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Pacific Northwest National Laboratory

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July 19, 2007

To: Steve Trent

From: Michael Lindberg
Environmental Sciences Laboratory

Subject: Geochemical Study and Radiological Screening of Grab Samples Collected From the 216-A-4 Crib and the 200-E-102 Trench Characterization Boreholes-Sample Delivery Group F06-059-SAF Number F06-059

This letter contains the following information for sample delivery group F06-059

- Cover Sheet
- Narrative
- Analytical Results

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Introduction

Between December 6, 2006 and January 23, 2007 soil cores and grab samples were received from borehole C5301 (216-A-4 crib) for geochemical studies. An additional sample (a grab sample from the 200-E-102 trench) was also collected and delivered to the laboratory; it was to be analyzed for a limited set of geochemical parameters.

Analytical Results/Methodology

The analyses for this project were performed at the 325 building located in the 300 Area of the Hanford Site. The analyses were performed according to Pacific Northwest National Laboratory (PNNL) approved procedures. The data sets include the sample identification numbers, analytical results, estimated quantification limits (EQL) and quality control data.

Quality Control

The preparatory and analytical quality control requirements, calibration requirements, acceptance criteria, and failure actions are defined in the on-line QA plan "Conducting Analytical Work in Support of Regulatory Programs" (CAW). This QA plan implements the Hanford Analytical Services Quality Assurance Requirements Documents (HASQARD) for PNNL.

Definitions

CCB	Continuing Calibration Blank
CCV	Continuing Calibration Verification
Spike	Matrix Spike
Dup	Duplicate

Sample Receipt

Samples were received with a chain of custody (COC) and were analyzed according to the sample identification numbers supplied by the client. All Samples were refrigerated upon receipt until prepared for analyses.

All samples were received with custody seals intact with the exception of samples B1L5L4 and B1L5L7. These samples were delivered with no custody seal. The discrepancy was noted on the COC at the time of receipt.

Holding Times

Holding time is defined as the time from sample preparation to the time of analyses. The prescribed holding times were met for all analytes.

Analytical Results

All reported analytical results met the requirements of the CAW.

pH

Quality control for metal analyses met the requirements of the CAW.
Samples B1L1L1, B1L4Y7, B1L500, B1L504, B1M5X1, B1L512, B1L5B7, B1L5C0, and B1L5C4 had to be reanalyzed due to a QC failure. The reanalysis of these samples did not fall within the prescribed holding time. Both results were reported for comparison.

Metal Analysis

ICP-OES

The matrix spikes performed were not applicable for aluminum, calcium, iron, and magnesium due the concentration of the samples being 5 times greater than the spiked value.

ICP-MS

The matrix spikes performed were not applicable for chromium, copper, and molybdenum due the concentration of the samples being 5 times greater than the spiked value.

The silver numbers are for information only. The analytical results for the two isotopes of silver measured did not compare. This may be due to an unknown interferent.

Further studies will be performed for ^{129}I. The ^{129}I values reported may change depending on the findings in Tier II analysis.

Anion Analysis

Fluoride could not be quantified in some samples due to a peak interferent. The fluoride results were reported as N/A.

XRD Analysis

X-ray diffraction analysis of sample B1M5X1 indicated that it was typical Hanford formation sediment composed of quartz (>60%), albite (approximately 10%), and hornblende (<5%). There is also some clay (chlorite and mica [both less than 5%]) associated with this sample.

This data package has been reviewed technically for completeness and compliance to the CAW.

DISCLAIMER

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This Workbook contains data for the C5301 borehole

This project is in support of the 216-A-4 and 200-E-102 project

Equations included herein have been verified by peer review and hand calculation check.
Any alteration to equations should be reviewed in advance and noted on the page containing the change.

This workbook is for ease in data control and reporting.

Split spoon liners

SAF # is F06-059

STORAGE LOCATION IN BLDG 325

Comments	SAMPLE #	depth (ft)	Avg. Depth	container	date received	borehole	drilling interval
	E-102						
	B1L1L1	54.94	54.94	1-1L poly and 1 200g MC	12/6/2006	E-102 direct push	
	A-4						
	B1L4Y7	22-22.5	22.25	1-1L poly and 1 200g MC	12/7/2006	C5301	1
	B1L4Y8	25.5	25.5	1-1L poly and 1 200g MC	12/7/2006	C5301	2
depth from template from Fluor (Jeff loaded on vadose drive)	B1L5L3	29.0-31.5	30.25	1000g split spoon liner	12/11/2006	C5301	4
	B1L4Y9	27.5-28	27.75	1-1L poly and 1 200g MC	12/7/2006	C5301	3
	B1L500	30.5-31	30.75	1-1L poly and 1 200g MC	12/7/2006	C5301	5
	B1L501	31.5-32	31.75	1-1L poly and 1 200g MC	12/7/2006	C5301	6
	B1L502	34.5-35	34.75	1-1L poly and 1 200g MC	12/7/2006	C5301	7
	B1L503	37.5-38	37.75	1-1L poly and 1 200g MC	12/7/2006	C5301	8
	B1L504	39.5-40	39.75	1-1L poly and 1 200g MC	12/7/2006	C5301	9
	B1L505	41.5-42	41.75	1-1L poly and 1 200g MC	12/7/2006	C5301	10
seals on this sample when delivered	B1L5L4	43-45.5	44.25	1000g split spoon liner	12/11/2006	C5301	11
	B1L506	44.5-45	44.75	1-1L poly and 1 200g MC	12/7/2006	C5301	12
	B1L507	47	47	1-1L poly and 1 200g MC	12/7/2006	C5301	13
	B1L508	50-50.5	50.25	1-1L poly and 1 200g MC	12/12/2006	C5301	14
Organic layer sampl	B1M5X1	51	51	1-500ml poly and 1 200g MC	1/25/2007	C5301	
	B1L509	52-52.5	52.25	1-1L poly and 1 200g MC	12/12/2006	C5301	15
	B1L510	54.5-55	54.75	1-1L poly and 1 200g MC	12/7/2006	C5301	16
	B1L511	57-57.5	57.25	1-1L poly and 1 200g MC	12/7/2006	C5301	17
	B1L512	59-59.5	59.25	1-1L poly and 1 200g MC	12/7/2006	C5301	18
	B1L513	62.5	62.5	1-1L poly and 1 200g MC	12/7/2006	C5301	19
	B1L514	65	65	1-1L poly and 1 200g MC	12/7/2006	C5301	20
	B1L515	67-67.5	67.25	1-1L poly and 1 200g MC	12/12/2006	C5301	21
	B1L516	69.5-70	69.75	1-1L poly and 1 200g MC	12/12/2006	C5301	22
	B1L517	72.5-73	72.75	1-1L poly and 1 200g MC	12/12/2006	C5301	23
	B1L518	74.5-75	74.75	1-1L poly and 1 200g MC	12/12/2006	C5301	24
	B1L519	77-77.5	77.25	1-1L poly and 1 200g MC	12/12/2006	C5301	25
	B1L520	80.5-81	80.75	1-1L poly and 1 200g MC	12/12/2006	C5301	26
	B1L521	82.5-83	82.75	1-1L poly and 1 200g MC	12/12/2006	C5301	27
	B1L522	85-85.5	85.25	1-1L poly and 1 200g MC	12/12/2006	C5301	28
	B1L523	88-88.5	88.25	1-1L poly and 1 200g MC	12/21/2006	C5301	29
	B1L524	90-90.5	90.25	1-1L poly and 1 200g MC	12/21/2006	C5301	30
	B1L525	92.5	92.5	1-1L poly and 1 200g MC	12/12/2006	C5301	31

Comments	SAMPLE #	depth (ft)	Avg. Depth	container	date received	borehole	drilling interval
	B1L526	94.5-95	94.75	1-1L poly and 1 200g MC	12/12/2006	C5301	32
	B1L527	97-97.5	97.25	1-1L poly and 1 200g MC	12/12/2006	C5301	33
	B1L528	100	100	1-1L poly and 1 200g MC	12/12/2006	C5301	34
	B1L529	102.5-103	102.75	1-1L poly and 1 200g MC	12/12/2006	C5301	35
	B1L530	104.5-105	104.75	1-1L poly and 1 200g MC	12/12/2006	C5301	36
	B1L531	108.5	108.5	1-1L poly and 1 200g MC	12/15/2006	C5301	37
	B1L532	110	110	1-1L poly and 1 200g MC	12/15/2006	C5301	38
	B1L533	112-112.5	112.25	1-1L poly and 1 200g MC	12/15/2006	C5301	39
	B1L534	115-115.5	115.25	1-1L poly and 1 200g MC	12/15/2006	C5301	40
	B1L535	117.5-118	117.75	1-1L poly and 1 200g MC	12/15/2006	C5301	41
	B1L536	119.5-120	119.75	1-1L poly and 1 200g MC	12/15/2006	C5301	42
	B1L537	121.5-122	121.75	1-1L poly and 1 200g MC	12/15/2006	C5301	43
	B1L5L5	122-124	123	1000g split spoon liner	12/15/2006	C5301	44
	B1L538	124.5-125	124.75	1-1L poly and 1 200g MC	12/15/2006	C5301	45
	B1L539	127-127.5	127.25	1-1L poly and 1 200g MC	12/15/2006	C5301	46
	B1L540	130.5-131	130.75	1-1L poly and 1 200g MC	12/15/2006	C5301	47
	B1L541	132.5-133	132.75	1-1L poly and 1 200g MC	12/18/2006	C5301	48
	B1L542	135-135.5	135.25	1-1L poly and 1 200g MC	12/18/2006	C5301	49
	B1L543	137-137.5	137.25	1-1L poly and 1 200g MC	12/18/2006	C5301	50
	B1L544	140.5-141	140.75	1-1L poly and 1 200g MC	12/18/2006	C5301	51
	B1L545	142-142.5	142.25	1-1L poly and 1 200g MC	12/18/2006	C5301	52
	B1L546	145.5	145.5	1-1L poly and 1 200g MC	12/21/2006	C5301	53
	B1L547	147-147.5	147.25	1-1L poly and 1 200g MC	12/21/2006	C5301	54
	B1L548	149.5-150.0	149.75	1-1L poly and 1 200g MC	1/8/2007	C5301	55
	B1L549	152-152.5	152.25	1-1L poly and 1 200g MC	1/8/2007	C5301	56
	B1L550	154-154.5	154.25	1-1L poly and 1 200g MC	1/8/2007	C5301	57
	B1L551	157.5-158	157.75	1-1L poly and 1 200g MC	1/8/2007	C5301	58
	B1LNH0	160.5-163	161.75	4-1000g split spoon liners	1/11/2007	C5301	SS-160
	B1L552	160-160.5	160.25	1-1L poly and 1 200g MC	1/8/2007	C5301	59
	B1L553	162.5-163	162.75	1-1L poly and 1 200g MC	1/8/2007	C5301	60
	B1L554	164.5-165	164.75	1-1L poly and 1 200g MC	1/8/2007	C5301	61
	B1L555	167-167.5	167.25	1-1L poly and 1 200g MC	1/8/2007	C5301	62
	B1L556	169.5-170	169.75	1-1L poly and 1 200g MC	1/8/2007	C5301	63
	B1L557	172-172.5	172.25	1-1L poly and 1 200g MC	1/8/2007	C5301	64
	B1L558	175-175.5	175.25	1-1L poly and 1 200g MC	1/8/2007	C5301	65
	B1L559	177-177.5	177.25	1-1L poly and 1 200g MC	1/8/2007	C5301	66
	B1L560	179.5-180	179.75	1-1L poly and 1 200g MC	1/8/2007	C5301	67
	B1L561	182-182.5	182.25	1-1L poly and 1 200g MC	1/8/2007	C5301	68
rad sample	B1L562	185-185.5	185.25	1-1L poly and 1 200g MC	1/9/2007	C5301	69
	B1L563	187-187.5	187.25	1-1L poly and 1 200g MC	1/8/2007	C5301	70
	B1L564	189.5-190	189.75	1-1L poly and 1 200g MC	1/8/2007	C5301	71
	B1L565	192-192.5	192.25	1-1L poly and 1 200g MC	1/8/2007	C5301	72
	B1L566	194-194.5	194.25	1-1L poly and 1 200g MC	1/8/2007	C5301	73
	B1L567	197-197.5	197.25	1-1L poly and 1 200g MC	1/8/2007	C5301	74

Comments	SAMPLE #	depth (ft)	Avg. Depth	container	date received	borehole	drilling interval
	B1L568	199.5-200	199.75	1-1L poly and 1 200g MC	1/8/2007	C5301	75
	B1L569	202-202.5	202.25	1-1L poly and 1 200g MC	1/8/2007	C5301	76
	B1L570	204.5-205	204.75	1-1L poly and 1 200g MC	1/8/2007	C5301	77
	B1L571	207-207.5	207.25	1-1L poly and 1 200g MC	1/8/2007	C5301	78
	B1L572	209.5-210	209.75	1-1L poly and 1 200g MC	1/8/2007	C5301	79
	B1L573	212-212.5	212.25	1-1L poly and 1 200g MC	1/9/2007	C5301	80
	B1L574	214.5-215	214.75	1-1L poly and 1 200g MC	1/9/2007	C5301	81
	B1L575	217-217.5	217.25	1-1L poly and 1 200g MC	1/9/2007	C5301	82
	B1L576	219.5-220	219.75	1-1L poly and 1 200g MC	1/9/2007	C5301	83
	B1L577	222-222.5	222.25	1-1L poly and 1 200g MC	1/9/2007	C5301	84
	B1L578	225-225.5	225.25	1-1L poly and 1 200g MC	1/9/2007	C5301	85
	B1L579	227-227.5	227.25	1-1L poly and 1 200g MC	1/9/2007	C5301	86
	B1L580	229-229.5	229.25	1-1L poly and 1 200g MC	1/9/2007	C5301	87
	B1L581	233.5-234	233.75	1-1L poly and 1 200g MC	1/9/2007	C5301	88
	B1L582	234.5-235	234.75	1-1L poly and 1 200g MC	1/9/2007	C5301	89
	B1L583	236.5-237	236.75	1-1L poly and 1 200g MC	1/9/2007	C5301	90
	B1L584	240-240.5	240.25	1-1L poly and 1 200g MC	1/9/2007	C5301	91
	B1L585	242-242.5	242.25	1-1L poly and 1 200g MC	1/9/2007	C5301	92
	B1L586	244.5-245	244.75	1-1L poly and 1 200g MC	1/9/2007	C5301	93
	B1L587	247-247.5	247.25	1-1L poly and 1 200g MC	1/9/2007	C5301	94
	B1L588	249.5-250	249.75	1-1L poly and 1 200g MC	1/9/2007	C5301	95
	B1L589	252-252.5	252.25	1-1L poly and 1 200g MC	1/9/2007	C5301	96
	B1L590	254-254.5	254.25	1-1L poly and 1 200g MC	1/9/2007	C5301	97
	B1L591	257-257.5	257.25	1-1L poly and 1 200g MC	1/9/2007	C5301	98
	B1L592	259.5-260	259.75	1-1L poly and 1 200g MC	1/9/2007	C5301	99
	B1L5L6	260-262	261	1000g split spoon liner	1/16/2007	C5301	100
	B1L593	262-262.5	262.25	1-1L poly and 1 200g MC	1/9/2007	C5301	101
	B1L594	264.5-265	264.75	1-1L poly and 1 200g MC	1/9/2007	C5301	102
	B1L595	266.5-267	266.75	1-1L poly and 1 200g MC	1/9/2007	C5301	103
	B1L596	269.5-270	269.75	1-1L poly and 1 200g MC	1/9/2007	C5301	104
	B1L597	272.5-273	272.75	1-1L poly and 1 200g MC	1/18/2007	C5301	105
	B1L598	274.5-275	274.75	1-1L poly and 1 200g MC	1/18/2007	C5301	106
	B1L599	277.5-278	277.75	1-1L poly and 1 200g MC	1/18/2007	C5301	107
	B1L5B0	280-280.5	280.25	1-1L poly and 1 200g MC	1/18/2007	C5301	108
	B1L5B1	282.5-283	282.75	1-1L poly and 1 200g MC	1/18/2007	C5301	109
seals on this sample when delivered	B1L5L7	283-285	284	1000g split spoon liner	1/16/2007	C5301	110
	B1L5B2	285.5-286	285.75	1-1L poly and 1 200g MC	1/18/2007	C5301	111
	B1L5B3	287-287.5	287.25	1-1L poly and 1 200g MC	1/18/2007	C5301	112
	B1L5B4	289.5-290	289.75	1-1L poly and 1 200g MC	1/18/2007	C5301	113
	B1L5B5	292-292.5	292.25	1-1L poly and 1 200g MC	1/18/2007	C5301	114
	B1L5B6	294.5-295	294.75	1-1L poly and 1 200g MC	1/18/2007	C5301	115
	B1L5B7	297-297.5	297.25	1-1L poly and 1 200g MC	1/18/2007	C5301	116

