 10:33	0.995	0.0991	0.969	0.97	0.979	0.1023
2	0.10 ppb Std. (58362-37)	3/1/2006 10:34	0.988	0.0992	0.984	0.974	0.959	0.1027
3	0.10 ppb Std. (58362-37)	3/1/2006 10:34	0.996	0.0989	0.984	0.976	0.939	0.0996
	Mean of 0.10 ppb Std. (58362-37)	3/1/2006 10:33	0.995	0.0991	0.969	0.97	0.979	0.1015
	SD of 0.10 ppb Std. (58362-37)		n/a	0.0002	n/a	n/a	n/a	0.0017
	%RSD of 0.10 ppb Std. (58362-37)		n/a	0.1758	n/a	n/a	n/a	1.6495
1	0.250 ppb Std. (58362-37)	3/1/2006 10:38	0.997	0.2447	0.993	0.993	0.993	0.2498
2	0.250 ppb Std. (58362-37)	3/1/2006 10:38	0.995	0.2429	0.969	0.985	0.974	0.2378
3	0.250 ppb Std. (58362-37)	3/1/2006 10:38	1.009	0.2416	0.992	0.995	0.973	0.2421
	Mean of 0.250 ppb Std. (58362-37)	3/1/2006 10:38	0.997	0.243	0.993	0.993	0.993	0.2432
	SD of 0.250 ppb Std. (58362-37)		n/a	0.0016	n/a	n/a	n/a	0.0062
	%RSD of 0.250 ppb Std. (58362-37)		n/a	0.6421	n/a	n/a	n/a	2.5517
1	0.50 ppb Std. (58362-37)	3/1/2006 10:42	1.001	0.4887	0.977	0.981	0.992	0.4955
2	0.50 ppb Std. (58362-37)	3/1/2006 10:42	0.998	0.4923	0.969	0.983	0.977	0.4929
3	0.50 ppb Std. (58362-37)	3/1/2006 10:43	1.002	0.49	0.971	0.979	0.96	0.492
	Mean of 0.50 ppb Std. (58362-37)	3/1/2006 10:42	1.001	0.4904	0.977	0.981	0.992	0.4934
	SD of 0.50 ppb Std. (58362-37)		n/a	0.0018	n/a	n/a	n/a	0.0018
	%RSD of 0.50 ppb Std. (58362-37)		n/a	0.3717	n/a	n/a	n/a	0.3681
1	1.0 ppb Std. (58362-37)	3/1/2006 10:47	1	0.9891	0.969	0.973	0.978	1.0079
2	1.0 ppb Std. (58362-37)	3/1/2006 10:47	1.01	0.9939	0.968	0.984	0.966	0.9997
3	1.0 ppb Std. (58362-37)	3/1/2006 10:47	1.009	0.9798	0.974	0.989	0.95	0.9664
	Mean of 1.0 ppb Std. (58362-37)	3/1/2006 10:47	1	0.9876	0.969	0.973	0.978	0.9913
	SD of 1.0 ppb Std. (58362-37)		n/a	0.0072	n/a	n/a	n/a	0.022
	%RSD of 1.0 ppb Std. (58362-37)		n/a	0.7292	n/a	n/a	n/a	2.2172
1	5.0 ppb Std. (58362-37)	3/1/2006 10:51	0.981	4.9944	0.942	0.961	0.959	5.1043
2	5.0 ppb Std. (58362-37)	3/1/2006 10:51	0.991	5.0145	0.963	0.975	0.954	4.9847

3	5.0 ppb Std. (58362-37)	3/1/2006 10:52	0.999	4.9866	0.969	0.969	0.942	4.9109
	Mean of 5.0 ppb Std. (58362-37)	3/1/2006 10:51	0.981	4.9985	0.942	0.961	0.959	5
	SD of 5.0 ppb Std. (58362-37)	n/a		0.0144 n/a	n/a	n/a		0.0976
	%RSD of 5.0 ppb Std. (58362-37)	n/a		0.288 n/a	n/a	n/a		1.9525
1	Blank 3	3/1/2006 10:55	0.94	0.0279	0.925	0.951	0.933	0.0295
2	Blank 3	3/1/2006 10:56	0.941	0.0241	0.929	0.927	0.919	0.0236
3	Blank 3	3/1/2006 10:56	0.948	0.0074	0.924	0.929	0.903	0.0085
	Mean of Blank 3	3/1/2006 10:55	0.94	0.0198	0.925	0.951	0.933	0.0205
	SD of Blank 3	n/a		0.0109 n/a	n/a	n/a		0.0108
	%RSD of Blank 3	n/a		54.987 n/a	n/a	n/a		52.699
1	Blank 4	3/1/2006 11:00	0.943	0.0106	0.926	0.924	0.905	0.0105
2	Blank 4	3/1/2006 11:00	0.939	0.0049	0.929	0.915	0.9	0.0064
3	Blank 4	3/1/2006 11:00	0.94	0.0042	0.919	0.917	0.891	0.0057
	Mean of Blank 4	3/1/2006 11:00	0.943	0.0066	0.926	0.924	0.905	0.0076
	SD of Blank 4	n/a		0.0035 n/a	n/a	n/a		0.0026
	%RSD of Blank 4	n/a		53.827 n/a	n/a	n/a		34.391
1	0.001 ppb Check (58362-37)	3/1/2006 11:04	0.997	0.0034	0.988	0.976	0.99	0.0035
2	0.001 ppb Check (58362-37)	3/1/2006 11:04	0.995	0.003	0.98	0.972	0.953	0.003
3	0.001 ppb Check (58362-37)	3/1/2006 11:05	1.003	0.0024	0.972	0.987	0.958	0.0017
	Mean of 0.001 ppb Check (58362-37)	3/1/2006 11:04	0.997	0.0029	0.988	0.976	0.99	0.0027
	SD of 0.001 ppb Check (58362-37)	n/a		0.0005 n/a	n/a	n/a		0.001
	%RSD of 0.001 ppb Check (58362-37)	n/a		17.589 n/a	n/a	n/a		35.257
1	0.005 ppb Check (58362-37)	3/1/2006 11:08	0.983	0.0059	0.97	0.976	0.976	0.0063
2	0.005 ppb Check (58362-37)	3/1/2006 11:09	0.991	0.0067	0.967	0.987	0.959	0.0053
3	0.005 ppb Check (58362-37)	3/1/2006 11:09	0.993	0.0054	0.968	0.98	0.948	0.0058
	Mean of 0.005 ppb Check (58362-37)	3/1/2006 11:08	0.983	0.0056	0.97	0.976	0.976	0.0055
	SD of 0.005 ppb Check (58362-37)	n/a		0.0004 n/a	n/a	n/a		0.0004
	%RSD of 0.005 ppb Check (58362-37)	n/a		6.7685 n/a	n/a	n/a		6.9268
1	0.01ppb Check (58362-37)	3/1/2006 11:13	1.001	0.0101	0.973	0.978	0.99	0.0086
2	0.01ppb Check (58362-37)	3/1/2006 11:13	1.001	0.0098	0.981	0.991	0.969	0.0075
3	0.01ppb Check (58362-37)	3/1/2006 11:13	1.002	0.0096	0.968	0.976	0.943	0.0093
	Mean of 0.01ppb Check (58362-37)	3/1/2006 11:13	1.001	0.0099	0.973	0.978	0.99	0.009
	SD of 0.01ppb Check (58362-37)	n/a		0.0003 n/a	n/a	n/a		0.0005
	%RSD of 0.01ppb Check (58362-37)	n/a		2.6797 n/a	n/a	n/a		5.7604
1	0.025 ppb Check (58362-37)	3/1/2006 11:17	1.017	0.025	0.977	1	1.004	0.0256
2	0.025 ppb Check (58362-37)	3/1/2006 11:18	1.017	0.0244	1.002	0.995	0.983	0.0247
3	0.025 ppb Check (58362-37)	3/1/2006 11:18	1.015	0.025	1	0.987	0.966	0.0236
	Mean of 0.025 ppb Check (58362-37)	3/1/2006 11:17	1.017	0.0248	0.977	1	1.004	0.0246
	SD of 0.025 ppb Check (58362-37)	n/a		0.0003 n/a	n/a	n/a		0.001
	%RSD of 0.025 ppb Check (58362-37)	n/a		1.4026 n/a	n/a	n/a		3.9629
1	0.05 ppb Check (58362-37)	3/1/2006 11:22	1.021	0.0496	0.999	1.009	1.019	0.0467
2	0.05 ppb Check (58362-37)	3/1/2006 11:22	1.025	0.0492	1.009	0.989	0.996	0.0469
3	0.05 ppb Check (58362-37)	3/1/2006 11:22	1.041	0.0492	1.002	1.006	0.982	0.0471
	Mean of 0.05 ppb Check (58362-37)	3/1/2006 11:22	1.021	0.0493	0.999	1.009	1.019	0.0469
	SD of 0.05 ppb Check (58362-37)	n/a		0.0002 n/a	n/a	n/a		0.0002
	%RSD of 0.05 ppb Check (58362-37)	n/a		0.4275 n/a	n/a	n/a		0.4049
1	0.1 ppb IND Check (58362-19)	3/1/2006 11:26	1.007	0.0972	0.964	0.981	1.014	0.0949
2	0.1 ppb IND Check (58362-19)	3/1/2006 11:26	0.993	0.0958	0.976	0.98	0.959	0.0956
3	0.1 ppb IND Check (58362-19)	3/1/2006 11:27	1.008	0.0985	0.981	1	0.963	0.0957
	Mean of 0.1 ppb IND Check (58362-19)	3/1/2006 11:26	1.007	0.0972	0.964	0.981	1.014	0.0954
	SD of 0.1 ppb IND Check (58362-19)	n/a		0.0013 n/a	n/a	n/a		0.0004
	%RSD of 0.1 ppb IND Check (58362-19)	n/a		1.3729 n/a	n/a	n/a		0.4207
1	0.25 ppb Std. (58362-37)	3/1/2006 11:30	1.038	0.2482	0.997	1.003	1.025	0.2529
2	0.25 ppb Std. (58362-37)	3/1/2006 11:31	1.028	0.2452	1.009	1.002	0.998	0.2411
3	0.25 ppb Std. (58362-37)	3/1/2006 11:31	1.047	0.2448	1.01	1.012	0.974	0.2379
	Mean of 0.25 ppb Std. (58362-37)	3/1/2006 11:30	1.038	0.2461	0.997	1.003	1.025	0.244
	SD of 0.25 ppb Std. (58362-37)	n/a		0.0019 n/a	n/a	n/a		0.0079
	%RSD of 0.25 ppb Std. (58362-37)	n/a		0.7536 n/a	n/a	n/a		3.2387
1	0.5 ppb Check (58362-37)	3/1/2006 11:35	1.008	0.4865	0.977	0.981	0.986	0.499