Comments	SAMPLE #	depth (ft)	Avg. Depth	container	date received	borehole	drilling interval
	B1L5B8	299.5-300	299.75	1-1L poly and 1 200g MC	1/18/2007	C5301	117
	B1L5B9	303-303.5	303.25	1-1L poly and 1 200g MC	1/18/2007	C5301	118
	B1L5C0	304.5-305	304.75	1-1L poly and 1 200g MC	1/18/2007	C5301	119
	B1L5C1	307-307.5	307.25	1-1L poly and 1 200g MC	1/18/2007	C5301	120
	B1L5C2	309.5-310	309.75	1-1L poly and 1 200g MC	1/18/2007	C5301	121
	B1L5C3	312-312.5	312.25	1-1L poly and 1 200g MC	1/18/2007	C5301	122
saturated sample eneountered ~313-316'	B1L5C4	314.5-315	314.75	1-1L poly and 1 200g MC	1/18/2007	C5301	123
	B1LX09	317.5-318	317.75	1-1L poly and 1 200g MC	1/23/2007	C5301	124
	B1LX10	319.5-320	319.75	1-1L poly and 1 200g MC	1/23/2007	C5301	125
	B1LX11	322.5-323	322.75	1-1L poly and 1 200g MC	1/23/2007	C5301	126
	B1LX12	324.5-325	324.75	1-1L poly and 1 200g MC	1/23/2007	C5301	127
	B1LX14	329.5-330	329.75	1-1L poly and 1 200g MC	1/23/2007	C5301	129
	B1LX15	332.5-333	332.75	1-1L poly and 1 200g MC	1/23/2007	C5301	130
	B1LX16	334.5-335	334.75	1-1L poly and 1 200g MC	1/23/2007	C5301	131
	B1LX17	337-337.5	337.25	1-1L poly and 1 200g MC	1/23/2007	C5301	132
	B1LX18	339.5-340	339.75	1-1L poly and 1 200g MC	1/23/2007	C5301	133
	B1LX19	342.5-343	342.75	1-1L poly and 1 200g MC	1/23/2007	C5301	134
	B1LX20	344.5-345	344.75	1-1L poly and 1 200g MC	1/23/2007	C5301	135
	B1LX21	347-347.5	347.25	1-1L poly and 1 200g MC	1/23/2007	C5301	136
	B1LX22	349.5-350	349.75	1-1L poly and 1 200g MC	1/23/2007	C5301	137
	B1LX23	352.5-353	352.75	1-1L poly and 1 200g MC	1/23/2007	C5301	138
	B1LX24	354.5-355	354.75	1-1L poly and 1 200g MC	1/23/2007	C5301	139

133 grab samples from A-4
9 split spoons from A-4
1 grab from E-102

Analysis	Water Extract	Acid Leach	Solids	Total # of Samples to Process
Sample Description (Geology)			2/13-2/14/07	All Grab Samples
Digital Photography			2/13-2/14/07	All Grab Samples
Moisture Content			2/8/2007	All Grab Samples
Water Extract			3/20/2007	30
Acid Leach			3/22-3/23/07	30
pH	3/21/2007			30
Conductivity	3/21/2007			30
Alkalinity	3/20-3/30/07			30
IC (Anions)	3/21/2007			30
ICP-OES (VZ)	3/26 & 3/29/07	3/27/2007		30
ICP-MS (RCRA, Tc-99, U-238)	3/26 & 3/27/2007	3/26 & 3/27/2007		30
ICP-MS (I-129)	4/3/2007			30
GEA	4/2/2007	4/4/2007	3/1/07 (3/6/07 E-102)	30
Carbon (TOC/TIC)			3/14-3/21/07	30
Gross Alpha/Beta	3/23/2007	3/28/2007		30
Particle Density			4/18/2007	8
Particle Size Distribution			4/25/2007	8
Cation Exchange Capacity			4/30/2007	8
Bulk Density				8
Matric Potential (filter papers)			3/9/2007	All VZ Cores

Moisture Content

Scale ID 1118401492 exp 08/2007
calibration set: HN 3418

Analyst name: IVK 2/8/07
Peer reviewer: Michael Lindberg
Project Manager acceptance date: 4/12/2007

ID	Tin tare	+ wet soil	Wet soil wt	+ dry soil	Dry soil wt	% Moisture
E-102						
B1L1L1	33.55	60.75	27.20	59.25	25.70	5.84%
A-4						
B1L4Y7	33.98	47.51	13.53	46.62	12.64	7.04%
B1L4Y8	33.83	54.20	20.37	53.32	19.49	4.52%
B1L4Y9	33.56	55.29	21.73	54.36	20.80	4.47%
B1L500	33.53	62.69	29.16	61.62	28.09	3.81%
B1L501	33.64	56.13	22.49	55.41	21.77	3.31%
B1L502	33.68	72.90	39.22	71.63	37.95	3.35%
B1L503	33.80	83.11	49.31	81.43	47.63	3.53%
B1L504	33.64	48.83	15.19	48.07	14.43	5.27%
B1L505	33.59	65.84	32.25	64.48	30.89	4.40%
B1L506	33.62	68.55	34.93	66.96	33.34	4.77%
B1L507	33.82	72.21	38.39	70.25	36.43	5.38%
B1L508	33.78	76.00	42.22	74.23	40.45	4.38%
B1M5X1	33.74	59.77	26.03	56.85	23.11	12.64%
B1L509	33.64	63.49	29.85	61.83	28.19	5.89%
B1L510	33.71	75.90	42.19	74.17	40.46	4.28%
B1L511	33.61	58.54	24.93	57.79	24.18	3.10%
B1L512	33.67	56.14	22.47	55.65	21.98	2.23%
B1L513	33.83	80.84	47.01	79.52	45.69	2.89%
B1L514	33.64	77.94	44.30	76.48	42.84	3.41%
B1L515	33.73	71.17	37.44	70.39	36.66	2.13%
B1L516	33.70	61.86	28.16	61.00	27.30	3.15%
B1L517	33.77	82.81	49.04	81.80	48.03	2.10%
B1L518	33.78	71.83	38.05	71.00	37.22	2.23%
B1L519	33.63	93.05	59.42	91.82	58.19	2.11%
B1L520	33.65	57.32	23.67	56.75	23.10	2.47%
B1L521	33.69	61.36	27.67	60.74	27.05	2.29%
B1L522	33.94	74.53	40.59	73.62	39.68	2.29%
B1L523	33.75	71.54	37.79	70.56	36.81	2.66%
B1L524	33.71	64.54	30.83	63.65	29.94	2.97%

ID	Tin tare	+ wet soil	Wet soil wt	+ dry soil	Dry soil wt	% Moisture
B1L525	33.60	66.51	32.91	65.31	31.71	3.78%
B1L526	33.67	60.76	27.09	59.91	26.24	3.24%
B1L527	33.62	68.22	34.60	66.39	32.77	5.58%
B1L528	33.95	100.74	66.79	97.03	63.08	5.88%
B1L529	33.78	64.67	30.89	63.74	29.96	3.10%
B1L530	33.79	61.12	27.33	60.15	26.36	3.68%
B1L531	33.69	65.48	31.79	64.28	30.59	3.92%
B1L532	33.72	87.98	54.26	86.32	52.60	3.16%
B1L533	35.23	70.38	35.15	69.05	33.82	3.93%
B1L534	33.52	68.32	34.80	67.01	33.49	3.91%
B1L535	33.74	67.98	34.24	66.77	33.03	3.66%
B1L536	33.61	76.14	42.53	74.95	41.34	2.88%
B1L537	33.76	82.14	48.38	80.36	46.60	3.82%
B1L538	33.72	65.81	32.09	64.75	31.03	3.42%
B1L539	33.73	80.68	46.95	79.11	45.38	3.46%
B1L540	33.84	81.96	48.12	80.30	46.46	3.57%
B1L541	33.76	75.02	41.26	73.44	39.68	3.98%
B1L542	33.48	71.46	37.98	70.15	36.67	3.57%
B1L543	33.75	69.90	36.15	68.31	34.56	4.60%
B1L544	33.70	72.38	38.68	70.54	36.84	4.99%
B1L545	33.98	61.13	27.15	60.00	26.02	4.34%
B1L546	33.80	60.64	26.84	59.44	25.64	4.68%
B1L547	33.72	87.08	53.36	84.22	50.50	5.66%
B1L548	33.73	71.51	37.78	69.82	36.09	4.68%
B1L549	33.87	62.53	28.66	61.49	27.62	3.77%
B1L550	33.62	54.72	21.10	54.17	20.55	2.68%
B1L551	33.73	62.59	28.86	61.58	27.85	3.63%
B1L552	33.76	66.59	32.83	65.49	31.73	3.47%
B1L553	33.67	60.97	27.30	59.86	26.19	4.24%
B1L554	33.80	67.09	33.29	66.12	32.32	3.00%
B1L555	33.62	61.38	27.76	60.63	27.01	2.78%
B1L556	33.90	56.35	22.45	55.75	21.85	2.75%
B1L557	33.54	74.08	40.54	72.80	39.26	3.26%
B1L558	33.67	66.15	32.48	65.26	31.59	2.82%

ID	Tin tare	+ wet soil	Wet soil wt	+ dry soil	Dry soil wt	% Moisture
B1L559	33.55	60.57	27.02	59.77	26.22	3.05%
B1L560	33.77	59.16	25.39	58.36	24.59	3.25%
B1L561	34.18	65.41	31.23	64.49	30.31	3.04%
B1L562	34.00	64.65	30.65	63.54	29.54	3.76%
B1L563	33.85	65.57	31.72	64.65	30.80	2.99%
B1L564	33.72	86.23	52.51	84.67	50.95	3.06%
B1L565	33.80	86.27	52.47	83.86	50.06	4.81%
B1L566	33.64	102.60	68.96	100.53	66.89	3.09%
B1L567	33.80	89.36	55.56	87.11	53.31	4.22%
B1L568	33.45	84.65	51.20	83.08	49.63	3.16%
B1L569	33.81	82.76	48.95	81.34	47.53	2.99%
B1L570	33.65	68.51	34.86	67.23	33.58	3.81%
B1L571	33.76	68.34	34.58	67.22	33.46	3.35%
B1L572	33.72	83.20	49.48	81.66	47.94	3.21%
B1L573	33.69	71.27	37.58	70.10	36.41	3.21%
B1L574	33.83	87.34	53.51	85.55	51.72	3.46%
B1L575	33.75	78.34	44.59	76.92	43.17	3.29%
B1L576	33.67	80.59	46.92	78.98	45.31	3.55%
B1L577	33.67	88.48	54.81	86.81	53.14	3.14%
B1L578	33.79	71.46	37.67	70.13	36.34	3.66%
B1L579	33.61	95.60	61.99	93.36	59.75	3.75%
B1L580	33.66	76.40	42.74	74.93	41.27	3.56%
B1L581	33.74	106.58	72.84	104.08	70.34	3.55%
B1L582	33.67	78.12	44.45	76.44	42.77	3.93%
B1L583	33.69	84.76	51.07	83.09	49.40	3.38%
B1L584	33.79	83.14	49.35	81.45	47.66	3.55%

ID	Tin tare	+ wet soil	Wet soil wt	+ dry soil	Dry soil wt	% Moisture
B1L585	33.77	93.61	59.84	91.53	57.76	3.60%
B1L586	33.73	88.99	55.26	86.95	53.22	3.83%
B1L587	33.67	82.01	48.34	80.30	46.63	3.67%
B1L588	33.75	87.46	53.71	85.39	51.64	4.01%
B1L589	33.69	67.04	33.35	65.74	32.05	4.06%
B1L590	33.90	57.04	23.14	56.20	22.30	3.77%
B1L591	33.89	64.21	30.32	63.09	29.20	3.84%
B1L592	33.80	54.59	20.79	53.78	19.98	4.05%
B1L593	33.90	66.74	32.84	65.45	31.55	4.09%
B1L594	33.73	57.80	24.07	56.89	23.16	3.93%
B1L595	33.85	57.81	23.96	57.02	23.17	3.41%
B1L596	33.88	68.15	34.27	67.11	33.23	3.13%
B1L597	33.87	96.90	63.03	94.22	60.35	4.44%
B1L598	33.72	73.73	40.01	72.71	38.99	2.62%
B1L599	33.59	124.09	90.50	121.96	88.37	2.41%
B1L5B0	33.74	152.23	118.49	149.56	115.82	2.31%
B1L5B1	33.87	87.42	53.55	78.62	44.75	19.66%
B1L5B2	33.73	107.38	73.65	95.86	62.13	18.54%
B1L5B3	33.64	101.80	68.16	90.38	56.74	20.13%
B1L5B4	33.54	101.28	67.74	90.00	56.46	19.98%
B1L5B5	33.73	90.39	56.66	79.30	45.57	24.34%
B1L5B6	33.75	98.52	64.77	87.60	53.85	20.28%
B1L5B7	33.71	69.06	35.35	62.40	28.69	23.21%
B1L5B8	33.85	81.36	47.51	79.63	45.78	3.78%
B1L5B9	33.71	75.00	41.29	73.75	40.04	3.12%
B1L5C0	33.71	90.00	56.29	88.16	54.45	3.38%
B1L5C1	33.66	74.80	41.14	73.30	39.64	3.78%
B1L5C2	33.65	103.65	70.00	100.51	66.86	4.70%
B1L5C3	33.65	134.15	100.50	129.90	96.25	4.42%
B1L5C4	33.68	84.11	50.43	82.17	48.49	4.00%

ID	Tin tare	+ wet soil	Wet soil wt	+ dry soil	Dry soil wt	% Moisture

MC on air dried soil sample for particle densities REC 4/10/07

ID	Tin tare	+ wet soil	Wet soil wt	+ dry soil	Dry soil wt	% Moisture
B1L4Y7	33.76	40.12	6.36	40.07	6.31	0.79%
B1M5X1	33.73	45.71	11.98	45.57	11.84	1.18%
B1L524	33.88	41.4	7.52	41.35	7.47	0.67%
B1L553	33.83	46.89	13.06	46.82	12.99	0.54%
B1L570	33.84	45.34	11.50	45.29	11.45	0.44%
B1L5B1	33.81	42.85	9.04	42.75	8.94	1.12%
B1L5B1 DUP	33.8	48.9	15.10	48.76	14.96	0.94%
B1L5B7	33.85	44.69	10.84	44.47	10.62	2.07%
B1L5C4	33.83	48.07	14.24	47.97	14.14	0.71%

MC on wet (<2mm) soil sample for hydrometers

ID	Tin tare	+ wet soil	Wet soil wt	+ dry soil	Dry soil wt	% Moisture
B1L4Y7	33.81	75.04	41.23	72	38.19	7.96%
B1M5X1	33.86	47.28	13.42	45.69	11.83	13.44%
B1L524	33.89	56.44	22.55	55.63	21.74	3.73%
B1L553	33.7	71.75	38.05	70.22	36.52	4.19%
B1L570	33.96	60.83	26.87	59.94	25.98	3.43%
B1L5B1	34	56.46	22.46	52.84	18.84	19.21%
B1L5B1 DUP	33.82	67.96	34.14	62.28	28.46	19.96%
B1L5B7	33.96	62.28	28.32	57.02	23.06	22.81%
B1L5C4	33.86	125.82	91.96	121.57	87.71	4.85%

pH and Conductivity of 1:1 Water Extracts

pH meter S/N 307699
conductivity meter in lab 325

Analyst name. REC 3/21/07 (B1L562-Cl 3/9/07)
Peer reviewer Michael Lindberg
Project Manager acceptance date. 4/12/2007

Samples in red flagged due to 7 buffer failure

ID	Depth(ft)	pH	Conductivity mS/cm	dilution factor	Conductivity (mS/cm) Dilution Corrected (In Pore Water)	Temp C
B-102						
B1L1L1	54.94	7.83	0.344	17.14	5.90E+00	20.4
A-4						
B1L4Y7	22.25	7.52	0.119	14.21	1.69E+00	20.5
B1L500	30.75	7.37	0.110	26.25	2.89E+00	20.6
B1L504	39.75	7.32	0.090	18.99	1.71E+00	20.6
B1M5X1	51	7.47	0.452	7.92	3.58E+00	20.6
B1L512	59.25	7.16	0.093	44.85	4.17E+00	20.2
B1L517	62.5	7.22	0.112	47.56	5.33E+00	20.3
B1L519	77.25	7.34	0.123	47.31	5.82E+00	20.3
B1L524	90.25	7.36	0.150	33.64	5.05E+00	20.4
B1L528	100	7.30	0.227	17.06	3.87E+00	20.5
B1L531	108.5	7.30	0.196	25.49	5.00E+00	20.5
B1L531 Dup	108.5	7.25	0.181	25.51	4.62E+00	20.4
B1L536	119.75	7.07	0.148	34.74	5.14E+00	20.4
B1L540	130.75	7.27	0.147	27.99	4.12E+00	20.4
B1L543	137.25	7.29	0.144	21.74	3.13E+00	20.4
B1L547	147.25	7.44	0.146	17.66	2.58E+00	20.3
B1L553	162.75	7.32	0.113	23.60	2.67E+00	20.4
B1L553 Dup	162.75	7.15	0.108	23.61	2.55E+00	20.4
B1L557	172.25	7.06	0.090	33.47	3.01E+00	20.3
B1L562	185.25	7.36	0.080	40.57	3.25E+00	20.5
B1L568	199.75	7.00	0.119	31.61	3.76E+00	20.3
B1L570	204.75	7.18	0.135	26.26	3.55E+00	20.3
B1L577	222.25	7.10	0.155	31.86	4.94E+00	20.3
B1L582	234.75	7.13	0.179	25.46	4.56E+00	20.3
B1L587	247.25	7.18	0.197	27.26	5.37E+00	20.3
B1L592	259.75	7.22	0.203	24.67	5.01E+00	20.3
B1L596	269.75	7.18	0.158	31.94	5.05E+00	20.4
B1L5B1	282.75	7.26	0.582	5.09	2.96E+00	20.7
B1L5B1 Dup	282.75	7.44	0.588	5.09	2.99E+00	20.7
B1L5B3	287.25	7.48	0.552	4.97	2.74E+00	20.7
B1L5B5	292.25	7.40	0.701	4.11	2.88E+00	20.6
B1L5B7	297.25	7.48	0.609	4.34	2.64E+00	20.5
B1L5C0	304.75	7.54	0.202	29.59	5.98E+00	20.5
B1L5C4	314.75	7.29	0.173	25.00	4.32E+00	20.5

re-run of pH samples that were flagged (not within required holding time) 4/5/07 MMV