2	0.5 ppb Check (58362-37)	3/1/2006 11:35	1.021	0.4916	0.976	0.983	0.969	0.4886
3	0.5 ppb Check (58362-37)	3/1/2006 11:35	1.015	0.4848	0.978	0.984	0.968	0.4897
	Mean of 0.5 ppb Check (58362-37)	3/1/2006 11:35	1.008	0.4876	0.977	0.981	0.986	0.4924
	SD of 0.5 ppb Check (58362-37)	n/a		0.0035 n/a	n/a	n/a		0.0057
	%RSD of 0.5 ppb Check (58362-37)	n/a		0.7257 n/a	n/a	n/a		1.1527
1	1.0 ppb IND Check (58362-19)	3/1/2006 11:39	0.978	0.9794	0.932	0.946	0.956	0.9971
2	1.0 ppb IND Check (58362-19)	3/1/2006 11:39	0.971	0.9803	0.933	0.942	0.935	0.9784
3	1.0 ppb IND Check (58362-19)	3/1/2006 11:40	0.973	0.9732	0.94	0.955	0.938	0.982
	Mean of 1.0 ppb IND Check (58362-19)	3/1/2006 11:39	0.978	0.9776	0.932	0.946	0.956	0.9858
	SD of 1.0 ppb IND Check (58362-19)	n/a		0.0039 n/a	n/a	n/a		0.0099
	%RSD of 1.0 ppb IND Check (58362-19)	n/a		0.3969 n/a	n/a	n/a		1.006
1	5.0 ppb Check (58362-37)	3/1/2006 11:43	1.019	5.005	0.968	0.98	0.995	5.1409
2	5.0 ppb Check (58362-37)	3/1/2006 11:44	1.031	5.0067	0.965	0.991	0.981	5.0727
3	5.0 ppb Check (58362-37)	3/1/2006 11:44	1.025	4.9551	0.985	0.993	0.958	4.9436
	Mean of 5.0 ppb Check (58362-37)	3/1/2006 11:43	1.019	4.989	0.968	0.98	0.995	5.0524
	SD of 5.0 ppb Check (58362-37)	n/a		0.0293 n/a	n/a	n/a		0.1002
	%RSD of 5.0 ppb Check (58362-37)	n/a		0.5876 n/a	n/a	n/a		1.9837
1	10.0 ppb Check (58362-37)	3/1/2006 11:48	1.049	0.0158	1.026	1.028	1.024	9.2515
2	10.0 ppb Check (58362-37)	3/1/2006 11:48	1.054	0.0143	1.035	1.013	1.002	9.0548
3	10.0 ppb Check (58362-37)	3/1/2006 11:49	1.056	0.0144	1.031	1.052	1.011	9.1008
	Mean of 10.0 ppb Check (58362-37)	3/1/2006 11:48	1.049	0.0148	1.026	1.028	1.024	9.1357
	SD of 10.0 ppb Check (58362-37)	n/a		0.0008 n/a	n/a	n/a		0.1029
	%RSD of 10.0 ppb Check (58362-37)	n/a		5.7072 n/a	n/a	n/a		1.1263
1	Blank 5	3/1/2006 11:52	1.011	0.0081	0.994	1.003	0.998	0.0516
2	Blank 5	3/1/2006 11:53	1.026	0.0074	0.981	0.994	0.982	0.0437
3	Blank 5	3/1/2006 11:53	1.018	0.0084	0.992	0.981	0.959	0.0484
	Mean of Blank 5	3/1/2006 11:52	1.011	0.0079	0.994	1.003	0.998	0.0479
	SD of Blank 5	n/a		0.0005 n/a	n/a	n/a		0.0039
	%RSD of Blank 5	n/a		6.4954 n/a	n/a	n/a		8.2379
1	Blank 6	3/1/2006 11:57	0.966	0.0026	0.943	0.957	0.957	0.0111
2	Blank 6	3/1/2006 11:57	0.954	0.002	0.951	0.951	0.928	0.0103
3	Blank 6	3/1/2006 11:57	0.959	0.0026	0.945	0.968	0.938	0.0144
	Mean of Blank 6	3/1/2006 11:57	0.966	0.0024	0.943	0.957	0.957	0.0119
	SD of Blank 6	n/a		0.0003 n/a	n/a	n/a		0.0022
	%RSD of Blank 6	n/a		12.84 n/a	n/a	n/a		18.448
1	2X 299-W11-25-PB1	3/1/2006 12:01	1.005	0.0012	0.976	0.976	1.084	0.0055
2	2X 299-W11-25-PB1	3/1/2006 12:01	0.997	0.0015	0.976	0.989	1.022	0.0048
3	2X 299-W11-25-PB1	3/1/2006 12:01	1.01	0.0011	0.985	0.981	0.985	0.0047
	Mean of 2X 299-W11-25-PB1	3/1/2006 12:01	1.005	0.0013	0.976	0.976	1.084	0.005
	SD of 2X 299-W11-25-PB1	n/a		0.0002 n/a	n/a	n/a		0.0004
	%RSD of 2X 299-W11-25-PB1	n/a		19.1 n/a	n/a	n/a		8.6151
1	2X 299-W11-25-15	3/1/2006 12:05	0.996	0.0026	0.938	0.904	0.938	1.5042
2	2X 299-W11-25-15	3/1/2006 12:05	1.007	0.0034	0.962	0.91	0.912	1.4623
3	2X 299-W11-25-15	3/1/2006 12:06	1.013	0.0032	0.965	0.923	0.906	1.4566
	Mean of 2X 299-W11-25-15	3/1/2006 12:05	0.996	0.003	0.938	0.904	0.938	1.4744
	SD of 2X 299-W11-25-15	n/a		0.0004 n/a	n/a	n/a		0.026
	%RSD of 2X 299-W11-25-15	n/a		13.396 n/a	n/a	n/a		1.7619
1	2X 299-W11-25-30	3/1/2006 12:09	1.05	0.0059	0.971	0.943	0.977	0.2118
2	2X 299-W11-25-30	3/1/2006 12:10	1.073	0.0062	0.987	0.934	0.938	0.2137
3	2X 299-W11-25-30	3/1/2006 12:10	1.059	0.0073	0.996	0.931	0.942	0.2086
	Mean of 2X 299-W11-25-30	3/1/2006 12:09	1.05	0.0065	0.971	0.943	0.977	0.2113
	SD of 2X 299-W11-25-30	n/a		0.0007 n/a	n/a	n/a		0.0026
	%RSD of 2X 299-W11-25-30	n/a		10.987 n/a	n/a	n/a		1.222
1	2X 299-W11-25-45	3/1/2006 12:14	1.074	0.0069	1.012	0.942	1.042	0.1827
2	2X 299-W11-25-45	3/1/2006 12:14	1.067	0.0073	1.008	0.965	1.035	0.1818
3	2X 299-W11-25-45	3/1/2006 12:14	1.086	0.0079	1.017	0.948	0.985	0.173
	Mean of 2X 299-W11-25-45	3/1/2006 12:14	1.074	0.008	1.012	0.942	1.042	0.1792
	SD of 2X 299-W11-25-45	n/a		0.0008 n/a	n/a	n/a		0.0054
	%RSD of 2X 299-W11-25-45	n/a		9.9529 n/a	n/a	n/a		2.9932

1	2X 299-W11-25-45 Dup	3/1/2006 12:18	1.047	0.0078	0.979	0.908	0.943	0.1366
2	2X 299-W11-25-45 Dup	3/1/2006 12:18	1.038	0.0074	0.971	0.907	0.999	0.1558
3	2X 299-W11-25-45 Dup	3/1/2006 12:19	1.056	0.0078	0.972	0.906	1.025	0.1536
	Mean of 2X 299-W11-25-45 Dup	3/1/2006 12:18	1.047	0.0077	0.979	0.908	0.943	0.1487
	SD of 2X 299-W11-25-45 Dup	n/a		0.0002 n/a	n/a	n/a		0.0105
	%RSD of 2X 299-W11-25-45 Dup	n/a		3.1002 n/a	n/a	n/a		7.0496
1	2X 299-W11-25-60	3/1/2006 12:22	1.082	0.0134	0.999	0.932	1.096	0.1269
2	2X 299-W11-25-60	3/1/2006 12:22	1.058	0.0118	0.989	0.945	1.005	0.1179
3	2X 299-W11-25-60	3/1/2006 12:23	1.073	0.0122	1.004	0.941	0.93	0.1054
	Mean of 2X 299-W11-25-60	3/1/2006 12:22	1.082	0.0125	0.999	0.932	1.096	0.1168
	SD of 2X 299-W11-25-60	n/a		0.0008 n/a	n/a	n/a		0.0108
	%RSD of 2X 299-W11-25-60	n/a		6.6536 n/a	n/a	n/a		9.247
1	2X 299-W11-25-75	3/1/2006 12:26	1.03	0.0256	0.959	0.916	1.02	0.1226
2	2X 299-W11-25-75	3/1/2006 12:27	1.049	0.0243	0.968	0.922	0.962	0.1125
3	2X 299-W11-25-75	3/1/2006 12:27	1.048	0.0247	0.954	0.922	0.93	0.1073
	Mean of 2X 299-W11-25-75	3/1/2006 12:26	1.03	0.0249	0.959	0.916	1.02	0.1141
	SD of 2X 299-W11-25-75	n/a		0.0007 n/a	n/a	n/a		0.0078
	%RSD of 2X 299-W11-25-75	n/a		2.7293 n/a	n/a	n/a		6.7919
1	2X 299-W11-25-90	3/1/2006 12:31	1.063	0.0036	0.949	0.914	1.026	0.3106
2	2X 299-W11-25-90	3/1/2006 12:31	1.055	0.0038	0.957	0.892	0.993	0.2934
3	2X 299-W11-25-90	3/1/2006 12:31	1.045	0.0039	0.957	0.896	0.977	0.295
	Mean of 2X 299-W11-25-90	3/1/2006 12:31	1.063	0.0038	0.949	0.914	1.026	0.2997
	SD of 2X 299-W11-25-90	n/a		0.0001 n/a	n/a	n/a		0.0095
	%RSD of 2X 299-W11-25-90	n/a		3.4954 n/a	n/a	n/a		3.1825
1	2X 299-W11-25-105	3/1/2006 12:35	1.034	0.0012	0.94	0.898	0.942	0.187
2	2X 299-W11-25-105	3/1/2006 12:35	1.025	0.0015	0.943	0.901	0.894	0.1761
3	2X 299-W11-25-105	3/1/2006 12:36	1.04	0.0015	0.945	0.896	0.886	0.1753
	Mean of 2X 299-W11-25-105	3/1/2006 12:35	1.034	0.0014	0.94	0.898	0.942	0.1794
	SD of 2X 299-W11-25-105	n/a		0.0002 n/a	n/a	n/a		0.0065
	%RSD of 2X 299-W11-25-105	n/a		14.077 n/a	n/a	n/a		3.6351
1	2X 299-W11-25-120	3/1/2006 12:39	1.052	0.0033	0.945	0.902	0.954	1.0886
2	2X 299-W11-25-120	3/1/2006 12:40	1.039	0.0033	0.956	0.9	0.902	1.02
3	2X 299-W11-25-120	3/1/2006 12:40	1.061	0.0036	0.96	0.896	0.882	1.0005
	Mean of 2X 299-W11-25-120	3/1/2006 12:39	1.052	0.0034	0.945	0.902	0.954	1.0364
	SD of 2X 299-W11-25-120	n/a		0.0002 n/a	n/a	n/a		0.0463
	%RSD of 2X 299-W11-25-120	n/a		4.9053 n/a	n/a	n/a		4.4659
1	Blank 7	3/1/2006 12:44	1.07	0.0004	0.978	0.947	1.001	0.0012
2	Blank 7	3/1/2006 12:44	1.065	0.0005	0.995	0.941	0.945	-0.0001
3	Blank 7	3/1/2006 12:44	1.067	0.0002	0.988	0.949	0.915	0
	Mean of Blank 7	3/1/2006 12:44	1.07	0.0004	0.978	0.947	1.001	0.0004
	SD of Blank 7	n/a		0.0001 n/a	n/a	n/a		0.0008
	%RSD of Blank 7	n/a		36.509 n/a	n/a	n/a		207.82
1	0.1 ppb IND Check (58362-19)	3/1/2006 12:48	1.086	0.0975	1.01	0.977	1.016	0.1039
2	0.1 ppb IND Check (58362-19)	3/1/2006 12:48	1.097	0.0984	1.013	0.976	0.964	0.0978
3	0.1 ppb IND Check (58362-19)	3/1/2006 12:49	1.088	0.0969	0.999	0.967	0.954	0.0988
	Mean of 0.1 ppb IND Check (58362-19)	3/1/2006 12:48	1.086	0.0976	1.01	0.977	1.016	0.1002
	SD of 0.1 ppb IND Check (58362-19)	n/a		0.0008 n/a	n/a	n/a		0.0032
	%RSD of 0.1 ppb IND Check (58362-19)	n/a		0.7799 n/a	n/a	n/a		3.2347
1	1.0 ppb IND Check (58362-19)	3/1/2006 12:52	1.018	0.9801	0.952	0.936	0.969	1.0376
2	1.0 ppb IND Check (58362-19)	3/1/2006 12:52	1.016	0.9743	0.944	0.933	0.923	1.0249
3	1.0 ppb IND Check (58362-19)	3/1/2006 12:53	1.038	0.9755	0.964	0.935	0.922	0.9872
	Mean of 1.0 ppb IND Check (58362-19)	3/1/2006 12:52	1.018	0.9766	0.952	0.936	0.969	1.0165
	SD of 1.0 ppb IND Check (58362-19)	n/a		0.003 n/a	n/a	n/a		0.0262
	%RSD of 1.0 ppb IND Check (58362-19)	n/a		0.3106 n/a	n/a	n/a		2.5756
1	Blank 8	3/1/2006 12:56	1.01	0.0019	0.944	0.927	0.943	0.0024
2	Blank 8	3/1/2006 12:57	1.014	0.0019	0.938	0.913	0.894	0.0015
3	Blank 8	3/1/2006 12:57	1.013	0.0015	0.947	0.912	0.89	0.0021
	Mean of Blank 8	3/1/2006 12:56	1.01	0.0018	0.944	0.927	0.943	0.002
	SD of Blank 8	n/a		0.0002 n/a	n/a	n/a		0.0005
	%RSD of Blank 8	n/a		12.445 n/a	n/a	n/a		22.907