ID	pH
B-102	
B1L1L1	7.66
A-4	
B1L4Y7	7.54
B1L500	7.46
B1L504	7.46
B1M5X1	7.52
B1L512	7.57
B1L5B7	7.27
B1L5C0	7.64
B1L5C4	7.43

pH buffer checkups-chec nfor B1L512 post-check

4.00	7.03		4.09
7.00	7.05	7.08	7.08
10.00	9.99		

Conductivity QC Pre

Standard Mol	nductivity mS	Temperature	Calibration Standard calculation check	
0.005	0.698	20.3	0.718	97.2%
0.001	0.133	20.3	0.147	90.5%
DI water	0	20.3		

Post

Standard Mol	nductivity mS	Temperature	Calibration Standard calculation check	
0.001	0.158	20.6	0.147	107%
DI water				

after B1L512

Standard Mol	nductivity mS	Temperature	Calibration Standard calculation check	
0.001	0.159	20.3	0.147	108%

after B1L536

Standard Mol	nductivity mS	Temperature	Calibration Standard calculation check	
0.001	0.156	20.3	0.147	106%

after B1L536

Standard Mol	nductivity mS	Temperature	Calibration Standard calculation check	
0.001	0.158	20.6	0.147	107%

buffer checks

pH Std	Pre-reading	after B1L512	recal	after B1L536	after B1L557	after B1L51	Post-reading
4	4.01						
7	6.99	7.18	6.97	7.09	7.02	7.08	7.14
10	9.97						
B1L562							
7	7.00						7.00

ICP-OES Analysis: B-102 & 216-A-4 AE samples
PNNL Technical Procedure: PNNL-AGG-ICP-AES rev 1
AG&G Batch ID. 1144
Date Samples Submitted: 3/26/07
Date Samples Analyzed: 3/27/07
Samples Analyzed by: Steven R. Baum
Data Processed by: Steven R Baum
Data Reviewed by: Eric T. Clayton

Project Manager acceptance date: 4/12/2007

ICP-OES Analysis. B-102 and 216-A-4 WE samples
PNNL Technical Procedure. PNNL-AGG-ICP-AES rev 1
AG&G Batch ID. 1144
Date Samples Submitted: 3/26/07
Date Samples Analyzed: 3/26/07, 3/29/07
Samples Analyzed by: Steven R Baum
Data Processed by: Steven R Baum
Data Reviewed by: Eric T. Clayton

Calculated concentrations in Porewater based upon ICP-OES analysis of contact water (ug/l)

Sample ID	Dilution Factor	Al ug/l	As ug/l	B ug/l	Ba ug/l	Be ug/l	Bi ug/l	Ca ug/l	Cd ug/l	Co ug/l	Cr ug/l	Cu ug/l	Fe ug/l	K ug/l	Li ug/l	Mg ug/l	Mn ug/l	Mo ug/l
Water Extracts																		
B-102																		
B1L1L1 WE	17.14	(1.05E+03)	(9.15E+02)	(4.08E+03)	(3.92E+02)	(1.14E+02)	(2.73E+02)	1.89E+05	(3.87E+00)	(1.25E+01)	(7.64E+01)	(3.26E+02)	(8.23E+02)	(1.44E+05)	(1.83E+03)	5.61E+04	1.38E+03	(1.52E+03)
A-4																		
B1L4Y7 WE	14.21	4.27E+03	<1.42E+04	(2.04E+03)	(4.42E+02)	(5.97E+01)	(1.67E+02)	4.27E+04	<3.55E+03	<3.55E+03	(9.21E+01)	(1.03E+02)	(6.98E+03)	(3.52E+04)	(1.38E+03)	1.27E+04	(1.28E+02)	(3.65E+02)
B1L500 WE	26.25	(2.61E+03)	(8.05E+02)	(3.29E+03)	(3.91E+02)	(6.56E+01)	<1.31E+04	1.06E+05	(5.04E+01)	<6.56E+03	(8.69E+01)	(4.91E+01)	(2.53E+03)	(7.58E+04)	(2.44E+03)	3.76E+04	(7.60E+01)	(7.91E+02)
B1L504 WE	18.99	(1.30E+03)	(5.53E+02)	(1.94E+03)	(1.72E+02)	(3.52E+01)	<9.50E+03	8.30E+04	<4.75E+03	<4.75E+03	(6.63E+01)	(4.89E+00)	(2.59E+03)	(3.50E+04)	(1.67E+03)	2.93E+04	(5.12E+01)	(3.27E+02)
B1M5X1 WE	7.92	(2.22E+02)	(8.20E+02)	1.20E+04	8.07E+02	(1.00E+01)	<3.96E+03	2.52E+05	<1.98E+03	<1.98E+03	(4.00E+01)	(1.52E+01)	(3.38E+02)	1.05E+05	(7.48E+02)	1.18E+05	2.94E+03	(5.95E+02)
B1L512 WE	44.85	(3.21E+03)	(5.51E+03)	(3.44E+03)	(8.01E+02)	(3.09E+01)	(1.25E+02)	1.76E+05	<1.12E+04	<1.12E+04	(1.28E+02)	<1.12E+04	(1.78E+04)	(1.33E+05)	(4.04E+03)	7.83E+04	1.22E+03	(1.24E+03)
B1L517 WE	47.56	(1.81E+03)	(2.02E+03)	(3.38E+03)	(1.21E+03)	(2.24E+01)	<2.38E+04	2.55E+05	<1.19E+04	<1.19E+04	(8.60E+01)	<1.19E+04	(3.17E+03)	(1.86E+05)	(4.00E+03)	1.13E+05	(1.26E+02)	(5.58E+02)
B1L519 WE	47.31	(2.09E+03)	(4.31E+03)	(2.89E+03)	(8.83E+02)	(6.34E+00)	<2.37E+04	2.72E+05	<1.18E+04	<1.18E+04	(1.33E+02)	(5.02E+01)	(5.82E+03)	(1.97E+05)	(4.16E+03)	1.30E+05	(2.42E+02)	(1.13E+03)
B1L524 WE	33.64	(1.25E+03)	<3.36E+04	(2.22E+03)	(8.50E+02)	(8.87E+00)	<1.68E+04	2.62E+05	<8.41E+03	<8.41E+03	<2.10E+03	<8.41E+03	(1.80E+04)	(1.31E+05)	(2.82E+03)	1.22E+05	(5.18E+01)	(7.99E+02)
B1L528 WE	17.06	(4.97E+02)	(4.61E+02)	(9.59E+02)	(3.68E+02)	<4.26E+02	(2.88E+02)	2.69E+05	<4.26E+03	<4.26E+03	(4.64E+01)	<4.26E+03	(8.74E+02)	(9.78E+04)	(1.34E+03)	8.63E+04	<4.26E+02	(6.33E+01)
B1L531 WE	25.49	(1.01E+03)	<2.55E+04	(2.40E+03)	(5.70E+02)	(1.46E+02)	<1.27E+04	3.36E+05	(2.80E+01)	<6.37E+03	(1.13E+02)	(8.95E+01)	(7.01E+03)	(1.29E+05)	(2.27E+03)	1.30E+05	(9.47E+01)	(6.28E+02)
B1L531 Dup 1 WE	25.51	(9.62E+02)	(1.59E+03)	(2.04E+03)	(5.31E+02)	(8.76E+01)	<1.28E+04	3.04E+05	<6.38E+03	<6.38E+03	(3.36E+01)	<6.38E+03	(3.14E+03)	(1.17E+05)	(2.06E+03)	1.17E+05	(3.89E+01)	(7.81E+02)
B1L536 WE	34.74	(9.74E+02)	(3.57E+03)	(1.10E+03)	(6.17E+02)	(7.20E+01)	<1.74E+04	3.80E+05	<8.69E+03	<8.69E+03	(7.94E+01)	<8.69E+03	(1.28E+03)	(1.44E+05)	(3.04E+03)	1.61E+05	(2.63E+01)	<8.69E+03
B1L540 WE	27.99	(7.16E+02)	(1.79E+03)	(7.38E+02)	(5.25E+02)	(4.08E+01)	<1.40E+04	2.03E+05	<7.00E+03	<7.00E+03	(4.12E+00)	<7.00E+03	(2.56E+03)	(1.26E+05)	(2.39E+03)	9.42E+04	(3.44E+01)	(6.51E+02)
B1L543 WE	21.74	(6.96E+02)	(1.67E+03)	(1.65E+02)	(2.88E+02)	(2.07E+01)	<1.09E+04	1.64E+05	<5.43E+03	<5.43E+03	(6.31E+01)	<5.43E+03	(8.41E+02)	(8.53E+04)	(1.89E+03)	7.35E+04	(9.49E+00)	(7.52E+02)
B1L547 WE	17.66	(4.07E+02)	(1.03E+03)	(4.92E+02)	(4.46E+02)	(1.40E+01)	<8.83E+03	1.38E+05	<4.42E+03	<4.42E+03	(1.65E+02)	<4.42E+03	(1.91E+03)	(6.20E+04)	(1.55E+03)	5.69E+04	(2.04E+01)	(5.86E+02)
B1L553 WE	23.60	(8.96E+02)	(1.74E+02)	(2.48E+02)	(4.57E+02)	(1.05E+01)	<1.18E+04	1.84E+05	<5.90E+03	<5.90E+03	(7.92E+01)	<5.90E+03	(1.33E+03)	(9.88E+04)	(1.96E+03)	5.05E+04	(1.74E+01)	(1.06E+03)
B1L553 Dup 2 WE	23.61	(1.13E+03)	(1.36E+03)	<1.18E+04	(4.34E+02)	(7.58E+00)	<1.18E+04	1.65E+05	<5.90E+03	<5.90E+03	(7.68E+01)	<5.90E+03	(8.75E+02)	(8.90E+04)	(1.88E+03)	4.54E+04	(1.05E+01)	(1.12E+03)
B1L557 WE	33.47	(1.74E+03)	(2.34E+03)	(3.99E+02)	(5.90E+02)	(5.86E+00)	<1.67E+04	2.27E+05	<8.37E+03	<8.37E+03	<2.09E+03	<8.37E+03	(1.93E+03)	(1.24E+05)	(2.66E+03)	8.10E+04	(4.31E-01)	(8.71E+02)
B1L562 WE	40.57	(2.45E+03)	(6.59E+03)	(2.16E+02)	(5.26E+02)	(1.75E+00)	(6.23E+02)	2.51E+05	<1.01E+04	<1.01E+04	<2.54E+03	<1.01E+04	1.26E+05	(1.34E+05)	(3.27E+03)	5.31E+04	<1.01E+03	(1.01E+02)
B1L568 WE	31.61	(1.33E+03)	(3.07E+03)	(7.39E+02)	(6.36E+02)	(2.05E+02)	<1.58E+04	2.73E+05	<7.90E+03	<7.90E+03	(9.63E+01)	<7.90E+03	(1.64E+03)	(1.30E+05)	(2.12E+03)	8.13E+04	(1.25E+02)	(8.16E+02)
B1L570 WE	26.26	(1.84E+03)	(1.12E+03)	(2.93E+02)	(1.19E+03)	(9.77E+01)	<1.31E+04	2.45E+05	<6.57E+03	<6.57E+03	(1.20E+02)	<6.57E+03	(9.66E+03)	(1.27E+05)	(1.85E+03)	7.56E+04	(9.39E+01)	(4.38E+02)
B1L577 WE	31.86	(1.56E+03)	(1.61E+03)	<1.59E+04	(7.68E+02)	(7.77E+01)	<1.59E+04	3.56E+05	<7.96E+03	<7.96E+03	(1.45E+02)	<7.96E+03	(1.12E+03)	(1.42E+05)	(2.30E+03)	1.30E+05	(7.38E+01)	<7.96E+03
B1L582 WE	25.46	(9.90E+02)	(2.02E+03)	<1.27E+04	(8.43E+02)	(4.70E+01)	<1.27E+04	3.31E+05	<6.36E+03	<6.36E+03	(9.76E+01)	<6.36E+03	(6.08E+02)	(1.35E+05)	(1.77E+03)	1.18E+05	(1.41E+01)	(6.95E+02)
B1L587 WE	27.26	(8.86E+02)	<2.73E+04	<1.36E+04	(9.56E+02)	(3.50E+01)	(8.87E+02)	3.94E+05	<6.82E+03	(4.41E+01)	(1.01E+03)	(2.08E+03)	(1.04E+03)	(1.60E+05)	(1.99E+03)	1.43E+05	1.20E+04	(8.45E+02)
B1L592 WE	24.67	(7.66E+02)	(5.12E+03)	<1.23E+04	(7.25E+02)	(2.25E+01)	(3.81E+02)	3.74E+05	<6.17E+03	<6.17E+03	(5.91E+01)	<6.17E+03	(1.81E+04)	(1.21E+05)	(2.06E+03)	1.37E+05	(7.96E+00)	(3.19E+02)
B1L596 WE	31.94	(1.58E+03)	<3.19E+04	<1.60E+04	(5.25E+02)	(2.04E+01)	<1.60E+04	3.03E+05	<7.99E+03	<7.99E+03	(2.54E+01)	<7.99E+03	(2.86E+03)	(1.52E+05)	(2.68E+03)	1.00E+05	(4.33E+01)	(9.49E+02)
B1L5B1 WE	5.09	(3.94E+01)	(1.05E+03)	<2.54E+03	3.84E+02	(2.14E+00)	<2.54E+03	3.00E+05	<1.27E+03	<1.27E+03	(1.75E+01)	<1.27E+03	(1.64E+03)	(3.70E+04)	(3.92E+02)	9.74E+04	<1.27E+02	(2.08E+02)
B1L5B1 Dup 3 WE	5.09	(4.91E+01)	(1.45E+02)	<2.54E+03	3.28E+02	(1.80E+00)	<2.54E+03	3.05E+05	<1.27E+03	<1.27E+03	(2.23E+01)	<1.27E+03	(1.12E+02)	(3.77E+04)	(4.33E+02)	9.95E+04	<1.27E+02	(2.03E+02)
B1L5B3 WE	4.97	(1.17E+02)	(2.23E+02)	7.16E+03	5.91E+02	(1.31E+00)	<2.49E+03	2.50E+05	<1.24E+03	<1.24E+03	(2.20E+01)	<1.24E+03	(2.67E+02)	(2.08E+04)	(4.26E+02)	9.42E+04	<1.24E+02	(1.80E+02)
B1L5B5 WE	4.11	(1.35E+02)	(6.65E+02)	6.32E+03	6.49E+02	(3.07E+01)	<2.05E+03	2.30E+05	(1.61E+00)	<1.03E+03	(2.13E+01)	<1.03E+03	(3.02E+03)	(1.76E+04)	(2.82E+02)	9.47E+04	(2.52E+01)	(3.66E+02)
B1L5B7 WE	4.34	(8.51E+01)	(3.14E+02)	4.89E+03	4.72E+02	(1.70E+01)	(2.13E+01)	1.76E+05	<1.09E+03	<1.09E+03	(1.22E+01)	<1.09E+03	(1.09E+02)	(2.13E+04)	(2.98E+02)	8.84E+04	(2.22E+01)	(3.11E+02)
B1L5C0 WE	29.59	(1.48E+03)	(3.64E+03)	<1.48E+04	(9.52E+02)	(8.78E+01)	<1.48E+04	2.06E+05	<7.40E+03	<7.40E+03	(2.54E+02)	<7.40E+03	(1.22E+03)	(1.72E+05)	(2.06E+03)	1.05E+05	(2.70E+02)	(1.43E+03)
B1L5C4 WE	25.00	(1.21E+03)	(1.56E+03)	<1.25E+04	(7.70E+02)	(5.87E+01)	<1.25E+04	2.43E+05	<6.25E+03	<6.25E+03	(5.15E+01)	<6.25E+03	(2.67E+03)	(1.26E+05)	(1.50E+03)	6.76E+04	(2.13E+02)	(1.21E+03)

Calculated concentrations in Porewater based upon ICP-OES analysis of contact water (ug/l)