1 2X 299-W11-25-135	3/1/2006 13:01	1.061	0.0037	0.983	0.921	0.977	1.3056
2 2X 299-W11-25-135	3/1/2006 13:01	1.077	0.0032	0.982	0.928	0.928	1.2495
3 2X 299-W11-25-135	3/1/2006 13:01	1.081	0.0035	0.98	0.93	0.917	1.2355
Mean of 2X 299-W11-25-135	3/1/2006 13:01	1.061	0.0035	0.983	0.921	0.977	1.2635
SD of 2X 299-W11-25-135	n/a		0.0002 n/a	n/a	n/a		0.0371
%RSD of 2X 299-W11-25-135	n/a		6.2247 n/a	n/a	n/a		2.9356
1 2X 299-W11-25-150	3/1/2006 13:05	1.023	0.0027	0.952	0.896	0.96	0.0792
2 2X 299-W11-25-150	3/1/2006 13:05	1.027	0.0026	0.952	0.901	0.924	0.0759
3 2X 299-W11-25-150	3/1/2006 13:06	1.025	0.003	0.952	0.897	0.908	0.0708
Mean of 2X 299-W11-25-150	3/1/2006 13:05	1.023	0.0028	0.952	0.896	0.96	0.0753
SD of 2X 299-W11-25-150	n/a		0.0002 n/a	n/a	n/a		0.0042
%RSD of 2X 299-W11-25-150	n/a		8.5749 n/a	n/a	n/a		5.6287
1 2X 299-W11-25-165	3/1/2006 13:09	0.99	0.0012	0.928	0.881	0.936	0.0225
2 2X 299-W11-25-165	3/1/2006 13:10	0.996	0.0012	0.928	0.892	0.892	0.0225
3 2X 299-W11-25-165	3/1/2006 13:10	1.023	0.0009	0.933	0.899	0.869	0.0207
Mean of 2X 299-W11-25-165	3/1/2006 13:09	0.99	0.0011	0.928	0.881	0.936	0.0219
SD of 2X 299-W11-25-165	n/a		0.0002 n/a	n/a	n/a		0.0011
%RSD of 2X 299-W11-25-165	n/a		17.648 n/a	n/a	n/a		4.8115
1 2X 299-W11-25-195	3/1/2006 13:14	1.024	0.0007	0.934	0.882	0.928	0.0497
2 2X 299-W11-25-195	3/1/2006 13:14	1.039	0.0011	0.936	0.882	0.883	0.0418
3 2X 299-W11-25-195	3/1/2006 13:14	1.04	0.0008	0.942	0.881	0.869	0.0435
Mean of 2X 299-W11-25-195	3/1/2006 13:14	1.024	0.0009	0.934	0.882	0.928	0.045
SD of 2X 299-W11-25-195	n/a		0.0002 n/a	n/a	n/a		0.0042
%RSD of 2X 299-W11-25-195	n/a		25.832 n/a	n/a	n/a		9.2627
1 2X 299-W11-25-225	3/1/2006 13:18	1.03	0.0001	0.927	0.894	0.931	0.1021
2 2X 299-W11-25-225	3/1/2006 13:18	1.029	0	0.941	0.89	0.881	0.0965
3 2X 299-W11-25-225	3/1/2006 13:18	1.039	0.0003	0.935	0.88	0.864	0.091
Mean of 2X 299-W11-25-225	3/1/2006 13:18	1.03	0.0001	0.927	0.894	0.931	0.0966
SD of 2X 299-W11-25-225	n/a		0.0001 n/a	n/a	n/a		0.0056
%RSD of 2X 299-W11-25-225	n/a		97.185 n/a	n/a	n/a		5.7687
1 3X 299-W11-60	3/1/2006 13:22	1.031	0.008	0.949	0.924	0.999	0.0787
2 3X 299-W11-60	3/1/2006 13:22	1.035	0.008	0.94	0.922	0.953	0.0757
3 3X 299-W11-60	3/1/2006 13:23	1.024	0.0082	0.947	0.917	0.961	0.0738
Mean of 3X 299-W11-60	3/1/2006 13:22	1.031	0.008	0.949	0.924	0.999	0.076
SD of 3X 299-W11-60	n/a		0.0001 n/a	n/a	n/a		0.0025
%RSD of 3X 299-W11-60	n/a		1.5906 n/a	n/a	n/a		3.2375
1 3X 299-W11-60 + .01	3/1/2006 13:26	1.043	0.0174	0.964	0.938	0.981	0.0893
2 3X 299-W11-60 + .01	3/1/2006 13:27	1.053	0.0175	0.97	0.931	0.976	0.0895
3 3X 299-W11-60 + .01	3/1/2006 13:27	1.052	0.0184	0.965	0.92	0.942	0.0876
Mean of 3X 299-W11-60 + .01	3/1/2006 13:26	1.043	0.0178	0.964	0.938	0.981	0.0888
SD of 3X 299-W11-60 + .01	n/a		0.0005 n/a	n/a	n/a		0.001
%RSD of 3X 299-W11-60 + .01	n/a		3.0909 n/a	n/a	n/a		1.176
1 3X 299-W11-60 + .05	3/1/2006 13:31	1.028	0.0588	0.945	0.893	0.97	0.1315
2 3X 299-W11-60 + .05	3/1/2006 13:31	1.043	0.0586	0.954	0.909	0.911	0.1247
3 3X 299-W11-60 + .05	3/1/2006 13:31	1.052	0.0576	0.959	0.905	0.924	0.1247
Mean of 3X 299-W11-60 + .05	3/1/2006 13:31	1.028	0.0583	0.945	0.893	0.97	0.1269
SD of 3X 299-W11-60 + .05	n/a		0.0006 n/a	n/a	n/a		0.004
%RSD of 3X 299-W11-60 + .05	n/a		1.0664 n/a	n/a	n/a		3.1197
1 3X 299-W11-75	3/1/2006 13:35	1.044	0.0158	0.974	0.922	0.99	0.0774
2 3X 299-W11-75	3/1/2006 13:35	1.045	0.0171	0.957	0.923	0.926	0.0736
3 3X 299-W11-75	3/1/2006 13:36	1.036	0.0162	0.96	0.907	0.903	0.0707
Mean of 3X 299-W11-75	3/1/2006 13:35	1.044	0.0164	0.974	0.922	0.99	0.0739
SD of 3X 299-W11-75	n/a		0.0007 n/a	n/a	n/a		0.0033
%RSD of 3X 299-W11-75	n/a		4.0005 n/a	n/a	n/a		4.5265
1 3X 299-W11-75 + .01	3/1/2006 13:39	1.059	0.0265	0.976	0.93	1.003	0.0871
2 3X 299-W11-75 + .01	3/1/2006 13:40	1.072	0.0259	0.972	0.922	0.936	0.0828
3 3X 299-W11-75 + .01	3/1/2006 13:40	1.057	0.0275	0.977	0.925	0.903	0.0801
Mean of 3X 299-W11-75 + .01	3/1/2006 13:39	1.059	0.0266	0.976	0.93	1.003	0.0834
SD of 3X 299-W11-75 + .01	n/a		0.0008 n/a	n/a	n/a		0.0036

%RSD of 3X 299-W11-75 + .01	n/a		3.1072 n/a	n/a	n/a		4.2654
1 Blank 9	3/1/2006 13:44	1.02	-0.0001	0.937	0.923	0.931	0.0008
2 Blank 9	3/1/2006 13:44	1.01	0.0002	0.94	0.903	0.885	-0.0006
3 Blank 9	3/1/2006 13:44	1.005	0.0003	0.935	0.916	0.883	-0.0004
Mean of Blank 9	3/1/2006 13:44	1.02	0.0001	0.937	0.923	0.931	-0.0001
SD of Blank 9	n/a		0.0002 n/a	n/a	n/a		0.0007
%RSD of Blank 9	n/a		133.75 n/a	n/a	n/a		1183
1 0.1 ppb IND Check (58362-19)	3/1/2006 13:48	1.032	0.0965	0.98	0.941	0.98	0.1032
2 0.1 ppb IND Check (58362-19)	3/1/2006 13:48	1.03	0.0966	0.977	0.946	0.943	0.098
3 0.1 ppb IND Check (58362-19)	3/1/2006 13:49	1.04	0.0945	0.974	0.942	0.91	0.0909
Mean of 0.1 ppb IND Check (58362-19)	3/1/2006 13:48	1.032	0.0959	0.98	0.941	0.98	0.0974
SD of 0.1 ppb IND Check (58362-19)	n/a		0.0012 n/a	n/a	n/a		0.0062
%RSD of 0.1 ppb IND Check (58362-19)	n/a		1.2607 n/a	n/a	n/a		6.3428
1 1.0 ppb IND Check (58362-19)	3/1/2006 13:52	0.99	0.987	0.912	0.901	0.92	1.036
2 1.0 ppb IND Check (58362-19)	3/1/2006 13:53	0.982	0.9811	0.915	0.897	0.897	0.9997
3 1.0 ppb IND Check (58362-19)	3/1/2006 13:53	0.985	0.9869	0.915	0.887	0.869	0.977
Mean of 1.0 ppb IND Check (58362-19)	3/1/2006 13:52	0.99	0.985	0.912	0.901	0.92	1.0042
SD of 1.0 ppb IND Check (58362-19)	n/a		0.0034 n/a	n/a	n/a		0.0298
%RSD of 1.0 ppb IND Check (58362-19)	n/a		0.3421 n/a	n/a	n/a		2.9628
1 Blank 10	3/1/2006 13:56	0.985	0.0026	0.917	0.895	0.906	0.0028
2 Blank 10	3/1/2006 13:57	0.977	0.0014	0.909	0.891	0.868	0.0012
3 Blank 10	3/1/2006 13:57	0.977	0.0002	0.919	0.873	0.868	0.0001
Mean of Blank 10	3/1/2006 13:56	0.985	0.0014	0.917	0.895	0.906	0.0013
SD of Blank 10	n/a		0.0012 n/a	n/a	n/a		0.0014
%RSD of Blank 10	n/a		87.194 n/a	n/a	n/a		102.75
1 3X 299-W11-75 + .05	3/1/2006 14:01	1.043	0.0688	0.961	0.91	0.952	0.134
2 3X 299-W11-75 + .05	3/1/2006 14:01	1.042	0.0684	0.968	0.914	0.914	0.1269
3 3X 299-W11-75 + .05	3/1/2006 14:01	1.049	0.0651	0.971	0.922	0.899	0.1234
Mean of 3X 299-W11-75 + .05	3/1/2006 14:01	1.043	0.0675	0.961	0.91	0.952	0.1281
SD of 3X 299-W11-75 + .05	n/a		0.002 n/a	n/a	n/a		0.0054
%RSD of 3X 299-W11-75 + .05	n/a		3.0294 n/a	n/a	n/a		4.2139
1 2X B1H2J7	3/1/2006 14:05	0.72	0.004	0.957	0.894	0.781	0.3536
2 2X B1H2J7	3/1/2006 14:05	0.717	0.0039	0.964	0.883	0.746	0.3331
3 2X B1H2J7	3/1/2006 14:06	0.719	0.0041	0.965	0.908	0.733	0.3361
Mean of 2X B1H2J7	3/1/2006 14:05	0.72	0.004	0.957	0.894	0.781	0.3409
SD of 2X B1H2J7	n/a		0.0001 n/a	n/a	n/a		0.0111
%RSD of 2X B1H2J7	n/a		2.9023 n/a	n/a	n/a		3.2447
1 2X B1H2J8	3/1/2006 14:09	1.048	0.0032	0.947	0.899	0.916	0.4547
2 2X B1H2J8	3/1/2006 14:10	1.06	0.0036	0.961	0.899	0.887	0.4498
3 2X B1H2J8	3/1/2006 14:10	1.05	0.0026	0.962	0.897	0.881	0.4431
Mean of 2X B1H2J8	3/1/2006 14:09	1.048	0.0031	0.947	0.899	0.916	0.4492
SD of 2X B1H2J8	n/a		0.0005 n/a	n/a	n/a		0.0058
%RSD of 2X B1H2J8	n/a		16.197 n/a	n/a	n/a		1.2986
1 2X B1H2J9	3/1/2006 14:14	1.042	0.0019	0.94	0.875	0.886	0.5702
2 2X B1H2J9	3/1/2006 14:14	1.048	0.0019	0.948	0.885	0.88	0.552
3 2X B1H2J9	3/1/2006 14:14	1.048	0.0021	0.937	0.878	0.854	0.5344
Mean of 2X B1H2J9	3/1/2006 14:14	1.042	0.002	0.94	0.875	0.886	0.5522
SD of 2X B1H2J9	n/a		0.0001 n/a	n/a	n/a		0.0179
%RSD of 2X B1H2J9	n/a		5.0822 n/a	n/a	n/a		3.2363
1 2X B1H3D8	3/1/2006 14:18	1.026	0.0005	0.919	0.86	0.899	0.6997
2 2X B1H3D8	3/1/2006 14:18	1.046	0.0003	0.916	0.865	0.863	0.6729
3 2X B1H3D8	3/1/2006 14:19	1.048	0.0006	0.935	0.861	0.838	0.6565
Mean of 2X B1H3D8	3/1/2006 14:18	1.026	0.0005	0.919	0.86	0.899	0.6764
SD of 2X B1H3D8	n/a		0.0001 n/a	n/a	n/a		0.0218
%RSD of 2X B1H3D8	n/a		27.037 n/a	n/a	n/a		3.2214
1 2X B1H2K0	3/1/2006 14:22	1.064	0.0007	0.946	0.884	0.907	0.7037
2 2X B1H2K0	3/1/2006 14:23	1.062	0.0004	0.948	0.878	0.882	0.6874
3 2X B1H2K0	3/1/2006 14:23	1.068	0.0002	0.956	0.887	0.857	0.6622
Mean of 2X B1H2K0	3/1/2006 14:22	1.064	0.0004	0.946	0.884	0.907	0.6844

SD of 2X B1H2K0	n/a		0.0002	n/a	n/a	n/a	0.0209
%RSD of 2X B1H2K0	n/a		50.754	n/a	n/a	n/a	3.0541
1 2X B1HT51	3/1/2006 14:26	0.825	0	0.947	0.808	0.892	0.6198
2 2X B1HT51	3/1/2006 14:27	0.834	-0.0001	0.95	0.807	0.879	0.6143
3 2X B1HT51	3/1/2006 14:27	0.82	-0.0001	0.948	0.819	0.869	0.6136
Mean of 2X B1HT51	3/1/2006 14:26	0.825	0	0.947	0.808	0.892	0.6159
SD of 2X B1HT51	n/a		0	n/a	n/a	n/a	0.0034
%RSD of 2X B1HT51	n/a		74.758	n/a	n/a	n/a	0.5474
1 2X B1HTJ2	3/1/2006 14:31	1.028	0.0003	0.923	0.884	0.928	0.5865
2 2X B1HTJ2	3/1/2006 14:31	1.028	0.0004	0.924	0.884	0.885	0.5544
3 2X B1HTJ2	3/1/2006 14:31	1.052	0.0001	0.929	0.889	0.863	0.5411
Mean of 2X B1HTJ2	3/1/2006 14:31	1.028	0.0003	0.923	0.884	0.928	0.5607
SD of 2X B1HTJ2	n/a		0.0002	n/a	n/a	n/a	0.0233
%RSD of 2X B1HTJ2	n/a		68.835	n/a	n/a	n/a	4.1587
1 3X B1H2J7	3/1/2006 14:44	0.825	0.0026	0.981	0.929	0.903	0.2651
2 3X B1H2J7	3/1/2006 14:44	0.817	0.0028	0.981	0.917	0.85	0.2554
3 3X B1H2J7	3/1/2006 14:44	0.816	0.0024	0.979	0.922	0.819	0.2467
Mean of 3X B1H2J7	3/1/2006 14:44	0.825	0.0026	0.981	0.929	0.903	0.2511
SD of 3X B1H2J7	n/a		0.0002	n/a	n/a	n/a	0.0061
%RSD of 3X B1H2J7	n/a		7.5526	n/a	n/a	n/a	2.4428
1 3X B1H2J7 + .01	3/1/2006 14:48	0.821	0.0119	0.965	0.9	0.849	0.2585
2 3X B1H2J7 + .01	3/1/2006 14:48	0.823	0.0107	0.971	0.908	0.822	0.2524
3 3X B1H2J7 + .01	3/1/2006 14:49	0.831	0.0112	0.971	0.912	0.8	0.2442
Mean of 3X B1H2J7 + .01	3/1/2006 14:48	0.821	0.0113	0.965	0.9	0.849	0.2517
SD of 3X B1H2J7 + .01	n/a		0.0006	n/a	n/a	n/a	0.0072
%RSD of 3X B1H2J7 + .01	n/a		5.5316	n/a	n/a	n/a	2.8488
1 Blank 11	3/1/2006 14:52	1.039	0.0001	0.935	0.905	0.912	0.0004
2 Blank 11	3/1/2006 14:53	1.03	0.0002	0.945	0.9	0.889	0.0009
3 Blank 11	3/1/2006 14:53	1.037	0.0001	0.943	0.896	0.874	0.0011
Mean of Blank 11	3/1/2006 14:52	1.039	0.0001	0.935	0.905	0.912	0.0008
SD of Blank 11	n/a		0.0001	n/a	n/a	n/a	0.0004
%RSD of Blank 11	n/a		62.349	n/a	n/a	n/a	48.186
1 0.1 ppb IND Check (58362-19)	3/1/2006 14:57	1.07	0.1	0.987	0.951	0.965	0.1032
2 0.1 ppb IND Check (58362-19)	3/1/2006 14:57	1.063	0.0972	0.982	0.939	0.946	0.0964
3 0.1 ppb IND Check (58362-19)	3/1/2006 14:57	1.079	0.0991	0.975	0.934	0.922	0.0924
Mean of 0.1 ppb IND Check (58362-19)	3/1/2006 14:57	1.07	0.0988	0.987	0.951	0.965	0.0973
SD of 0.1 ppb IND Check (58362-19)	n/a		0.0014	n/a	n/a	n/a	0.0055
%RSD of 0.1 ppb IND Check (58362-19)	n/a		1.4126	n/a	n/a	n/a	5.5993
1 1.0 ppb IND Check (58362-19)	3/1/2006 15:01	1.014	0.9744	0.926	0.909	0.927	1.0384
2 1.0 ppb IND Check (58362-19)	3/1/2006 15:01	1.038	0.9939	0.931	0.893	0.894	1.001
3 1.0 ppb IND Check (58362-19)	3/1/2006 15:02	1.022	0.9693	0.925	0.909	0.882	0.9836
Mean of 1.0 ppb IND Check (58362-19)	3/1/2006 15:01	1.014	0.9792	0.926	0.909	0.927	1.007
SD of 1.0 ppb IND Check (58362-19)	n/a		0.013	n/a	n/a	n/a	0.0269
%RSD of 1.0 ppb IND Check (58362-19)	n/a		1.3261	n/a	n/a	n/a	2.6749
1 Blank 12	3/1/2006 15:05	0.987	0.0003	0.903	0.872	0.877	0.0004
2 Blank 12	3/1/2006 15:06	0.986	0.0009	0.907	0.876	0.849	0.0006
3 Blank 12	3/1/2006 15:06	0.994	0.0013	0.906	0.867	0.84	0.0006
Mean of Blank 12	3/1/2006 15:05	0.987	0.0008	0.903	0.872	0.877	0.0005
SD of Blank 12	n/a		0.0005	n/a	n/a	n/a	0.0001
%RSD of Blank 12	n/a		62.811	n/a	n/a	n/a	19.248
1 3X B1H2J7 + .1	3/1/2006 15:09	0.774	0.0879	0.922	0.868	0.808	0.3415
2 3X B1H2J7 + .1	3/1/2006 15:10	0.784	0.0866	0.928	0.869	0.784	0.3314
3 3X B1H2J7 + .1	3/1/2006 15:10	0.792	0.0878	0.939	0.863	0.759	0.3177
Mean of 3X B1H2J7 + .1	3/1/2006 15:09	0.774	0.0874	0.922	0.868	0.808	0.3384
SD of 3X B1H2J7 + .1	n/a		0.0007	n/a	n/a	n/a	0.0072
%RSD of 3X B1H2J7 + .1	n/a		0.8441	n/a	n/a	n/a	2.132
1 3X B1H2J8	3/1/2006 15:14	1.029	0.0025	0.938	0.89	0.905	0.3071
2 3X B1H2J8	3/1/2006 15:14	1.043	0.0025	0.949	0.882	0.876	0.2984
3 3X B1H2J8	3/1/2006 15:14	1.042	0.003	0.945	0.883	0.885	0.292