Sample ID	Dilution Factor	Ni ug/l	P ug/l	Pb ug/l	Se ug/l	Sr ug/l	Tl ug/l	V ug/l	Zn ug/l	Na ug/l	Si ug/l	S ug/l	Ti ug/l	Zr ug/l	Ag ug/l	Re ug/l	Sb ug/l
Water Extracts																	
B-102																	
B1L1L1 WE	17.14	(5.43E+02)	(2.38E+03)	(3.09E+02)	<8.57E+04	9.67E+02	(4.56E+02)	<4.29E+03	(8.61E+02)	8.43E+05	(5.30E+04)	(2.08E+05)	(5.28E+01)	(8.44E+01)	(3.11E+02)	(3.38E+02)	<8.57E+04
A-4																	
B1L4Y7 WE	14.21	(2.43E+02)	(1.32E+03)	(3.87E+02)	(5.19E+02)	(2.47E+02)	(2.66E+02)	(5.75E+01)	(8.38E+02)	2.41E+05	1.46E+05	(2.25E+04)	(2.52E+02)	(3.87E+01)	(1.91E+02)	(2.92E+02)	<7.10E+04
B1L500 WE	26.25	(4.58E+02)	(2.74E+03)	<6.56E+03	<1.31E+05	(5.87E+02)	(1.76E+02)	(1.33E+01)	(1.25E+03)	3.29E+05	1.40E+05	(6.23E+04)	(1.32E+02)	(4.02E-01)	(2.86E+02)	<1.31E+04	<1.31E+05
B1L504 WE	18.99	(1.99E+02)	2.77E+04	<4.75E+03	<9.50E+04	(3.44E+02)	(1.12E+02)	<4.75E+03	(7.39E+02)	1.40E+05	(9.30E+04)	(1.55E+04)	(3.97E+01)	(1.19E+01)	(1.65E+02)	(3.02E+02)	<9.50E+04
B1M5X1 WE	7.92	(7.03E+01)	4.59E+05	<1.98E+03	<3.96E+04	1.42E+03	<3.96E+03	<1.98E+03	(6.94E+02)	2.03E+05	4.46E+04	6.39E+05	<3.96E+02	<3.96E+02	(4.91E+01)	(7.86E+01)	<3.96E+04
B1L512 WE	44.85	(1.33E+02)	4.37E+05	(1.30E+03)	(4.40E+02)	(8.08E+02)	<2.24E+04	(1.19E+02)	(1.79E+03)	3.70E+05	(2.01E+05)	(1.56E+05)	(9.44E+01)	<2.24E+03	(3.47E+02)	(2.87E+02)	<2.24E+05
B1L517 WE	47.56	(5.08E+02)	1.24E+05	(9.17E+02)	<2.38E+05	(1.18E+03)	(4.14E+02)	(2.40E+02)	(1.79E+03)	3.88E+05	(2.01E+05)	(1.55E+05)	<2.38E+03	(2.35E+01)	(2.51E+02)	(1.11E+03)	<2.38E+05
B1L519 WE	47.31	<1.18E+04	6.79E+04	<1.18E+04	<2.37E+05	(1.29E+03)	(1.40E+03)	(4.20E+02)	(1.44E+03)	4.26E+05	(1.96E+05)	(1.85E+05)	(2.40E+01)	<2.37E+03	(4.79E+02)	(9.65E+01)	<2.37E+05
B1L524 WE	33.64	<8.41E+03	(3.69E+04)	(1.64E+02)	(3.93E+03)	(1.39E+03)	<1.68E+04	<8.41E+03	(1.62E+03)	3.29E+05	1.68E+05	(1.44E+05)	<1.68E+03	<1.68E+03	(1.70E+02)	(4.77E+02)	<1.68E+05

B1L528 WE	17 06	(1.39E+01)	(1.48E+04)	<4.26E+03	<8.53E+04	9.59E+02	(3.35E+02)	<4.26E+03	(1 22E+03)	1 95E+05	9.02E+04	(2.09E+05)	<8.53E+02	<8.53E+02	(4.16E+01)	(4.19E+02)	<8.53E+04
B1L531 WE	25.49	(5.65E+02)	(1 08E+04)	(2.23E+02)	<1.27E+05	1.48E+03	(9.90E+02)	<6.37E+03	(1.13E+03)	2.25E+05	1.33E+05	(2.44E+05)	(4.20E+01)	(8.56E+01)	(3.85E+02)	(5.35E+02)	<1.27E+05
B1L531 Dup 1 WE	25.51	(2.16E+02)	(8.42E+03)	<6.38E+03	(3.05E+03)	1.29E+03	(9.06E+02)	<6.38E+03	(1 10E+03)	2 12E+05	(1 27E+05)	(2.03E+05)	(1.35E+00)	(3.21E+01)	(2.32E+02)	(1 15E+03)	<1 28E+05
B1L536 WE	34.74	(5.49E+02)	(1 37E+04)	<8.69E+03	<1.74E+05	(1 73E+03)	(5.16E+02)	<8.69E+03	(1.77E+03)	1.38E+05	(1.62E+05)	(2.29E+05)	(2.00E+00)	(5.56E+01)	(3.14E+02)	<1.74E+04	<1.74E+05
B1L540 WE	27 99	(5.01E+02)	(7.29E+03)	(4.83E+02)	<1.40E+05	(1.08E+03)	(7.35E+02)	(3.33E+01)	(1.16E+03)	2.65E+05	1 50E+05	(1.25E+05)	<1.40E+03	(4.51E+01)	(2.66E+02)	(9.28E+01)	<1 40E+05
B1L543 WE	21.74	(2.07E+02)	(6 16E+03)	(1.64E+02)	<1.09E+05	(9.07E+02)	(3.80E+02)	(7.36E+01)	(5.92E+02)	2.11E+05	1.18E+05	(7 34E+04)	<1.09E+03	(5.91E+01)	(1.27E+02)	<1.09E+04	(4.85E+02)
B1L547 WE	17 66	(1.57E+02)	(4.61E+03)	<4.42E+03	<8.83E+04	(6.61E+02)	(1.33E+03)	<4.42E+03	(7 09E+02)	1 74E+05	9.84E+04	(1.19E+05)	<8.83E+02	(2.30E+01)	(1.34E+02)	(1.02E+02)	<8.83E+04
B1L553 WE	23.60	(1 20E+02)	(5.35E+03)	<5.90E+03	<1.18E+05	(8.80E+02)	(3.75E+02)	(2.57E+00)	(1.03E+03)	1.40E+05	1.20E+05	(5.04E+04)	<1 18E+03	(1.66E+01)	(1.93E+02)	<1 18E+04	(1.39E+03)
B1L553 Dup 2 WE	23.61	(2.00E+02)	(7.23E+03)	(2 74E+02)	<1 18E+05	(7.35E+02)	(7 14E+02)	<5.90E+03	(1.00E+03)	1.29E+05	(1.05E+05)	(5.22E+04)	<1.18E+03	<1.18E+03	(1.31E+02)	(5.62E+02)	<1.18E+05
B1L557 WE	33.47	<8.37E+03	(8.87E+03)	(1.74E+02)	<1.67E+05	(1.10E+03)	(5.79E+02)	<8.37E+03	(1.21E+03)	8.84E+04	(1.66E+05)	(6.92E+04)	<1.67E+03	(1.55E+01)	(1 18E+02)	(3.89E+02)	<1 67E+05
B1L562 WE	40.57	<1 01E+04	(8.08E+03)	(1.61E+03)	<2.03E+05	(1 23E+03)	(1.95E+03)	(2.34E+02)	(3.85E+02)	1.09E+05	2.17E+05	(4.95E+04)	(5.61E+00)	<2.03E+03	(1.32E+02)	(1.12E+03)	(2.41E+03)
B1L568 WE	31.61	(4.94E+02)	(8.20E+03)	<7.90E+03	<1.58E+05	1.67E+03	(5.58E+02)	<7.90E+03	(1.31E+03)	1.32E+05	1.77E+05	(5.67E+04)	(7.51E+01)	(9.80E+01)	(4.07E+02)	<1.58E+04	<1.58E+05
B1L570 WE	26.26	(3.35E+02)	(6.08E+03)	(6.06E+02)	<1.31E+05	1.39E+03	(7.63E+02)	<6.57E+03	(1.28E+03)	1.49E+05	1.40E+05	(4.02E+04)	(5.57E+01)	(4.39E+01)	(1.98E+02)	(1.36E+02)	(1 20E+03)
B1L577 WE	31.86	(9.49E+01)	(8.10E+03)	(8.12E+02)	<1.59E+05	2.04E+03	<1.59E+04	<7.96E+03	(1.34E+03)	1.33E+05	(1.55E+05)	(3.91E+04)	<1.59E+03	(1.20E+01)	(3.56E+02)	(3.08E+02)	<1.59E+05
B1L582 WE	25.46	(2 75E+02)	(5.83E+03)	(6.87E+02)	(1 81E+03)	2.01E+03	(2.81E+01)	<6.36E+03	(1.35E+03)	1.17E+05	(1.26E+05)	(2.31E+04)	<1.27E+03	(4.84E+01)	(2.80E+02)	(6.73E+02)	(4.74E+02)
B1L587 WE	27.26	(1.12E+03)	(5.43E+03)	<6.82E+03	<1.36E+05	2.50E+03	<1.36E+04	<6.82E+03	(1.52E+03)	1.44E+05	1.48E+05	(3.88E+04)	<1.36E+03	(1.11E+02)	<6.82E+03	(5.20E+02)	<1.36E+05
B1L592 WE	24.67	(1.01E+02)	(5.91E+03)	<6.17E+03	(6.27E+02)	2.21E+03	<1.23E+04	<6.17E+03	(1 17E+03)	1.23E+05	(1.23E+05)	(3.32E+04)	<1 23E+03	(5.91E+00)	(1.04E+02)	(1.66E+02)	<1.23E+05
B1L596 WE	31.94	(1.40E+02)	(8.25E+03)	<7.99E+03	(1.59E+03)	(1.46E+03)	(2.20E+02)	<7 99E+03	(1.18E+03)	2.77E+05	1.75E+05	(5.28E+04)	<1.60E+03	(1.92E+01)	(1.99E+02)	(2.91E+02)	<1.60E+05
B1L5B1 WE	5.09	(3.88E+01)	(1.74E+03)	<1.27E+03	(2.15E+03)	1.49E+03	(1.48E+02)	<1.27E+03	(7.62E+02)	3.73E+04	4.83E+04	(1.97E+04)	<2.54E+02	<2.54E+02	(1.91E+01)	(5.16E+01)	<2.54E+04
B1L5B1 Dup 3 WE	5.09	(2.65E+01)	(1.52E+03)	<1.27E+03	(2.77E+03)	1.51E+03	(1.81E+02)	<1.27E+03	(3.76E+02)	3 78E+04	4.76E+04	(1 89E+04)	<2.54E+02	(1.79E-01)	(2.23E+01)	(1.99E+02)	<2.54E+04
B1L5B3 WE	4.97	(5.24E+01)	(1.26E+03)	<1.24E+03	(6.63E+02)	1.83E+03	(1.22E+02)	<1.24E+03	(5.30E+02)	8.91E+04	4.91E+04	(3.49E+04)	<2.49E+02	<2.49E+02	(3.00E+01)	(1 26E+02)	<2.49E+04
B1L5B5 WE	4.11	(9.60E+01)	(1.20E+03)	<1.03E+03	(1.94E+03)	1.82E+03	<2.05E+03	<1.03E+03	(5.11E+02)	1.41E+05	3.80E+04	(4.49E+04)	<2.05E+02	(2.01E+01)	(6.80E+01)	(1.52E+02)	<2.05E+04
B1L5B7 WE	4.34	(1.03E+02)	(1.33E+03)	<1.09E+03	(2.09E+03)	1.47E+03	(1.04E+02)	<1.09E+03	(3.87E+02)	1.47E+05	4.28E+04	(4.16E+04)	<2.17E+02	(7 05E+00)	(4.81E+01)	(1.95E+00)	<2.17E+04
B1L5C0 WE	29.59	(4.06E+02)	(3.53E+03)	(4.60E+02)	(2.10E+03)	1.59E+03	(1 54E+03)	<7.40E+03	(1.27E+03)	5.33E+05	1.50E+05	(2.10E+05)	(3.10E+01)	(3.03E+01)	(2.95E+02)	<1.48E+04	<1.48E+05
B1L5C4 WE	25.00	(2.75E+02)	(4.23E+03)	(3.43E+02)	<1.25E+05	1.51E+03	(1.53E+03)	(1.87E+02)	(1.33E+03)	2.86E+05	(1.07E+05)	(1.26E+05)	(5.82E-01)	(2.59E+01)	(2.17E+02)	<1.25E+04	<1 25E+05