Mean of 3X B1H2J8	3/1/2006 15:14	1.029	0.0027	0.938	0.89	0.905	0.2952
SD of 3X B1H2J8	n/a		0.0003 n/a	n/a	n/a		0.0045
%RSD of 3X B1H2J8	n/a		10.148 n/a	n/a	n/a		1.5395
1 3X B1H2J8 + .01	3/1/2006 15:18	1.041	0.0118	0.927	0.885	0.903	0.3107
2 3X B1H2J8 + .01	3/1/2006 15:18	1.041	0.0122	0.933	0.877	0.878	0.3025
3 3X B1H2J8 + .01	3/1/2006 15:19	1.044	0.0122	0.935	0.874	0.852	0.2938
Mean of 3X B1H2J8 + .01	3/1/2006 15:18	1.041	0.0121	0.927	0.885	0.903	0.3023
SD of 3X B1H2J8 + .01	n/a		0.0002 n/a	n/a	n/a		0.0085
%RSD of 3X B1H2J8 + .01	n/a		1.7619 n/a	n/a	n/a		2.7959
1 3X B1H2J8 + .1	3/1/2006 15:22	1.053	0.1041	0.935	0.877	0.911	0.41
2 3X B1H2J8 + .1	3/1/2006 15:23	1.061	0.1019	0.931	0.887	0.871	0.3833
3 3X B1H2J8 + .1	3/1/2006 15:23	1.057	0.0996	0.948	0.885	0.859	0.3819
Mean of 3X B1H2J8 + .1	3/1/2006 15:22	1.053	0.1019	0.935	0.877	0.911	0.3967
SD of 3X B1H2J8 + .1	n/a		0.0022 n/a	n/a	n/a		0.0189
%RSD of 3X B1H2J8 + .1	n/a		2.1907 n/a	n/a	n/a		4.7672
1 Blank 13	3/1/2006 15:27	1.042	0.0014	0.946	0.897	0.911	0.004
2 Blank 13	3/1/2006 15:27	1.044	0.0009	0.945	0.887	0.863	0.0039
3 Blank 13	3/1/2006 15:27	1.054	0.0007	0.936	0.889	0.852	0.0028
Mean of Blank 13	3/1/2006 15:27	1.042	0.001	0.946	0.897	0.911	0.0036
SD of Blank 13	n/a		0.0004 n/a	n/a	n/a		0.0007
%RSD of Blank 13	n/a		37.063 n/a	n/a	n/a		19.754
1 Blank 14	3/1/2006 15:31	1.003	0.0002	0.915	0.882	0.874	0.0001
2 Blank 14	3/1/2006 15:31	1.002	0	0.916	0.863	0.84	-0.0001
3 Blank 14	3/1/2006 15:32	0.994	-0.0002	0.917	0.862	0.815	-0.0002
Mean of Blank 14	3/1/2006 15:31	1.003	0	0.915	0.882	0.874	-0.0001
SD of Blank 14	n/a		0.0002 n/a	n/a	n/a		0.0001
%RSD of Blank 14	n/a		2361.4 n/a	n/a	n/a		197.17
1 0.001 ppb Check (58362-37)	3/1/2006 15:35	1.067	0.0009	0.968	0.92	0.936	0.001
2 0.001 ppb Check (58362-37)	3/1/2006 15:36	1.062	0.0011	0.97	0.931	0.901	0.0006
3 0.001 ppb Check (58362-37)	3/1/2006 15:36	1.072	0.0013	0.973	0.925	0.88	0.0006
Mean of 0.001 ppb Check (58362-37)	3/1/2006 15:35	1.067	0.0011	0.968	0.92	0.936	0.0007
SD of 0.001 ppb Check (58362-37)	n/a		0.0002 n/a	n/a	n/a		0.0003
%RSD of 0.001 ppb Check (58362-37)	n/a		17.019 n/a	n/a	n/a		38.351
1 0.005 ppb Check (58362-37)	3/1/2006 15:40	1.067	0.0053	0.97	0.918	0.948	0.0049
2 0.005 ppb Check (58362-37)	3/1/2006 15:40	1.074	0.0051	0.977	0.929	0.917	0.0046
3 0.005 ppb Check (58362-37)	3/1/2006 15:40	1.085	0.0055	0.972	0.925	0.889	0.0042
Mean of 0.005 ppb Check (58362-37)	3/1/2006 15:40	1.067	0.0053	0.97	0.918	0.948	0.0046
SD of 0.005 ppb Check (58362-37)	n/a		0.0002 n/a	n/a	n/a		0.0004
%RSD of 0.005 ppb Check (58362-37)	n/a		3.8068 n/a	n/a	n/a		8.4684
1 0.01ppb Check (58362-37)	3/1/2006 15:44	1.094	0.0106	0.999	0.93	0.945	0.0093
2 0.01ppb Check (58362-37)	3/1/2006 15:44	1.099	0.0106	1.007	0.945	0.921	0.0093
3 0.01ppb Check (58362-37)	3/1/2006 15:45	1.089	0.0089	0.986	0.923	0.897	0.0088
Mean of 0.01ppb Check (58362-37)	3/1/2006 15:44	1.094	0.01	0.999	0.93	0.945	0.0091
SD of 0.01ppb Check (58362-37)	n/a		0.001 n/a	n/a	n/a		0.0003
%RSD of 0.01ppb Check (58362-37)	n/a		9.5633 n/a	n/a	n/a		3.1177
1 0.025 ppb Check (58362-37)	3/1/2006 15:48	1.074	0.024	0.967	0.915	0.927	0.0247
2 0.025 ppb Check (58362-37)	3/1/2006 15:49	1.058	0.0254	0.965	0.911	0.899	0.0251
3 0.025 ppb Check (58362-37)	3/1/2006 15:49	1.07	0.0249	0.972	0.92	0.896	0.0242
Mean of 0.025 ppb Check (58362-37)	3/1/2006 15:48	1.074	0.0248	0.967	0.915	0.927	0.0247
SD of 0.025 ppb Check (58362-37)	n/a		0.0007 n/a	n/a	n/a		0.0005
%RSD of 0.025 ppb Check (58362-37)	n/a		2.7606 n/a	n/a	n/a		1.8803
1 0.05 ppb Check (58362-37)	3/1/2006 15:53	1.077	0.05	0.959	0.914	0.932	0.0502
2 0.05 ppb Check (58362-37)	3/1/2006 15:53	1.065	0.0493	0.974	0.908	0.905	0.0494
3 0.05 ppb Check (58362-37)	3/1/2006 15:53	1.067	0.048	0.976	0.932	0.886	0.0487
Mean of 0.05 ppb Check (58362-37)	3/1/2006 15:53	1.077	0.0491	0.959	0.914	0.932	0.0494
SD of 0.05 ppb Check (58362-37)	n/a		0.001 n/a	n/a	n/a		0.0007
%RSD of 0.05 ppb Check (58362-37)	n/a		2.0998 n/a	n/a	n/a		1.4526
1 0.1 ppb IND Check (58362-19)	3/1/2006 15:57	1408.88	0.6022	1753.184	2754.599	2203.367	0.8426
2 0.1 ppb IND Check (58362-19)	3/1/2006 15:57	1669.785	1.4305	3428.454	1709.75	3672.281	1.0728