Calculated concentrations in soil based upon ICP-OES analysis of contact water

Sample ID	Dilution Factor	Al ug/g soil	As ug/g soil	B ug/g soil	Ba ug/g soil	Be ug/g soil	Bi ug/g soil	Ca ug/g soil	Cd ug/g soil	Co ug/g soil	Cr ug/g soil	Cu ug/g soil	Fe ug/g soil	K ug/g soil	Li ug/g soil	Mg ug/g soil	Mn ug/g soil	Mo ug/g soil
Water Extracts																		
E-102																		
B1L1L1 WE	1.00	(6 13E-02)	(5.34E-02)	(2.38E-01)	(2.29E-02)	(6.66E-03)	(1.59E-02)	1.11E+01	(2.26E-04)	(7.31E-04)	(4.46E-03)	(1.90E-02)	(4.80E-02)	(8.41E+00)	(1.07E-01)	3.27E+00	8.04E-02	(8.86E-02)
A-4																		
B1L4Y7 WE	1.00	3.01E-01	<1.00E+00	(1.43E-01)	(3.11E-02)	(4.20E-03)	(1.18E-02)	3.01E+00	<2.50E-01	<2.50E-01	(6.49E-03)	(7.23E-03)	(4.91E-01)	(2.48E+00)	(9.70E-02)	8.95E-01	(8.99E-03)	(2.57E-02)
B1L500 WE	1.00	(9.96E-02)	(3.06E-02)	(1.25E-01)	(1.49E-02)	(2.50E-03)	<5.00E-01	4.02E+00	(1.92E-03)	<2.50E-01	(3.31E-03)	(1.87E-03)	(9.65E-02)	(2.89E+00)	(9.28E-02)	1.43E+00	(2.89E-03)	(3.01E-02)
B1L504 WE	1.00	(6.82E-02)	(2.91E-02)	(1.02E-01)	(9.07E-03)	(1.85E-03)	<5.00E-01	4.37E+00	<2.50E-01	<2.50E-01	(3.49E-03)	(2.58E-04)	(1.36E-01)	(1.84E+00)	(8.78E-02)	1.54E+00	(2.70E-03)	(1.72E-02)
B1M5X1 WE	1.00	(2.81E-02)	(1.04E-01)	1.51E+00	1.02E-01	(1.27E-03)	<5.00E-01	3.18E+01	<2.50E-01	<2.50E-01	(5.06E-03)	(1.92E-03)	(4.27E-02)	1.32E+01	(9.45E-02)	1.49E+01	3.71E-01	(7.52E-02)
B1L512 WE	1.00	(7.17E-02)	(1.23E-01)	(7.68E-02)	(1.79E-02)	(6.89E-04)	(2.79E-03)	3.92E+00	<2.50E-01	<2.50E-01	(2.85E-03)	<2.50E-01	(3.97E-01)	(2.97E+00)	(9.00E-02)	1.74E+00	2.72E-02	(2.77E-02)
B1L517 WE	1.00	(3.81E-02)	(4.24E-02)	(7.12E-02)	(2.54E-02)	(4 72E-04)	<5.00E-01	5.36E+00	<2.50E-01	<2.50E-01	(1.81E-03)	<2.50E-01	(6.67E-02)	(3.92E+00)	(8.42E-02)	2.38E+00	(2.65E-03)	(1.17E-02)
B1L519 WE	1.00	(4.42E-02)	(9.11E-02)	(6.11E-02)	(1.87E-02)	(1.34E-04)	<5.00E-01	5.75E+00	<2.50E-01	<2.50E-01	(2.82E-03)	(1.06E-03)	(1.23E-01)	(4.17E+00)	(8.80E-02)	2.75E+00	(5.11E-03)	(2.39E-02)
B1L524 WE	1.00	(3.72E-02)	<1.00E+00	(6.59E-02)	(2.53E-02)	(2.64E-04)	<5.00E-01	7.79E+00	<2.50E-01	<2.50E-01	<6.25E-02	<2.50E-01	(5.35E-01)	(3.89E+00)	(8.37E-02)	3.63E+00	(1.54E-03)	(2.38E-02)
B1L528 WE	1.00	(2.92E-02)	(2.71E-02)	(5.64E-02)	(2.16E-02)	<2.51E-02	(1.69E-02)	1.58E+01	<2.51E-01	<2.51E-01	(2.73E-03)	<2.51E-01	(5.14E-02)	(5.75E+00)	(7.89E-02)	5.08E+00	<2.51E-02	(3.72E-03)
B1L531 WE	1.00	(3.97E-02)	<1.00E+00	(9.42E-02)	(2.24E-02)	(5.71E-03)	<5.00E-01	1.32E+01	(1.10E-03)	<2.50E-01	(4.44E-03)	(3.51E-03)	(2.75E-01)	(5.06E+00)	(8.89E-02)	5.11E+00	(3.71E-03)	(2.46E-02)
B1L531 Dup 1 WE	1.00	(3.77E-02)	(6.23E-02)	(8.00E-02)	(2.08E-02)	(3.44E-03)	<5.00E-01	1.19E+01	<2.50E-01	<2.50E-01	(1.32E-03)	<2.50E-01	(1.23E-01)	(4.58E+00)	(8.09E-02)	4.59E+00	(1.52E-03)	(3.06E-02)
B1L536 WE	1.00	(2.80E-02)	(1.03E-01)	(3.15E-02)	(1.78E-02)	(2.07E-03)	<5.00E-01	1.09E+01	<2.50E-01	<2.50E-01	(2.29E-03)	<2.50E-01	(3.67E-02)	(4.15E+00)	(8.75E-02)	4.62E+00	(7.57E-04)	<2.50E-01
B1L540 WE	1.00	(2.56E-02)	(6.38E-02)	(2.64E-02)	(1.87E-02)	(1.46E-03)	<5.00E-01	7.26E+00	<2.50E-01	<2.50E-01	(1.47E-04)	<2.50E-01	(9.16E-02)	(4.49E+00)	(8.53E-02)	3.36E+00	(1.23E-03)	(2.33E-02)
B1L543 WE	1.00	(3.20E-02)	(7.70E-02)	(7.59E-03)	(1.33E-02)	(9.51E-04)	<5.00E-01	7.53E+00	<2.50E-01	<2.50E-01	(2.90E-03)	<2.50E-01	(3.87E-02)	(3.92E+00)	(8.72E-02)	3.38E+00	(4.37E-04)	(3.46E-02)
B1L547 WE	1 00	(2.31E-02)	(5.82E-02)	(2.78E-02)	(2.52E-02)	(7.95E-04)	<5.00E-01	7.84E+00	<2.50E-01	<2.50E-01	(9.33E-03)	<2.50E-01	(1.08E-01)	(3.51E+00)	(8.76E-02)	3.22E+00	(1.16E-03)	(3.32E-02)
B1L553 WE	1.00	(3.80E-02)	(7.39E-03)	(1.05E-02)	(1.94E-02)	(4.46E-04)	<5.00E-01	7.78E+00	<2.50E-01	<2.50E-01	(3.36E-03)	<2.50E-01	(5.63E-02)	(4.19E+00)	(8.29E-02)	2.14E+00	(7.37E-04)	(4.49E-02)
B1L553 Dup 2 WE	1.00	(4.81E-02)	(5.76E-02)	<5.00E-01	(1.84E-02)	(3.21E-04)	<5.00E-01	7.00E+00	<2.50E-01	<2.50E-01	(3.25E-03)	<2.50E-01	(3.71E-02)	(3.77E+00)	(7.99E-02)	1.93E+00	(4.47E-04)	(4.77E-02)
B1L557 WE	1.09	(5.68E-02)	(7.64E-02)	(1.30E-02)	(1.92E-02)	(1 91E-04)	<5.46E-01	7.38E+00	<2.73E-01	<2.73E-01	<6.82E-02	<2.73E-01	(6.28E-02)	(4.06E+00)	(8.69E-02)	2.64E+00	(1.40E-05)	(2.84E-02)
B1L562 WE	1 52	(9.19E-02)	(2.48E-01)	(8.13E-03)	(1.98E-02)	(6.56E-05)	(2.34E-02)	9.44E+00	<3.81E-01	<3.81E-01	<9.53E-02	<3.81E-01	4 75E+00	(5.05E+00)	(1.23E-01)	2.00E+00	<3.81E-02	(3.80E-03)
B1L568 WE	1.00	(4.21E-02)	(9 71E-02)	(2.34E-02)	(2.01E-02)	(6.48E-03)	<5.00E-01	8.65E+00	<2.50E-01	<2.50E-01	(3.05E-03)	<2.50E-01	(5.17E-02)	(4.12E+00)	(6.72E-02)	2.57E+00	(3.94E-03)	(2.58E-02)
B1L570 WE	1.00	(7 00E-02)	(4.27E-02)	(1 12E-02)	(4.52E-02)	(3.72E-03)	<5.01E-01	9.34E+00	<2.50E-01	<2.50E-01	(4.56E-03)	<2.50E-01	(3.68E-01)	(4.84E+00)	(7.06E-02)	2.88E+00	(3.58E-03)	(1 67E-02)
B1L577 WE	1.00	(4.89E-02)	(5.05E-02)	<5.01E-01	(2.41E-02)	(2.44E-03)	<5.01E-01	1.12E+01	<2.50E-01	<2.50E-01	(4.55E-03)	<2.50E-01	(3.51E-02)	(4.47E+00)	(7 23E-02)	4.07E+00	(2.32E-03)	<2.50E-01
B1L582 WE	1.00	(3.89E-02)	(7.93E-02)	<5.00E-01	(3.31E-02)	(1.84E-03)	<5.00E-01	1.30E+01	<2.50E-01	<2.50E-01	(3.83E-03)	<2.50E-01	(2.39E-02)	(5.30E+00)	(6.95E-02)	4.63E+00	(5.55E-04)	(2.73E-02)
B1L587 WE	1.00	(3.25E-02)	<1.00E+00	<5.00E-01	(3.50E-02)	(1.28E-03)	(3.25E-02)	1.44E+01	<2.50E-01	(1 62E-03)	(3.70E-02)	(7.63E-02)	(3.80E-02)	(5 87E+00)	(7.31E-02)	5.25E+00	4.41E-01	(3 10E-02)
B1L592 WE	1.00	(3.10E-02)	(2.08E-01)	<5.00E-01	(2.94E-02)	(9.13E-04)	(1 55E-02)	1.52E+01	<2.50E-01	<2.50E-01	(2.40E-03)	<2.50E-01	(7 34E-01)	(4.92E+00)	(8.35E-02)	5.57E+00	(3.23E-04)	(1.29E-02)
B1L596 WE	1.00	(4.93E-02)	<1.00E+00	<5.00E-01	(1.64E-02)	(6.39E-04)	<5.00E-01	9.48E+00	<2.50E-01	<2.50E-01	(7.96E-04)	<2.50E-01	(8.94E-02)	(4.76E+00)	(8.40E-02)	3 14E+00	(1 35E-03)	(2.97E-02)
B1L5B1 WE	1.00	(7 74E-03)	(2.06E-01)	<5.00E-01	7.55E-02	(4.21E-04)	<5 00E-01	5.91E+01	<2.50E-01	<2.50E-01	(3.44E-03)	<2.50E-01	(3.23E-01)	(7.28E+00)	(7.71E-02)	1.92E+01	<2.50E-02	(4.08E-02)
B1L5B1 Dup 3 WE	1.00	(9.65E-03)	(2.85E-02)	<5.00E-01	6.45E-02	(3.54E-04)	<5.00E-01	6.00E+01	<2.50E-01	<2.50E-01	(4.39E-03)	<2.50E-01	(2.20E-02)	(7.42E+00)	(8.51E-02)	1 96E+01	<2.50E-02	(3.99E-02)
B1L5B3 WE	1.00	(2.36E-02)	(4.48E-02)	1.44E+00	1.19E-01	(2.64E-04)	<5.00E-01	5.02E+01	<2.50E-01	<2.50E-01	(4.43E-03)	<2.50E-01	(5.38E-02)	(4.20E+00)	(8.57E-02)	1.90E+01	<2.50E-02	(3.63E-02)
B1L5B5 WE	1.00	(3.29E-02)	(1.62E-01)	1.54E+00	1.58E-01	(7 48E-03)	<5.00E-01	5.59E+01	(3.91E-04)	<2.50E-01	(5 18E-03)	<2.50E-01	(7.36E-01)	(4.28E+00)	(6.86E-02)	2.30E+01	(6.14E-03)	(8.91E-02)
B1L5B7 WE	1.01	(1.98E-02)	(7.30E-02)	1.13E+00	1.10E-01	(3.95E-03)	(4.94E-03)	4.08E+01	<2.52E-01	<2.52E-01	(2.83E-03)	<2.52E-01	(2.54E-02)	(4.95E+00)	(6.93E-02)	2.05E+01	(5.15E-03)	(7 22E-02)
B1L5C0 WE	1 00	(5.00E-02)	(1.23E-01)	<5.00E-01	(3.22E-02)	(2.97E-03)	<5 00E-01	6.96E+00	<2.50E-01	<2.50E-01	(8.58E-03)	<2.50E-01	(4 13E-02)	(5.83E+00)	(6.97E-02)	3.55E+00	(9.12E-03)	(4.83E-02)
B1L5C4 WE	1.00	(4.84E-02)	(6.24E-02)	<5.00E-01	(3.08E-02)	(2.35E-03)	<5.00E-01	9.72E+00	<2.50E-01	<2.50E-01	(2.06E-03)	<2.50E-01	(1.07E-01)	(5.03E+00)	(5.99E-02)	2 70E+00	(8.52E-03)	(4.85E-02)

Calculated concentrations in soil based upon ICP-OES analysis of contact water

Sample ID	Dilution Factor	Ni ug/g soil	P ug/g soil	Pb ug/g soil	Se ug/g soil	Sr ug/g soil	Tl ug/g soil	V ug/g soil	Zn ug/g soil	Na ug/g soil	Si ug/g soil	S ug/g soil	Ti ug/g soil	Zr ug/g soil	Ag ug/g soil	Re ug/g soil	Sb ug/g soil
Water Extracts																	
E-102																	
B1L1L1 WE	1.00	(3.17E-02)	(1.39E-01)	(1.80E-02)	<5 00E+00	5.64E-02	(2.66E-02)	<2.50E-01	(5.02E-02)	4.92E+01	(3.09E+00)	(1.22E+01)	(3.08E-03)	(4.93E-03)	(1.82E-02)	(1.97E-02)	<5.00E+00
A-4																	
B1L4Y7 WE	1 00	(1.71E-02)	(9.28E-02)	(2.73E-02)	(3.66E-02)	(1.74E-02)	(1.87E-02)	(4.05E-03)	(5.90E-02)	1.70E+01	1.03E+01	(1.58E+00)	(1.78E-02)	(2 72E-03)	(1.34E-02)	(2.06E-02)	<5.00E+00
B1L500 WE	1.00	(1.74E-02)	(1 04E-01)	<2.50E-01	<5.00E+00	(2.23E-02)	(6.70E-03)	(5.08E-04)	(4.75E-02)	1.25E+01	5.34E+00	(2.37E+00)	(5.01E-03)	(1.53E-05)	(1 09E-02)	<5.00E-01	<5.00E+00
B1L504 WE	1.00	(1.05E-02)	1.46E+00	<2.50E-01	<5.00E+00	(1.81E-02)	(5.89E-03)	<2.50E-01	(3.89E-02)	7 36E+00	(4.90E+00)	(8 16E-01)	(2.09E-03)	(6.26E-04)	(8 70E-03)	(1.59E-02)	<5.00E+00
B1M5X1 WE	1.00	(8.89E-03)	5.81E+01	<2.50E-01	<5.00E+00	1.80E-01	<5.00E-01	<2.50E-01	(8.77E-02)	2.57E+01	5.63E+00	8.08E+01	<5.00E-02	<5.00E-02	(6.20E-03)	(9.93E-03)	<5.00E+00
B1L512 WE	1.00	(2.96E-03)	9.75E+00	(2.91E-02)	(9.81E-03)	(1.80E-02)	<5.00E-01	(2.65E-03)	(3.98E-02)	8.26E+00	(4 47E+00)	(3.48E+00)	(2 10E-03)	<5.00E-02	(7.73E-03)	(6.40E-03)	<5.00E+00
B1L517 WE	1.00	(1.07E-02)	2.60E+00	(1.93E-02)	<5.00E+00	(2.48E-02)	(8.71E-03)	(5.05E-03)	(3.75E-02)	8 15E+00	(4.22E+00)	(3.27E+00)	<5.00E-02	(4.95E-04)	(5.28E-03)	(2.32E-02)	<5.00E+00
B1L519 WE	1.00	<2.50E-01	1.44E+00	<2.50E-01	<5.00E+00	(2 72E-02)	(2.96E-02)	(8.88E-03)	(3.05E-02)	9 00E+00	(4.15E+00)	(3.91E+00)	(5.08E-04)	<5.00E-02	(1.01E-02)	(2.04E-03)	<5.00E+00
B1L524 WE	1.00	<2.50E-01	(1.10E+00)	(4.88E-03)	(1 17E-01)	(4.15E-02)	<5.00E-01	<2.50E-01	(4.81E-02)	9 78E+00	5.01E+00	(4.27E+00)	<5.00E-02	<5.00E-02	(5.06E-03)	(1.42E-02)	<5.00E+00
B1L528 WE	1.00	(8.17E-04)	(8.71E-01)	<2.51E-01	<5.02E+00	5.64E-02	(1.97E-02)	<2.51E-01	(7.16E-02)	1.15E+01	5.31E+00	(1.23E+01)	<5.02E-02	<5.02E-02	(2.45E-03)	(2 46E-02)	<5.02E+00
B1L531 WE	1.00	(2.22E-02)	(4.24E-01)	(8.73E-03)	<5.00E+00	5.82E-02	(3.89E-02)	<2.50E-01	(4.44E-02)	8.82E+00	5.21E+00	(9.58E+00)	(1.65E-03)	(3.36E-03)	(1.51E-02)	(2.10E-02)	<5.00E+00
B1L531 Dup 1 WE	1 00	(8.47E-03)	(3.30E-01)	<2.50E-01	(1.20E-01)	5.07E-02	(3.55E-02)	<2.50E-01	(4.30E-02)	8.31E+00	(4.98E+00)	(7.95E+00)	(5.28E-05)	(1.26E-03)	(9.09E-03)	(4.50E-02)	<5.00E+00
B1L536 WE	1.00	(1.58E-02)	(3.95E-01)	<2.50E-01	<5.00E+00	(4.99E-02)	(1.49E-02)	<2.50E-01	(5.10E-02)	3.96E+00	(4.65E+00)	(6.59E+00)	(5.74E-05)	(1.60E-03)	(9.05E-03)	<5.00E-01	<5.00E+00
B1L540 WE	1.00	(1.79E-02)	(2.61E-01)	(1.73E-02)	<5.00E+00	(3.87E-02)	(2.63E-02)	(1.19E-03)	(4.13E-02)	9.49E+00	5.37E+00	(4.46E+00)	<5.00E-02	(1.61E-03)	(9.50E-03)	(3.32E-03)	<5.00E+00
B1L543 WE	1.00	(9.54E-03)	(2.84E-01)	(7 55E-03)	<5.00E+00	(4 17E-02)	(1.75E-02)	(3.38E-03)	(2.73E-02)	9.73E+00	5.45E+00	(3.38E+00)	<5.00E-02	(2.72E-03)	(5.86E-03)	<5.00E-01	(2.23E-02)
B1L547 WE	1.00	(8.88E-03)	(2.61E-01)	<2.50E-01	<5.00E+00	(3.74E-02)	(7.53E-02)	<2.50E-01	(4.02E-02)	9.86E+00	5.57E+00	(6.74E+00)	<5.00E-02	(1.30E-03)	(7.59E-03)	(5.80E-03)	<5.00E+00
B1L553 WE	1.00	(5.07E-03)	(2.27E-01)	<2.50E-01	<5.00E+00	(3.73E-02)	(1.59E-02)	(1.09E-04)	(4.38E-02)	5.94E+00	5.08E+00	(2.14E+00)	<5.00E-02	(7.05E-04)	(8.20E-03)	<5.00E-01	(5.90E-02)
B1L553 Dup 2 WE	1 00	(8.47E-03)	(3.06E-01)	(1.16E-02)	<5.00E+00	(3.12E-02)	(3.03E-02)	<2.50E-01	(4.25E-02)	5.48E+00	(4.45E+00)	(2.22E+00)	<5.00E-02	<5.00E-02	(5.54E-03)	(2.38E-02)	<5.00E+00
B1L557 WE	1.09	<2.73E-01	(2.89E-01)	(5.69E-03)	<5.46E+00	(3.59E-02)	(1.89E-02)	<2.73E-01	(3.94E-02)	2.88E+00	(5.42E+00)	(2.25E+00)	<5.46E-02	(5.07E-04)	(3.86E-03)	(1.27E-02)	<5.46E+00
B1L562 WE	1.52	<3.81E-01	(3.03E-01)	(6.06E-02)	<7.62E+00	(4.62E-02)	(7.32E-02)	(8.81E-03)	(1.45E-02)	4.11E+00	8.17E+00	(1.86E+00)	(2.11E-04)	<7.62E-02	(4.97E-03)	(4.22E-02)	(9.04E-02)
B1L568 WE	1.00	(1.56E-02)	(2.59E-01)	<2.50E-01	<5.00E+00	5.30E-02	(1.76E-02)	<2.50E-01	(4.14E-02)	4 19E+00	5.60E+00	(1.79E+00)	(2.38E-03)	(3 10E-03)	(1.29E-02)	<5.00E-01	<5.00E+00
B1L570 WE	1.00	(1.28E-02)	(2.32E-01)	(2.31E-02)	<5.01E+00	5.31E-02	(2.91E-02)	<2.50E-01	(4.88E-02)	5.68E+00	5.34E+00	(1 53E+00)	(2.12E-03)	(1.67E-03)	(7.56E-03)	(5.18E-03)	(4.56E-02)
B1L577 WE	1.00	(2.98E-03)	(2.55E-01)	(2.55E-02)	<5.01E+00	6.40E-02	<5.01E-01	<2.50E-01	(4.21E-02)	4.19E+00	(4.86E+00)	(1.23E+00)	<5.01E-02	(3.77E-04)	(1 12E-02)	(9.67E-03)	<5.01E+00
B1L582 WE	1 00	(1.08E-02)	(2.29E-01)	(2.70E-02)	(7.09E-02)	7.88E-02	(1.10E-03)	<2.50E-01	(5.31E-02)	4.58E+00	(4.94E+00)	(9.06E-01)	<5.00E-02	(1.90E-03)	(1.10E-02)	(2.64E-02)	(1 86E-02)
B1L587 WE	1.00	(4.12E-02)	(1.99E-01)	<2.50E-01	<5.00E+00	9.17E-02	<5.00E-01	<2.50E-01	(5.58E-02)	5.29E+00	5.42E+00	(1.42E+00)	<5.00E-02	(4.07E-03)	<2.50E-01	(1.91E-02)	<5.00E+00
B1L592 WE	1.00	(4.08E-03)	(2.40E-01)	<2.50E-01	(2.54E-02)	8.95E-02	<5.00E-01	<2.50E-01	(4.73E-02)	4.99E+00	(5.00E+00)	(1.34E+00)	<5.00E-02	(2.40E-04)	(4.23E-03)	(6.74E-03)	<5.00E+00
B1L596 WE	1.00	(4.39E-03)	(2.58E-01)	<2.50E-01	(4.97E-02)	(4.58E-02)	(6.88E-03)	<2.50E-01	(3.70E-02)	8.67E+00	5.48E+00	(1.65E+00)	<5.00E-02	(6.01E-04)	(6.23E-03)	(9.12E-03)	<5.00E+00
B1L5B1 WE	1.00	(7.63E-03)	(3.43E-01)	<2.50E-01	(4.23E-01)	2.94E-01	(2.90E-02)	<2.50E-01	(1.50E-01)	7.33E+00	9.50E+00	(3.87E+00)	<5.00E-02	<5.00E-02	(3.75E-03)	(1.01E-02)	<5.00E+00
B1L5B1 Dup 3 WE	1.00	(5.20E-03)	(2.98E-01)	<2.50E-01	(5.45E-01)	2.98E-01	(3.56E-02)	<2.50E-01	(7.40E-02)	7.44E+00	9.36E+00	(3.73E+00)	<5.00E-02	(3.53E-05)	(4.38E-03)	(3.91E-02)	<5.00E+00
B1L5B3 WE	1.00	(1.06E-02)	(2.53E-01)	<2.50E-01	(1.33E-01)	3.67E-01	(2.45E-02)	<2.50E-01	(1.07E-01)	1.79E+01	9.88E+00	(7.02E+00)	<5.00E-02	<5.00E-02	(6.04E-03)	(2.54E-02)	<5.00E+00
B1L5B5 WE	1.00	(2.34E-02)	(2.93E-01)	<2.50E-01	(4.71E-01)	4.43E-01	<5.00E-01	<2.50E-01	(1.24E-01)	3.44E+01	9.25E+00	(1.09E+01)	<5.00E-02	(4.90E-03)	(1.65E-02)	(3.70E-02)	<5.00E+00
B1L5B7 WE	1.01	(2.38E-02)	(3.10E-01)	<2.52E-01	(4.86E-01)	3.42E-01	(2.42E-02)	<2.52E-01	(8.98E-02)	3.42E+01	9.93E+00	(9.65E+00)	<5.04E-02	(1.64E-03)	(1.12E-02)	(4.52E-04)	<5.04E+00
B1L5C0 WE	1.00	(1.37E-02)	(1.19E-01)	(1.56E-02)	(7.11E-02)	5.36E-02	(5.21E-02)	<2.50E-01	(4.31E-02)	1.80E+01	5.07E+00	(7.11E+00)	(1.05E-03)	(1 03E-03)	(9.98E-03)	<5.00E-01	<5.00E+00
B1L5C4 WE	1.00	(1.10E-02)	(1.69E-01)	(1.37E-02)	<5.00E+00	6.02E-02	(6.12E-02)	(7.46E-03)	(5.31E-02)	1.14E+01	(4.26E+00)	(5.03E+00)	(2.33E-05)	(1.03E-03)	(8.67E-03)	<5.00E-01	<5.00E+00