3	0.1 ppb IND Check (58362-19)	3/1/2006 15:58	1366.187	0.9073	1858.798	2203.679	2003.061	0.3596
	Mean of 0.1 ppb IND Check (58362-19)	3/1/2006 15:57	1408.88	0.98	1753.184	2754.599	2203.367	0.6917
	SD of 0.1 ppb IND Check (58362-19)	n/a		0.4189	n/a	n/a	n/a	0.3591
	%RSD of 0.1 ppb IND Check (58362-19)	n/a		42.746	n/a	n/a	n/a	51.919
1	0.25 ppb Std. (58362-37)	3/1/2006 16:02	1.037	0.2434	0.916	0.864	0.867	0.2589
2	0.25 ppb Std. (58362-37)	3/1/2006 16:02	1.036	0.2431	0.934	0.869	0.839	0.2499
3	0.25 ppb Std. (58362-37)	3/1/2006 16:02	1.045	0.2402	0.92	0.874	0.834	0.2469
	Mean of 0.25 ppb Std. (58362-37)	3/1/2006 16:02	1.037	0.2422	0.916	0.864	0.867	0.2519
	SD of 0.25 ppb Std. (58362-37)	n/a		0.0018	n/a	n/a	n/a	0.0062
	%RSD of 0.25 ppb Std. (58362-37)	n/a		0.7329	n/a	n/a	n/a	2.4735
1	0.1 ppb IND Check (58362-19)	3/1/2006 16:06	1.065	0.0989	0.943	0.886	0.893	0.1009
2	0.1 ppb IND Check (58362-19)	3/1/2006 16:06	1.072	0.099	0.944	0.9	0.872	0.0975
3	0.1 ppb IND Check (58362-19)	3/1/2006 16:07	1.046	0.0991	0.955	0.893	0.854	0.0954
	Mean of 0.1 ppb IND Check (58362-19)	3/1/2006 16:06	1.065	0.099	0.943	0.886	0.893	0.0979
	SD of 0.1 ppb IND Check (58362-19)	n/a		0.0001	n/a	n/a	n/a	0.0028
	%RSD of 0.1 ppb IND Check (58362-19)	n/a		0.1087	n/a	n/a	n/a	2.8672
1	0.5 ppb Check (58362-37)	3/1/2006 16:10	1.052	0.4955	0.933	0.892	0.889	0.5239
2	0.5 ppb Check (58362-37)	3/1/2006 16:11	1.049	0.5008	0.945	0.883	0.863	0.5017
3	0.5 ppb Check (58362-37)	3/1/2006 16:11	1.038	0.4883	0.957	0.887	0.846	0.4887
	Mean of 0.5 ppb Check (58362-37)	3/1/2006 16:10	1.052	0.4949	0.933	0.892	0.889	0.5048
	SD of 0.5 ppb Check (58362-37)	n/a		0.0063	n/a	n/a	n/a	0.0178
	%RSD of 0.5 ppb Check (58362-37)	n/a		1.2669	n/a	n/a	n/a	3.5216
1	1.0 ppb IND Check (58362-19)	3/1/2006 16:15	1.031	0.99	0.916	0.865	0.856	1.0116
2	1.0 ppb IND Check (58362-19)	3/1/2006 16:15	1.031	0.98	0.908	0.863	0.836	1.0085
3	1.0 ppb IND Check (58362-19)	3/1/2006 16:15	1.032	0.9914	0.933	0.884	0.835	1.0013
	Mean of 1.0 ppb IND Check (58362-19)	3/1/2006 16:15	1.031	0.9872	0.916	0.865	0.856	1.0071
	SD of 1.0 ppb IND Check (58362-19)	n/a		0.0062	n/a	n/a	n/a	0.0053
	%RSD of 1.0 ppb IND Check (58362-19)	n/a		0.6281	n/a	n/a	n/a	0.5224
1	5.0 ppb Check (58362-37)	3/1/2006 16:19	1.073	5.0655	0.951	0.9	0.904	5.3014
2	5.0 ppb Check (58362-37)	3/1/2006 16:19	1.089	5.0339	0.966	0.913	0.886	5.1624
3	5.0 ppb Check (58362-37)	3/1/2006 16:20	1.078	5.0384	0.968	0.924	0.872	5.0428
	Mean of 5.0 ppb Check (58362-37)	3/1/2006 16:19	1.073	5.046	0.951	0.9	0.904	5.1689
	SD of 5.0 ppb Check (58362-37)	n/a		0.0171	n/a	n/a	n/a	0.1294
	%RSD of 5.0 ppb Check (58362-37)	n/a		0.3392	n/a	n/a	n/a	2.5037
1	Blank 15	3/1/2006 16:23	1.003	0.0102	0.927	0.879	0.867	0.0126
2	Blank 15	3/1/2006 16:24	1.022	0.0031	0.929	0.873	0.845	0.0028
3	Blank 15	3/1/2006 16:24	1.004	0.0025	0.926	0.865	0.832	0.0026
	Mean of Blank 15	3/1/2006 16:23	1.003	0.0053	0.927	0.879	0.867	0.006
	SD of Blank 15	n/a		0.0043	n/a	n/a	n/a	0.0057
	%RSD of Blank 15	n/a		81.612	n/a	n/a	n/a	95.636

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-001-041	PAGE 1 OF 1
COLLECTOR: Gent/Mahood/Todak	COMPANY CONTACT: TRENT, SJ — TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 1A — DATA TURNAROUND: 24 Hours / 15 Days
SAMPLING LOCATION: C4970, I-1	PROJECT DESIGNATION: Groundwater Sampling for Boreholes in the 200-UP-1 OU	SAF NO.: F06-001	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-314-3 — COA: 121931ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: PNNL Building 325	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: Radioactive lie to B1H2J7

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HNO3 to pH <2(ULTREX)
TYPE OF CONTAINER	Nalgene
NO. OF CONTAINER(S)	1
VOLUME	1000mL
SAMPLE ANALYSIS	Tc-99 by ICPMS; Uranium by ICPMS;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1H2J7	WATER	2/23/06	11:30	1

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: R.D. Mahood / Richard O. Mahood — DATE/TIME: 2/23/06 16:18	RECEIVED BY/STORED IN: MO-612 Refrigerator — DATE/TIME: 2/23/06 16:18	not filtered at drill site.
RELINQUISHED BY/REMOVED FROM: MO-612 Refrigerator — DATE/TIME: 3/1/06 07:40	RECEIVED BY/STORED IN: R.D. Mahood / Richard O. Mahood — DATE/TIME: 3/1/06 07:40	
RELINQUISHED BY/REMOVED FROM: R.D. Mahood / Richard O. Mahood 3/1/06 — DATE/TIME: 13:02	RECEIVED BY/STORED IN: U. Valenta M. Valenta — DATE/TIME: 3/1/06 13:02	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	

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

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-001-044	PAGE 1 OF 1

COLLECTOR: Gent/Mahood/Todak	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 1A	DATA TURNAROUND: 24 Hours / 15 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: C4970, I-2	PROJECT DESIGNATION: Groundwater Sampling for Boreholes in the 200-UP-1 OU	SAF NO.: F06-001	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-314-3	COA: 121931ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE
SHIPPED TO: PNNL Building 325	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: Radioactive tie to B1H2J8

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HNO3 to pH <2(ULTREX)								
TYPE OF CONTAINER	Halgene								
NO. OF CONTAINER(S)	1								
VOLUME	1000mL								
SAMPLE ANALYSIS	Tc-99 by TCPMS; Uranium by ICPMS;								

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1H2J8	WATER	3/24/06	0905	✓								

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
MO-612 Refrigerator	3-1-06 07:40	R.O. Mahood/Robert O. Mahood	3-1-06 07:40	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
R.O. Mahood/Robert O. Mahood	3-1-06 13:02	M. Valenta M. Valenta	3/1/06 13:02	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

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

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-001-047	PAGE 1 OF 1

COLLECTOR Gent/Mahood/Todak	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION C4970, I-3	PROJECT DESIGNATION Groundwater Sampling for Boreholes in the 200-UP-1 OU		SAF NO. F06-001
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-314-3	COA 121931ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE
SHIPPED TO PNNL Building 325	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A

PRICE CODE 1A

AIR QUALITY ☐

DATA TURNAROUND: 24 Hours / 15 Days

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: Radioactive tie to B1H2J9

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HNO3 to pH <2(ULTREX)
TYPE OF CONTAINER	Nalgene
NO. OF CONTAINER(S)	1
VOLUME	1000mL
SAMPLE ANALYSIS	Tc-99 by (ICPMS); Uranium by ICPMS;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1H2J9	WATER	2-24-06	11:57	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R.O. Mahood/Richard O. Mahood	2/24/06 12:33	MO-612 Refrigerator	2/24/06 12:33
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MO-612 Refrigerator	3-1-06 07:40	R.O. Mahood/Richard O. Mahood	3-1-06 07:40
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Richard O. Mahood/R.O. Mahood	3-1-06 13:02	M. Valenta M. Valenta	3/1/06 13:02
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

JUL.24.2006 11:14AM AG&G D9TB1 NO.446 P.23

42000024

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-001-050	PAGE 1 OF 1
COLLECTOR: Gent/Mahood/Todak	COMPANY CONTACT: TRENT, SJ — TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 1A — DATA TURNAROUND: 24 Hours / 15 Days
SAMPLING LOCATION: C4970, I-4	PROJECT DESIGNATION: Groundwater Sampling for Boreholes in the 200-UP-1 OU	SAF NO.: F06-001	AIR QUALITY: ☐
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-314-3 — COA: 121931ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: PNNL Building 325	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: Radioactive tie to B1H2K0

SPECIAL HANDLING AND/OR STORAGE:

PRESERVATION	HNO3 to pH <2(ULTREX)
TYPE OF CONTAINER	Nalgene
NO. OF CONTAINER(S)	1
VOLUME	1000mL
SAMPLE ANALYSIS	Tc-99 by ICMS; Uranium by ICPMS;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1H2K0	WATER	2-28-06	08:45	1

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM — DATE/TIME: R.O. Mahood/Richard O. Mahood 2/28/06 12:12	RECEIVED BY/STORED IN — DATE/TIME: MO-612 Refrigerator 2-28-06 12:12	
RELINQUISHED BY/REMOVED FROM — DATE/TIME: MO-612 Refrigerator 3-1-06 07:40	RECEIVED BY/STORED IN — DATE/TIME: R.O. Mahood/Richard O. Mahood 3-1-06 07:40	
RELINQUISHED BY/REMOVED FROM — DATE/TIME: R.O. Mahood/Richard O. Mahood 3-1-06 13:02	RECEIVED BY/STORED IN — DATE/TIME: M. Valenta M. Valenta 3/1/06 13:02	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME	

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

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-001-083

COLLECTOR Gent/Mahood/Todak	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** TRENT, SJ
SAMPLING LOCATION C4970, 1-4-D	**PROJECT DESIGNATION** Groundwater Sampling for Boreholes in the 200-UP-1 OU		**SAF NO.** F06-001
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-314-3	**COA** 121931ESI0	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
SHIPPED TO PNNL Building 325	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 1A

AIR QUALITY ☐

DATA TURNAROUND 24 Hours / 15 Days

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 Radioactive tie to B1H2K0

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HNO3 to pH <2(ULTREX)
TYPE OF CONTAINER	Nalgene
NO. OF CONTAINER(S)	1
VOLUME	1000mL
SAMPLE ANALYSIS	Tc-99 by ICPMS; Uranium by ICPMS;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1H3D8	WATER	2-28-06	08:45	I

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R.D. Mahood/Richard D. Mahood	2-28-06 12:12	MO-612 Refrigerator	2-28-06 12:12
MO-612 Refrigerator	3-1-06 07:40	R.D. Mahood/Richard D. Mahood	3-1-06 07:40
R.D. Mahood/Richard D. Mahood	3-1-06 13:02	N. Valenta NM Valenta	3/1/06 13:02

SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-001-089	PAGE 1 OF 1
COLLECTOR: Gent/Mahood/Todak	COMPANY CONTACT: TRENT, SJ — TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 1A — DATA TURNAROUND: 24 Hours / 15 Days
SAMPLING LOCATION: C4970, I-5-4 KA315	PROJECT DESIGNATION: Groundwater Sampling for Boreholes in the 200-UP-1 OU	SAF NO.: F06-001	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-314-3 — COA: 121931ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: PNNL Building 325	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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: Radioactive tie to B1HT51

SPECIAL HANDLING AND/OR STORAGE:

PRESERVATION	HNO3 to pH <2(ULTREX)
TYPE OF CONTAINER	Nalgene
NO. OF CONTAINER(S)	1
VOLUME	1000mL
SAMPLE ANALYSIS	Tc-99 by ICPMS; Uranium by ICPMS;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1HT51	WATER	2-27-06	10:25	✓

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: R.O. Mahood/Richard O. Mahood 2/27/06	DATE/TIME: 11:22	RECEIVED BY/STORED IN: MO-612 Refrigerator	DATE/TIME: 2-27-06 11:22
RELINQUISHED BY/REMOVED FROM: MO-612 Refrigerator 3-1-06	DATE/TIME: 07:40	RECEIVED BY/STORED IN: R.O. Mahood/Richard O. Mahood 3-1-06	DATE/TIME: 07:40
RELINQUISHED BY/REMOVED FROM: R.O. Mahood/Richard O. Mahood 3-1-06	DATE/TIME: 13:02	RECEIVED BY/STORED IN: H. Valenta M. Valenta 3/1/06	DATE/TIME: 13:02
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS: NOT FILTERED

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

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-001-092	PAGE 1 OF 1
COLLECTOR Gent/Mahood/Todak	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 1A AIR QUALITY ☐
SAMPLING LOCATION C4970 I-5 357.75 ft	PROJECT DESIGNATION Groundwater Sampling for Boreholes in the 200-UP-1 OU		SAF NO. F06-001	DATA TURNAROUND 24 Hours / 15 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-314-3	COA 121931ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO PNNL Building 325	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO.	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HNO3 to pH <2(ULTREX)
TYPE OF CONTAINER	Nalgene
NO. OF CONTAINER(S)	1
VOLUME	1000mL
SAMPLE ANALYSIS	Tc-99 by ICPMS; Uranium by ICPMS;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	[redacted]
B1HTJ2	WATER	2-28-06	1545	1

CHAIN OF POSSESSION	SIGN/ PRINT NAMES
RELINQUISHED BY/REMOVED FROM — DATE/TIME R.O. Mahood/Ruhall O. Mahood 2-28-06 16:42	RECEIVED BY/STORED IN — DATE/TIME MO-612 Refrigerator 2-28-06 16:42
RELINQUISHED BY/REMOVED FROM — DATE/TIME MO-612 Refrigerator 3-1-06 07:40	RECEIVED BY/STORED IN — DATE/TIME R.O. Mahood/Ruhall O. Mahood 3-1-06 07:40
RELINQUISHED BY/REMOVED FROM — DATE/TIME R.O. Mahood/Ruhall O. Mahood 3-1-06 13:02	RECEIVED BY/STORED IN — DATE/TIME M. Valenta M. Valenta 3/1/06 13:02
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME

SPECIAL INSTRUCTIONS

filtered to < 0.45 microns

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

A-6003-606(01/06)

JUL.24.2006 11:15AM AG&G D9TB1 NO.446 P.27
82000000