Calculated concentrations in soil based upon ICP-OES analysis of contact Acid

Sample ID	acid:soil ratio (ml/g)	Al ug/g soil	As ug/g soil	B ug/g soil	Ba ug/g soil	Be ug/g soil	Bi ug/g soil	Ca ug/g soil	Cd ug/g soil	Co ug/g soil	Cr ug/g soil	Cu ug/g soil	Fe ug/g soil	K ug/g soil	Li ug/g soil	Mg ug/g soil	Mn ug/g soil	Mo ug/g soil
ACID EXTRACTS																		
E-102																		
B1L1L1 AE	4.60	6.23E+03	<4.60E+01	(2.63E+00)	6.30E+01	(7 16E-01)	<2.30E+01	7.64E+03	<2.30E+00	(7.51E+00)	2.43E+01	1.47E+01	2.17E+04	1 15E+03	(7.19E+00)	4.43E+03	3.69E+02	(5.70E+00)
A-4																		
B1L4Y7 AE	5.36	5.14E+03	<5.36E+01	(1.47E+00)	5.90E+01	(4.25E-01)	<2.68E+01	4.78E+03	<2.68E+00	(5.76E+00)	7.02E+00	8.60E+00	1.08E+04	(1.08E+03)	(6.55E+00)	3.97E+03	2.82E+02	<1.34E+01
B1L500 AE	5.16	6.35E+03	<5.16E+01	<5 16E+01	5.76E+01	(3.64E-01)	<2.58E+01	1.04E+04	<2.58E+00	(5.89E+00)	1.04E+01	9.35E+00	1.34E+04	(1.02E+03)	(7.35E+00)	5.09E+03	2.69E+02	<1.29E+01
B1L504 AE	5.49	6.18E+03	<5.49E+01	<5.49E+01	5.81E+01	(3.22E-01)	<2.74E+01	9.49E+03	<2.74E+00	(5.97E+00)	9.43E+00	8.69E+00	1.30E+04	(1.06E+03)	(7 76E+00)	5 19E+03	2 78E+02	<1.37E+01
B1M5X1 AE	5.30	6.64E+03	<5.30E+01	<5.30E+01	6.09E+01	(3.55E-01)	<2.65E+01	8.66E+03	<2.65E+00	(7.33E+00)	1.18E+01	1.18E+01	1.27E+04	1.50E+03	(7.69E+00)	5.15E+03	2.73E+02	<1.33E+01
B1L512 AE	5.21	5.20E+03	<5.21E+01	<5.21E+01	5.55E+01	(2.56E-01)	<2.61E+01	8.96E+03	<2.61E+00	(5.50E+00)	7.30E+00	7.68E+00	1.11E+04	(1.02E+03)	(6.56E+00)	4.27E+03	2.47E+02	(3.05E-01)
B1L517 AE	5.62	7.10E+03	<5.62E+01	<5.62E+01	6.52E+01	(6.72E-01)	<2.81E+01	9.80E+03	<2.81E+00	(7 51E+00)	1.21E+01	9.43E+00	1.50E+04	(1.18E+03)	(8.50E+00)	5 73E+03	3.11E+02	(6.58E-01)
B1L519 AE	5.28	6.86E+03	<5.28E+01	<5.28E+01	6.70E+01	(4.79E-01)	<2.64E+01	1.01E+04	<2.64E+00	(7.06E+00)	1.11E+01	1 01E+01	1.40E+04	(1 21E+03)	(7.94E+00)	5.45E+03	2.87E+02	(3.56E-01)
B1L524 AE	5 17	5 27E+03	<5 17E+01	<5.17E+01	6 32E+01	(3.55E-01)	<2.59E+01	7.70E+03	<2.59E+00	(5.38E+00)	7 99E+00	6.82E+00	1.02E+04	(1.26E+03)	(6.59E+00)	4.21E+03	2.58E+02	<1.29E+01
B1L528 AE	5.23	5.35E+03	<5.23E+01	<5.23E+01	5.95E+01	(3.19E-01)	<2.62E+01	9.04E+03	<2.62E+00	(5.42E+00)	8.71E+00	8.91E+00	1.19E+04	(9.97E+02)	(6 16E+00)	4.61E+03	2.66E+02	<1.31E+01
B1L531 AE	5.32	6 73E+03	<5.32E+01	<5.32E+01	6.70E+01	(3.43E-01)	<2.66E+01	8.80E+03	<2.66E+00	(6.19E+00)	9.68E+00	7.79E+00	1.41E+04	(1.27E+03)	(7.82E+00)	4.98E+03	2 77E+02	<1.33E+01
B1L531 Dup 1 AE	5.54	6.43E+03	<5.54E+01	<5.54E+01	6.39E+01	(3.02E-01)	<2.77E+01	8.84E+03	<2.77E+00	(6.00E+00)	9.32E+00	8.12E+00	1.34E+04	(1.27E+03)	(7 94E+00)	4.85E+03	2.69E+02	<1.39E+01
B1L536 AE	5.37	4.49E+03	<5.37E+01	<5.37E+01	5.69E+01	(2.25E-01)	<2 69E+01	8.51E+03	<2.69E+00	(4.89E+00)	6 16E+00	7.16E+00	1.01E+04	(9.55E+02)	(4.96E+00)	3.80E+03	2.24E+02	<1.34E+01
B1L540 AE	5.44	4.12E+03	<5.44E+01	<5.44E+01	5.45E+01	(2.13E-01)	<2 72E+01	7.79E+03	<2.72E+00	(4 94E+00)	6.37E+00	7.09E+00	9.01E+03	(9.80E+02)	(4.61E+00)	3.57E+03	2.31E+02	<1 36E+01
B1L543 AE	5.27	6.90E+03	<5.27E+01	<5.27E+01	7 39E+01	(3.06E-01)	<2.63E+01	9.50E+03	<2.63E+00	(7.02E+00)	1.03E+01	8.09E+00	1.36E+04	1.74E+03	(9.01E+00)	5.47E+03	3.28E+02	<1.32E+01
B1L547 AE	5.21	6.48E+03	<5.21E+01	<5.21E+01	7.30E+01	(2.99E-01)	<2.61E+01	1.00E+04	<2.61E+00	(6.07E+00)	9.79E+00	9.09E+00	1.32E+04	1.33E+03	(7.27E+00)	5.14E+03	3.32E+02	<1.30E+01
B1L553 AE	5.27	4.23E+03	(4 87E-01)	<5.27E+01	5.33E+01	(5.21E-01)	<2.63E+01	6.61E+03	<2.63E+00	(5.22E+00)	8.67E+00	8.16E+00	8.58E+03	(9.33E+02)	(4.92E+00)	3.67E+03	2.30E+02	<1 32E+01
B1L553 Dup 2 AE	5.93	5.05E+03	<5 93E+01	<5.93E+01	5 73E+01	(4.30E-01)	<2.97E+01	7.29E+03	<2.97E+00	(5.58E+00)	1 01E+01	9.04E+00	1.01E+04	(1.04E+03)	(5.34E+00)	4.34E+03	2.51E+02	(3.40E-01)

B1L557 AE	5.38	6 15E+03	<5.38E+01	<5.38E+01	6.07E+01	(3.62E-01)	<2.69E+01	6.89E+03	<2.69E+00	(6 71E+00)	1 19E+01	9.60E+00	1.28E+04	(1 02E+03)	(6.51E+00)	5 02E+03	2.54E+02	<1.34E+01
B1L562 AE	7 00	6.02E+03	<7.00E+01	<7.00E+01	5.82E+01	(3.32E-01)	<3.50E+01	6.35E+03	<3.50E+00	(6.85E+00)	1.20E+01	9.73E+00	1.32E+04	(9.96E+02)	(5.89E+00)	4 84E+03	2.67E+02	<1 75E+01
B1L568 AE	5.28	6 15E+03	<5.28E+01	<5.28E+01	5.89E+01	(2.82E-01)	<2.64E+01	6.93E+03	<2.64E+00	(6.93E+00)	1.16E+01	1 01E+01	1.39E+04	(9 73E+02)	(6.08E+00)	4.91E+03	2.56E+02	<1.32E+01
B1L570 AE	5.31	5 42E+03	<5.31E+01	<5.31E+01	5.29E+01	(2.27E-01)	<2.66E+01	6.27E+03	<2.66E+00	(5.44E+00)	1.09E+01	9.06E+00	1.11E+04	(1 01E+03)	(5.85E+00)	4.47E+03	2.53E+02	<1 33E+01
B1L577 AE	5.39	5.56E+03	<5.39E+01	<5.39E+01	6.18E+01	(2.20E-01)	<2.70E+01	6.57E+03	<2 70E+00	(6.28E+00)	1.17E+01	1 01E+01	1.27E+04	(1 00E+03)	(5.64E+00)	4.57E+03	2.50E+02	<1.35E+01
B1L582 AE	5.29	8 16E+03	<5.29E+01	<5.29E+01	7.10E+01	(2.96E-01)	<2.64E+01	8.30E+03	<2.64E+00	(7 65E+00)	1.72E+01	9.97E+00	1.53E+04	(1.30E+03)	(7 45E+00)	6.02E+03	3.11E+02	<1 32E+01
B1L587 AE	5.31	7 67E+03	<5.31E+01	<5.31E+01	6 72E+01	(2.69E-01)	<2.66E+01	7.84E+03	<2.66E+00	(7.35E+00)	1.72E+01	9.92E+00	1.48E+04	(1.22E+03)	(7 08E+00)	5.82E+03	2.95E+02	<1.33E+01
B1L592 AE	5.36	6.30E+03	<5.36E+01	<5.36E+01	6.88E+01	(2.27E-01)	<2.68E+01	6.84E+03	<2.68E+00	(6.13E+00)	1.29E+01	9.20E+00	1.20E+04	(1.10E+03)	(6.38E+00)	5.12E+03	2.71E+02	<1 34E+01
B1L596 AE	5.22	5.48E+03	<5.22E+01	<5.22E+01	6.17E+01	(5.67E-01)	<2.61E+01	6.93E+03	<2 61E+00	(6.11E+00)	1.17E+01	1.07E+01	1.31E+04	(1.01E+03)	(5.91E+00)	4.15E+03	2.62E+02	(1.48E+00)
B1L5B1 AE	5.18	1 28E+04	<5 18E+01	<5.18E+01	1.04E+02	(6 70E-01)	<2.59E+01	1.31E+04	<2.59E+00	(1.11E+01)	2.31E+01	1 88E+01	1 98E+04	2.26E+03	(1.20E+01)	7.59E+03	4.97E+02	<1.29E+01
B1L5B1 Dup 3 AE	6 19	1.35E+04	<6.19E+01	<6 19E+01	1.10E+02	(6.39E-01)	<3.09E+01	1.30E+04	<3.09E+00	(1.15E+01)	2.45E+01	2.04E+01	2.12E+04	2.50E+03	(1.30E+01)	8.18E+03	5.53E+02	<1.55E+01
B1L5B3 AE	5.41	1.53E+04	<5.41E+01	<5.41E+01	1.50E+02	(7.22E-01)	<2.70E+01	1 54E+04	<2.70E+00	(1.34E+01)	3.06E+01	2.83E+01	2.36E+04	2.87E+03	(1.51E+01)	1.00E+04	5.07E+02	<1.35E+01
B1L5B5 AE	5.52	1 34E+04	<5.52E+01	<5.52E+01	1.87E+02	(6.94E-01)	<2.76E+01	2.18E+04	<2 76E+00	1.44E+01	2.94E+01	3.26E+01	2.59E+04	2.23E+03	(1.08E+01)	1 02E+04	7.26E+02	<1.38E+01
B1L5B7 AE	5.30	2.29E+04	<5.30E+01	<5.30E+01	1.97E+02	(6.61E-01)	<2.65E+01	1.24E+04	<2.65E+00	1 74E+01	5.06E+01	4.02E+01	3.46E+04	3.65E+03	(2.24E+01)	1.36E+04	5.89E+02	<1.32E+01
B1L5C0 AE	4.91	6.53E+03	<4.91E+01	<4.91E+01	9.01E+01	(2.66E-01)	<2.46E+01	4.47E+03	<2.46E+00	(7.90E+00)	2.23E+01	1.58E+01	1.65E+04	(9.61E+02)	(6.27E+00)	4.21E+03	3.05E+02	(2.20E+00)
B1L5C4 AE	5.01	6.94E+03	<5.01E+01	<5.01E+01	9.71E+01	(2.77E-01)	<2.51E+01	5.50E+03	<2.51E+00	(9.39E+00)	2.35E+01	1.72E+01	1.79E+04	(8.90E+02)	(5.32E+00)	4.40E+03	2.91E+02	(4 08E+00)

Calculated concentrations in soil based upon ICP-OES analysis of contact Acid

Sample ID	acid:soil ratio (ml/g)	Ni ug/g soil	P ug/g soil	Pb ug/g soil	Se ug/g soil	Sr ug/g soil	Tl ug/g soil	V ug/g soil	Zn ug/g soil	Na ug/g soil	Si ug/g soil	S ug/g soil	Ti ug/g soil	Zr ug/g soil	Ag ug/g soil	Re ug/g soil	Sb ug/g soil
ACID EXTRACTS																	
B-102																	
B1L1L1 AE	4.60	1.51E+01	5.30E+02	<1 15E+01	<2.30E+02	2.78E+01	<4.60E+01	(1.08E+01)	3.51E+01	3.28E+02	<2.30E+02	<4.60E+02	6.22E+02	8.47E+00	<4.60E+00	<1.15E+01	<4.60E+01
A-4																	
B1L4Y7 AE	5.36	8.91E+00	5.46E+02	<1.34E+01	<2.68E+02	2.49E+01	<5.36E+01	(2.98E+00)	2.70E+01	(1.81E+02)	<2.68E+02	<5.36E+02	2.97E+02	6.69E+00	<5.36E+00	<1.34E+01	<5.36E+01
B1L500 AE	5.16	1.16E+01	4.97E+02	<1.29E+01	(7.87E+00)	3.50E+01	<5.16E+01	(8.12E+00)	3.20E+01	(1.80E+02)	<2.58E+02	<5.16E+02	5.24E+02	6.68E+00	<5.16E+00	<1.29E+01	<5.16E+01
B1L504 AE	5.49	1.04E+01	5.07E+02	<1 37E+01	(2.42E+00)	2.74E+01	<5.49E+01	(5.18E+00)	3.02E+01	(1.36E+02)	<2.74E+02	<5.49E+02	4.91E+02	5.64E+00	<5.49E+00	<1.37E+01	<5.49E+01
B1M5X1 AE	5.30	1.41E+01	8.78E+02	(1.30E-01)	(1.12E+01)	3.45E+01	<5.30E+01	(3.60E+00)	3.60E+01	(1.27E+02)	<2.65E+02	(9.50E+01)	3.41E+02	3.80E+00	<5.30E+00	<1.33E+01	(2.51E+00)
B1L512 AE	5.21	9.29E+00	4.69E+02	<1.30E+01	(1.87E+01)	2.81E+01	<5.21E+01	(4.21E+00)	2.66E+01	(1.23E+02)	<2.61E+02	<5.21E+02	3.80E+02	5.37E+00	<5.21E+00	(1.27E-01)	<5.21E+01
B1L517 AE	5.62	1.46E+01	4.98E+02	<1.41E+01	(2.08E+00)	3.26E+01	<5.62E+01	(8.67E+00)	3.39E+01	(1.76E+02)	(5.03E+01)	<5.62E+02	6.44E+02	6.76E+00	<5.62E+00	<1.41E+01	(1.30E+00)
B1L519 AE	5.28	1.27E+01	4.81E+02	<1.32E+01	<2.64E+02	3.31E+01	<5.28E+01	(6.94E+00)	3.24E+01	(1.48E+02)	<2.64E+02	<5.28E+02	5.81E+02	6.11E+00	<5.28E+00	<1.32E+01	<5.28E+01
B1L524 AE	5.17	9.40E+00	3.60E+02	<1 29E+01	(1.08E+01)	2.83E+01	<5.17E+01	(3.02E+00)	2.66E+01	(9.75E+01)	<2.59E+02	<5.17E+02	3.16E+02	4.37E+00	<5.17E+00	<1.29E+01	<5.17E+01
B1L528 AE	5.23	1 08E+01	5.37E+02	<1.31E+01	(9.45E+00)	2.67E+01	<5.23E+01	(2.88E+00)	2.84E+01	(1.20E+02)	<2.62E+02	<5.23E+02	3.22E+02	6.04E+00	<5.23E+00	<1.31E+01	(1.53E-01)
B1L531 AE	5.32	8.69E+00	4.59E+02	<1.33E+01	<2.66E+02	3.04E+01	<5.32E+01	(1.08E+01)	3.34E+01	(1.65E+02)	<2.66E+02	<5.32E+02	6.82E+02	7.47E+00	<5.32E+00	<1.33E+01	<5.32E+01
B1L531 Dup 1 AE	5.54	9.39E+00	4.43E+02	<1.39E+01	<2.77E+02	2.94E+01	<5.54E+01	(9.57E+00)	3 15E+01	(1.58E+02)	(3.62E+01)	<5.54E+02	6.35E+02	6.78E+00	<5.54E+00	<1.39E+01	<5.54E+01
B1L536 AE	5.37	8.15E+00	4.46E+02	<1.34E+01	(1.78E+01)	3.05E+01	<5.37E+01	(2.37E+00)	2.32E+01	(9.38E+01)	<2.69E+02	<5.37E+02	2.90E+02	5.64E+00	<5.37E+00	<1.34E+01	(1.99E+00)
B1L540 AE	5.44	8.98E+00	4.61E+02	<1.36E+01	(2.42E+01)	2.69E+01	<5.44E+01	(1.46E+00)	2.09E+01	(1.11E+02)	<2.72E+02	<5.44E+02	2.13E+02	5.61E+00	<5.44E+00	<1.36E+01	<5.44E+01
B1L543 AE	5.27	1.10E+01	4.43E+02	<1.32E+01	(1.10E+01)	3.32E+01	<5.27E+01	(5.86E+00)	3.47E+01	(1.25E+02)	<2.63E+02	<5.27E+02	4.77E+02	5.75E+00	<5.27E+00	<1.32E+01	(5.74E-01)
B1L547 AE	5.21	1.12E+01	5.12E+02	<1.30E+01	(5.16E+00)	3.25E+01	<5.21E+01	(5.91E+00)	3.24E+01	(1.37E+02)	<2.61E+02	<5.21E+02	4.46E+02	7.03E+00	<5.21E+00	<1.30E+01	<5.21E+01
B1L553 AE	5.27	1.24E+01	4.63E+02	(4.71E-01)	(2.03E+01)	2.50E+01	<5.27E+01	(1.90E+00)	2.19E+01	(9.54E+01)	<2.63E+02	<5.27E+02	1.84E+02	3.77E+00	<5.27E+00	<1.32E+01	(6.32E-01)
B1L553 Dup 2 AE	5.93	1.36E+01	4.72E+02	<1.48E+01	(4.50E+00)	2.66E+01	<5.93E+01	(3.18E+00)	2.54E+01	(1.18E+02)	(1.60E+02)	<5.93E+02	2.50E+02	4 13E+00	<5.93E+00	<1.48E+01	<5.93E+01
B1L557 AE	5.38	1.53E+01	5.57E+02	<1.34E+01	<2.69E+02	2.93E+01	<5.38E+01	(9.46E+00)	2.80E+01	(1.35E+02)	<2.69E+02	<5.38E+02	5.28E+02	6.68E+00	<5.38E+00	<1.34E+01	<5.38E+01
B1L562 AE	7.00	1.46E+01	5.37E+02	<1.75E+01	<3.50E+02	2.73E+01	<7.00E+01	(1.12E+01)	2.80E+01	(1.64E+02)	(4.16E+01)	<7.00E+02	6.17E+02	6.89E+00	<7.00E+00	(1.56E-02)	<7.00E+01
B1L568 AE	5.28	1.39E+01	5 73E+02	<1.32E+01	<2.64E+02	3.01E+01	<5.28E+01	(1.34E+01)	2.89E+01	(1.70E+02)	<2.64E+02	<5.28E+02	6.78E+02	9.30E+00	<5.28E+00	<1.32E+01	<5.28E+01
B1L570 AE	5.31	1.44E+01	5.21E+02	<1.33E+01	<2.66E+02	2.69E+01	<5.31E+01	(6.16E+00)	2.61E+01	(1.29E+02)	<2.66E+02	<5.31E+02	3.25E+02	5.42E+00	<5.31E+00	<1.33E+01	<5.31E+01
B1L577 AE	5.39	1.33E+01	6.03E+02	<1.35E+01	<2.70E+02	2.65E+01	<5.39E+01	(9.44E+00)	2.70E+01	(1.47E+02)	<2.70E+02	<5.39E+02	4.70E+02	7.43E+00	<5.39E+00	<1.35E+01	(3.92E+00)
B1L582 AE	5.29	1.80E+01	4.91E+02	<1.32E+01	<2.64E+02	3.93E+01	<5.29E+01	(1 50E+01)	3.37E+01	(2.18E+02)	<2.64E+02	<5.29E+02	8.26E+02	6.67E+00	<5.29E+00	<1.32E+01	<5.29E+01
B1L587 AE	5.31	1 82E+01	5.11E+02	<1.33E+01	<2.66E+02	3.88E+01	<5.31E+01	(1.42E+01)	3.23E+01	(2.04E+02)	<2.66E+02	<5.31E+02	7.68E+02	6.51E+00	<5.31E+00	<1.33E+01	(5.04E-02)
B1L592 AE	5.36	1.66E+01	4 79E+02	<1.34E+01	(3.82E+00)	3.45E+01	<5.36E+01	(6.74E+00)	2.97E+01	(1.32E+02)	<2.68E+02	<5.36E+02	4.12E+02	4.95E+00	<5.36E+00	<1.34E+01	(5.38E-01)
B1L596 AE	5.22	1.12E+01	6 10E+02	<1.31E+01	<2.61E+02	3.04E+01	<5.22E+01	(8.72E+00)	2.83E+01	(1.65E+02)	<2.61E+02	<5.22E+02	4.51E+02	8 73E+00	<5.22E+00	<1.31E+01	<5.22E+01
B1L5B1 AE	5.18	2.51E+01	9.52E+02	<1.29E+01	<2.59E+02	5.73E+01	<5.18E+01	(1.75E+01)	5.33E+01	(2.09E+02)	<2.59E+02	<5.18E+02	7.35E+02	8.13E+00	<5.18E+00	<1.29E+01	<5.18E+01
B1L5B1 Dup 3 AE	6.19	2.70E+01	9.41E+02	<1.55E+01	<3.09E+02	5.82E+01	<6.19E+01	(1.77E+01)	5.72E+01	(2.15E+02)	(2.68E+01)	<6.19E+02	7.99E+02	8.10E+00	<6.19E+00	<1.55E+01	<6 19E+01
B1L5B3 AE	5.41	3.14E+01	9.08E+02	(2.89E+00)	<2 70E+02	7.07E+01	<5.41E+01	(1.64E+01)	7.29E+01	(1 95E+02)	<2.70E+02	<5.41E+02	5.43E+02	7.90E+00	<5.41E+00	<1.35E+01	<5.41E+01
B1L5B5 AE	5.52	3.05E+01	9.69E+02	(6.16E+00)	(2.90E-01)	8.10E+01	<5.52E+01	(1.77E+01)	7.83E+01	(1.89E+02)	<2.76E+02	<5.52E+02	3.48E+02	8.60E+00	<5.52E+00	<1.38E+01	<5.52E+01
B1L5B7 AE	5.30	4.31E+01	8.34E+02	(3.40E+00)	<2.65E+02	7.28E+01	<5.30E+01	3.32E+01	9.20E+01	4.56E+02	<2.65E+02	<5.30E+02	1.12E+03	1.10E+01	<5.30E+00	<1.32E+01	<5.30E+01
B1L5C0 AE	4.91	1.19E+01	6.04E+02	<1.23E+01	<2.46E+02	2.47E+01	<4.91E+01	(1.99E+01)	4.01E+01	3.52E+02	<2.46E+02	<4.91E+02	9.41E+02	1.26E+01	<4.91E+00	<1.23E+01	<4 91E+01
B1L5C4 AE	5.01	1 49E+01	7 81E+02	<1.25E+01	<2.51E+02	3.00E+01	<5.01E+01	(2.22E+01)	4.03E+01	4.02E+02	<2.51E+02	<5.01E+02	1.16E+03	1 86E+01	<5.01E+00	<1.25E+01	<5 01E+01

*Quality Control		Al	As	B	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	K	Li	Mg	Mn	Mo
PB-032007-1 WE		(1.85E+00)	<3.00E+02	(4 76E+01)	(4.45E+00)	<7.50E+00	<1.50E+02	(6.90E+01)	<7 50E+01	<7 50E+01	(7.34E-01)	(3.52E+00)	(7.00E+00)	(1.38E+02)	(2.81E+01)	(1.09E+01)	<7 50E+00	(5.91E+00)
PB-032007-2 WE		(1.88E-01)	(1 48E+01)	(4.43E+01)	(2.27E+00)	<7 50E+00	<1 50E+02	(7.21E+01)	<7.50E+01	<7 50E+01	(2.03E-01)	(4 03E+00)	(5.26E+00)	(3.29E+02)	(2.72E+01)	(1.17E+01)	<7.50E+00	(6.24E+00)
PB-032007-3 WE		(1 03E+00)	(2.03E+01)	(4.56E+01)	(2.87E+00)	<7.50E+00	<1.50E+02	(6.39E+01)	<7.50E+01	<7.50E+01	(1.11E+00)	(3.62E+00)	(4.22E+00)	(2.20E+02)	(2.67E+01)	(1 10E+01)	<7.50E+00	(4.43E-01)

*Quality Control		Ni	P	Pb	Se	Sr	Tl	V	Zn	Na	Si	S	Ti	Zr	Ag	Re	Sb
PB-032007-1 WE		(3.96E+00)	(2.17E+01)	(2.89E+00)	<1.50E+03	<1.50E+01	(2.21E+01)	(5.25E-01)	(5 19E+01)	(6.20E+01)	<1.50E+03	<3.00E+04	<1.50E+01	<1.50E+01	(1.70E+00)	(2.85E+00)	<1 50E+03
PB-032007-2 WE		(2.04E+00)	(8.60E-01)	(3.44E+00)	<1.50E+03	<1.50E+01	(1 32E+01)	(2.55E+00)	(4.22E+01)	(7.27E+01)	<1 50E+03	<3 00E+04	<1 50E+01	<1.50E+01	(1 87E+00)	(2.85E+00)	(1.32E+01)

HH-032007-3 WE		(2.25E+00)	<3.75E+02	(6.83E+00)	<1.50E+03	<1.50E+01	(7.64E+00)	<7.50E+01	(4.05E+01)	(5.76E+01)	<1.50E+03	<3.00E+04	<1.50E+01	<1.50E+01	(2.16E+00)	(1.23E+00)	<1.50E+03

ICP-OES Analysis B-102 and 216-A-4 WE samples
PNNL Technical Procedure PNNL-AGG-ICP-ABS rev 1
AG&G Batch ID. 1144
Date Samples Submitted: 3/26/07
Date Samples Analyzed: 3/26/07, 3/29/07
Samples Analyzed by: Steven R. Baum
Data Processed by: Steven R. Baum

R = radial mode
S = detector saturated
Dilution Value of 1 = no dilution

Input	Input	Calc
Sample ID	Spike µg/L	% Recovery
Al 396.153		
B1L500 WE	50	96
B1L519 WE	50	93
Al 394.401		
B1L500 WE	50	89
B1L519 WE	50	90
As 193.696		
B1L500 WE	50	96
B1L519 WE	50	107
B 208.957		
B1L500 WE	50	91
B1L519 WE	50	94
Ba 455.403 R		
B1L500 WE	25	95
B1L519 WE	25	92
Be 313.042		
B1L500 WE	25	99
B1L519 WE	25	98
Bi 223.061		
B1L500 WE	50	87
B1L519 WE	50	74
Ca 422.673 R		
B1L500 WE	50	96
B1L519 WE	50	102
Cd 228.802		
B1L500 WE	25	96
B1L519 WE	25	95
Co 228.616		
B1L500 WE	25	97
B1L519 WE	25	100
Cr 267.716		
B1L500 WE	12.5	101
B1L519 WE	12.5	97
Cu 324.752		
B1L500 WE	50	99

B1L519 WE	50	100
Fe 259.939		
B1L500 WE	50	100
B1L519 WE	50	89
Fe 273.955		
B1L500 WE	50	101
B1L519 WE	50	90
K 766.490R		
B1L500 WE	125	81
B1L519 WE	125	83
Li 610.362		
B1L500 WE	50	94
B1L519 WE	50	92
Li 670.784 R		
B1L500 WE	50	93
B1L519 WE	50	91
Mg 285.213		
B1L500 WE	50	99
B1L519 WE	50	99
Mn 257.610		
B1L500 WE	25	102
B1L519 WE	25	101
Mo 202.031		
B1L500 WE	50	96
B1L519 WE	50	90
Ni 231.604		
B1L500 WE	50	98
B1L519 WE	50	95
Ni 221.648		
B1L500 WE	50	97
B1L519 WE	50	98
P 213.617		
B1L500 WE	125	89
B1L519 WE	125	93
Pb 220.353		
B1L500 WE	50	102
B1L519 WE	50	88
Se 196.026		
B1L500 WE	50	106
B1L519 WE	50	70
Sr 421.552 R		
B1L500 WE	50	95
B1L519 WE	50	94
Ti 351.924		
B1L500 WE	50	99
B1L519 WE	50	101
Ti 190.801		
B1L500 WE	50	112

000019

B1L519 WB	50	67
V 290.880		
B1L500 WB	25	99
B1L519 WB	25	96
Zn 206.200		
B1L500 WB	25	101
B1L519 WB	25	97
Zn 213.857		
B1L500 WB	25	100
B1L519 WB	25	99
Na 589.592 R		
B1L500 WB	50	119
B1L519 WB	50	68
Si 251.611		
B1L500 WB	50	127
B1L519 WB	50	103
B 180.669		
B1L500 WB	100	46
B1L519 WB	100	134
Ti 334.940		
B1L500 WB	25	100
B1L519 WB	25	101
Ti 336.121		
B1L500 WB	25	101
B1L519 WB	25	100
Zr 343.823		
B1L500 WB	25	101
B1L519 WB	25	100
Ag 328.068		
B1L500 WB	50	99
B1L519 WB	50	99
Re 197.248		
B1L500 WB	50	101
B1L519 WB	50	105
Sb 206.836		
B1L500 WB	50	115
B1L519 WB	50	74

ICP-OES Analysis: E-102 and 216-A-4 WB dups & spikes
PNNL Technical Procedure: PNNL-AGG-ICP-AES rev. 1
AG&G Batch ID: 1144
Date Samples Submitted: 3/26/07
Date Samples Analyzed: 3/29/07
Samples Analyzed by: Steven R. Baum
Data Processed by: Steven R. Baum

EQL = Estimated Quantification Limit
R = Radial mode
S = detector saturated
CCV standards w/in ±10%

Instrument EQL:	5	5	50	50	5	5	25	25	5	12.5	2.5	10	50	50	1,250	100	100	10	2.5	50
Sample ID	Al 396 153	Al 394.401	As 193.696	B 208.957	Ba 455.403 R	Be 313.042	Bi 223.061	*Ca 422.673 R*	Cd 228.802	Co 228.616	Cr 267 716	Cu 324 752	Fe 259.939	Fe 273 955	*K 766.490R*	Li 610.362	Li 670.784 R	Mg 285.213	Mn 257 610	Mo 202.031

2% HNO3 Blank	-1.01	0 02	2.26	5.83	-0.15	0 16	4.10	0.08	0 02	0 92	-0 17	0.62	0.28	0.84	89 87	0.09	5.21	-0.06	-0 11	-1.73
500 ppb CCV-7 (58483-42)	478.27	461.98	476.02	495.15	246.57	256.29	466 74	480.72	243.58	254.83	125.21	508 72	505.56	515.81	1,175.82	483.69	492.99	490.23	260 16	490.64
5K ppb CCV-9 (58483-42)	5,051.13	5,051.81	5,053.31	5,051.93	2,555.88	2,571 58	4,629.28	5,207.21	2,445.66	2,541 11	1,265.37	5,213.97	5,042 73	5,107 10	12,846 41	5,099 22	5,250.71	5,079.04	2,591 05	4,945.53
2% HNO3 Blank	0.01	0.34	-8 40	25.28	0.00	0.21	5.28	3.50	-0.29	0.75	0.25	3 42	1.02	0.37	67.49	3.23	6.82	1 00	-0.12	-0.06
500 ppb CCV-7 (58483-42)	485.98	469.81	497.54	524.37	250.17	258 18	468.41	492.04	245.25	256.99	126.31	523.17	511 15	519 65	1,310 16	490.27	500 75	498.70	263 13	494.33
5K ppb CCV-9 (58483-42)	5,106.96	5,144.12	5,076.88	5,139.70	2,535.30	2,593.66	4,680.78	5,165.32	2,458.97	2,566.36	1,273.58	5,297.45	5,085.77	5,141.10	12,805.42	5,145 94	5,212.95	5,139.20	2,612.61	4,981.89
2% HNO3 Blank	-0.27	0 17	2.02	18.61	-0.15	0 17	1.77	3.00	-0.27	1.18	0.43	2.03	0 79	1 02	89 26	3.57	4 05	0.67	-0.13	0 80
500 ppb CCV-7 (58483-42)	491.55	471 14	498.09	526.08	251.46	257.32	477 40	487 50	244.59	257.66	126.80	523.69	511.52	521.34	1,296.59	486.33	502.14	501.34	264.13	495.16
5K ppb CCV-9 (58483-42)	5,153.47	5,129.48	5,121.52	5,174.75	2,576.89	2,622.16	4,679.77	5,248.12	2,459.53	2,559.38	1,274 73	5,325.14	5,109 00	5,138 15	12,967 89	5,169 17	5,298.06	5,162.35	2,626.57	5,025.37
2% HNO3 Blank	-0.69	0.39	0.21	16 76	-0.61	0.14	9 01	14.01	-0.29	1 24	-0 09	1.29	0.34	0.79	59.18	4.68	6.35	0.39	-0 19	1.46
500 ppb CCV-7 (58483-42)	492.63	474.05	508 43	515.07	248.16	252.20	474 79	489.43	240.32	251.97	123.96	526.02	510.34	510.55	1,251 63	479.37	494.52	501 64	263.13	489.26
5K ppb CCV-9 (58483-42)	5,160.52	5,152.68	5,047 10	5,131.53	2,508 12	2,595.34	4,708.28	5,115 08	2,451.22	2,561.09	1,272 46	5,339 50	5,093 16	5,131.24	12,614.30	5,191 10	5,147 40	5,161.32	2,619.55	4,981.40
2% HNO3 Blank	0.08	0.59	6.64	13.34	-0.47	0 14	6.15	8.82	-0 10	0.47	0.11	0.94	0.82	0.47	75 10	3.77	5.81	0.39	-0.23	-1 56
500 ppb CCV-7 (58483-42)	491.14	472.96	495.73	515.65	253.36	255.62	476.20	499.28	242.08	254.34	124.76	526.14	513.74	513.12	1,254.96	489.34	503.69	501.63	265 14	490.53
5K ppb CCV-9 (58483-42)	5,222.16	5,166 54	5,074.37	5,134.05	2,543.72	2,611.80	4,740.35	5,182.46	2,462.48	2,580.75	1,282 44	5,383.93	5,139.74	5,161.07	12,749.25	5,249.57	5,221.31	5,209.83	2,645.38	4,979.14
2% HNO3 Blank	0.99	1.06	4 78	24.32	0 07	0.72	6.54	12.44	0.05	1.60	0.21	3.75	1.76	1.59	54.65	5.64	7.66	1.08	0 16	0.40
500 ppb CCV-7 (58483-42)	494.79	475.90	518.03	524.66	253.66	257.00	475.45	509.27	241.08	255.88	125.90	530 42	515.06	516.88	1,260.19	489.67	501.65	503.91	265.71	494.67
5K ppb CCV-9 (58483-42)	5,258 41	5,164.05	5,084 30	5,137.14	2,584.69	2,623.96	4,741.79	5,272.28	2,459.25	2,586.26	1,283.65	5,414.69	5,168.52	5,162.05	12,905.72	5,278.31	5,294.25	5,226.79	2,661.62	4,998.92
2% HNO3 Blank	-0.16	-1.48	-7.28	15.38	-0.33	0.17	6.86	11.56	-0.22	-0.26	0.04	0.29	0.33	0 81	64 07	5.65	6.00	0.31	-0.23	0.10
500 ppb CCV-7 (58483-42)	495.66	473.70	506.75	518.04	250.56	258.84	480.06	508.51	241.99	255 12	125.69	528.68	515.54	514.88	1,254.12	493.12	500.39	503.10	266.04	492.21
5K ppb CCV-9 (58483-42)	5,218.94	5,170.96	5,032.12	5,121.85	2,572.51	2,579.59	4,761.07	5,223.81	2,442.16	2,572 72	1,279.37	5,366.57	5,110.60	5,137.09	12,708.36	5,247.58	5,260.21	5,177.90	2,633.48	4,966.21
2% HNO3 Blank	-0.86	0 71	5.56	16.23	-0.22	0.35	6.39	21.95	-0.26	1.08	0.08	0.63	1.00	1.01	39.37	6.62	7.07	0.28	-0.07	-1.38
500 ppb CCV-7 (58483-42)	498.93	475.80	511.12	518.52	259.11	262.12	485.03	504.52	242.27	257.59	126.80	532.52	517.52	517.43	1,259.58	506.39	515.89	505 66	267.62	497.65
5K ppb CCV-9 (58483-42)	5,279.08	5,189.28	5,083.30	5,136.74	2,587 08	2,582.91	4,781.14	5,231 86	2,443.70	2,585.20	1,281.51	5,423 71	5,141.88	5,141.13	12,724.90	5,305.87	5,302.20	5,219.46	2,651.74	4,985.96
2% HNO3 Blank	-0.82	1.06	6 19	16.14	-0.18	0.59	2.39	25.07	0.03	0.47	0.52	1.28	1 35	1 09	14 10	8 44	8.60	0.58	0.09	1.42
500 ppb CCV-7 (58483-42)	498.93	472.01	511.30	525.17	251.97	258.72	484.57	500.63	242.60	258 74	127.13	529.20	515.02	517.69	1,229.76	499.01	502.61	502.23	266.45	499 46
5K ppb CCV-9 (58483-42)	5,231 44	5,120.20	5,033.74	5,071.80	2,545.31	2,579.96	4,740.82	5,157.07	2,410.63	2,564.67	1,269.45	5,373.39	5,106.31	5,086.90	12,536.22	5,288.04	5,198.94	5,161.31	2,635.10	4,917.28
2% HNO3 Blank	-0.92	0.33	-0.57	10.89	0.11	0.23	8.56	17.92	-0.24	0.21	0.15	0.10	2.72	2 49	38.26	7 18	6.95	-0.02	-0.16	-1.55
500 ppb CCV-7 (58483-42)	503.01	474.68	497.27	517.36	259.82	259.60	479.16	516.90	239.76	256.18	126.09	533.50	518.77	514.66	1,292.71	501.49	518.38	506.09	268.39	492.24
5K ppb CCV-9 (58483-42)	5,220.32	5,169.38	5,015.99	5,094.64	2,630.11	2,585.03	4,779.20	5,338.82	2,419.16	2,568.96	1,271.70	5,373.29	5,108.28	5,093.24	12,959.99	5,262.97	5,394.93	5,159 66	2,637.97	4,932.32
2% HNO3 Blank	-1.14	0.32	4.63	9.38	-0 13	0.38	8.12	19.21	-0.19	0.78	0.00	1.05	0.95	0.24	38.77	9.73	6.31	-0.13	0.00	-0.32
500 ppb CCV-7 (58483-42)	507.60	478.78	492.91	512.51	261.87	260.53	488.24	520.72	240.83	257.71	126.74	539 00	520.54	517.04	1,267.26	507.50	523.46	509.43	269 13	496.09
5K ppb CCV-9 (58483-42)	5,304.45	5,183.76	5,080.04	5,161.27	2,662.04	2,629.31	4,829.19	5,371.25	2,428.55	2,590.61	1,285.21	5,469.11	5,185.21	5,123.94	13,024.65	5,357 33	5,463.98	5,249.63	2,677.91	5,007.21
2% HNO3 Blank	-0.97	-0.15	3.05	1.22	0.36	0.32	5.09	19.11	-0.55	0.02	0.04	0.11	0.52	0.08	24.00	6.71	7.34	0.23	-0.13	1.33
500 ppb CCV-7 (58483-42)	509.86	477.98	504.37	513.94	263.12	262.97	491.73	525.20	243.98	260.73	128.14	537.43	522.48	520.89	1,243.30	514.23	525.92	510.13	270.67	499.39
5K ppb CCV-9 (58483-42)	5,330.52	5,163.89	5,112.54	5,167.28	2,650.09	2,615.05	4,827.48	5,340.08	2,423.32	2,593.90	1,284.67	5,438.00	5,168.43	5,116.01	12,892.55	5,379.47	5,425.44	5,226.08	2,671.27	5,028.26
2% HNO3 Blank	-0.12	0.87	6.12	1.79	0.30	0.51	5.19	18.53	-0.20	0.35	0.11	0.06	0.86	0.59	-2.74	4.85	8.28	0 70	-0.01	0.61
500 ppb CCV-7 (58483-42)	512 79	478.58	514.50	512.99	267.62	262.28	493.28	518.19	241.75	260.91	128.05	538.88	522.96	519.81	1,229.41	506.34	531.87	511.24	271.47	499.28
5K ppb CCV-9 (58483-42)	5,315.84	5,144.65	5,098.00	5,147 18	2,650.63	2,638.85	4,832.08	5,329.79	2,423.16	2,594.79	1,287.34	5,433.91	5,176.02	5,126.63	12,897.23	5,383.90	5,391.97	5,220.91	2,677.69	5,010 05
2% HNO3 Blank	0.01	-0.34	10.84	0.59	0.62	0.29	0.90	17.42	-0.57	-0.52	0.11	-0.92	0.42	0.35	-59.44	4.54	7 45	0.13	-0.19	-0.76
500 ppb CCV-7 (58483-42)	508 10	474.91	512.98	509.82	262.13	263.58	490.92	518.80	243.37	261.82	128.95	535.51	523.13	522.42	1,282.96	509.58	518.88	508.88	271.38	502.98
5K ppb CCV-9 (58483-42)	5,245.53	5,177.69	5,087.44	5,106.87	2,670.02	2,610.02	4,852.11	5,338.70	2,420.17	2,599.16	1,288.20	5,348.93	5,097.51	5,124.81	12,942.08	5,314.51	5,411.20	5,148.27	2,638.39	4,966.21
2% HNO3 Blank	-1.27	-0.21	4.23	2.68	0 40	0.30	3.59	19.68	-0.55	-0.41	-0.15	-0.30	0.66	0.28	5.37	6.76	7.70	-0.13	-0.20	-1.07
500 ppb CCV-7 (58483-42)	508.80	478.59	502.97	506.28	267.25	260.59	481.89	524.89	239.72	257.67	127.14	539.47	523.31	515.03	1,245.89	507 91	533.03	510.30	271.35	496.67
5K ppb CCV-9 (58483-42)	5,331.96	5,156.77	5,118.23	5,194.05	2,694.16	2,637 91	4,834.03	5,451.97	2,418.91	2,601 50	1,288.24	5,471.83	5,194.48	5,121.43	13,067.15	5,398.32	5,431.55	5,247.18	2,687.20	5,026.40
2% HNO3 Blank	-0.53	0.44	3.35	3.38	0.21	0.25	2.24	19 66	-0.44	-0.30	0.01	-0 40	0.64	-0.08	-15.58	7.18	7.68	-0.22	-0.15	0.69
500 ppb CCV-7 (58483-42)	510.29	476.80	520.94	525.10	267.80	265.79	498.14	524.92	245.26	265.32	129.94	539.43	525.22	528.04	1,228.98	520.11	532.77	511.07	272.52	510.26
5K ppb CCV-9 (58483-42)	5,336.39	5,184 43	5,092.83	5,161.35	2,654.58	2,629.56	4,843.88	5,356.90	2,415.67	2,601.29	1,288.23	5,458.76	5,172.74	5,121.12	12,883.89	5,400.60	5,425 75	5,233.32	2,677 21	5,016.32
2% HNO3 Blank	-0.37	-0.43	7.48	8.15	-0.52	0.31	4.77	29.39	-0.19	-0.06	0.23	-0 47	1.80	0 74	6 40	6.36	7.90	-0.13	-0.15	-0.51
500 ppb CCV-7 (58483-42)	503.95	472.30	505.02	515.10	245.51	260.80	489.41	500.12	238.82	257 97	126.61	533.21	520.84	513.56	1,152 75	505.68	494.08	504.91	270.04	493.91
5K ppb CCV-9 (58483-42)	5,286.62	5,146.40	5,070.93	5,121.50	2,576.00	2,610.52	4,843.00	5,168.88	2,403.27	2,593 10	1,284.13	5,406.10	5,127.57	5,096.03	12,520.05	5,351.91	5,271.28	5,184.44	2,653.21	4,970.68
2% HNO3 Blank	-0.32	0 46	6.58	9.98	0.48	0.33	2.91	19.16	-0.14	-0.35	0.32	-0.92	1.00	0.79	-34.60	5.56	7.05	-0.05	-0 15	1 16
500 ppb CCV-7 (58483-42)	511.55	477.09	495.27	511.59	264.66	262.07	497.34	496.56	241.53	260.61	128.27	539.43	524.38	518.24	1,236.29	508.66	528.50	510 66	272.30	498 13
5K ppb CCV-9 (58483-42)	5,418.22	5,133.33	5,112.04	5,136.25	2,637.66	2,660.36	4,851.41	5,279.79	2,416.64	2,614.46	1,292.89	5,552.65	5,287.83	5,128.97	12,750 43	5,487.26	5,417.49	5,318.64	2,738.24	5,018.96
Instrument BQL:	25	25	125	25	1,000	5	50	50	12.5	5,000	12.5	50	500	1,000	250	5	5	10	100	100
Sample ID	Ni 231 604	Ni 221.648	P 213.617	Pb 220.353	Se 196.026	Sr 421.552 R	*Tl 351.924*	*Tl 190.801*	V 290.880	*Zn 206.200*	Zn 213.857	Na 589.592 R	Si 251 611	S 180.669	*Tl 334.940*	Ti 336.121	Zr 343.823	Ag 328.068	*Be 197.248*	Sb 206.836
2% HNO3 Blank	0.86	-0.14	-0 72	0.51	26.54	0.26	0.69	-20.35	0.16	0.10	-0.36	-2.01	-93.06	13.34	1 74	0 18	0.26	0.07	2.03	-9.81
500 ppb CCV-7 (58483-42)	503.71	506.06	1,247.53	500.63	555.52	491.93	496.05	489.15	246.98	250 71	253 19	455.01	454.91	1,005.42	260.36	261.14	259.83	516.75	526.06	521.46
5K ppb CCV-9 (58483-42)	5,042.22	5,034.19	12,460.04	5,051.89	5,035.28	5,071.13	5,082.97	5,033.04	2,507.79	2,506.33	2,548.28	5,158.18	5,226 58	10,334.57	2,598 45	2,609 10	2,611 37	5,149.29	5,291.21	4,979 06
2% HNO3 Blank	1.38	2.21	80.23	-0.28	39.07	0.01	6.85	-16.45	0.38	0.88	-0 12	10.64	-88.08	32.03	1.69	0.09	-0.29	-0.04	-1 76	10.72
500 ppb CCV-7 (58483-42)	508.90	510.74	1,286 12	506.51	569 09	498.27	499.60	491.81	251 40	253.27	254.47	455 05	463 10	1,049.92	264.12	263.88	264.13	525.56	533.12	503.05
5K ppb CCV-9 (58483-42)	5,071.94	5,081 99	12,617.04	5,066.96	5,024 77	5,021.56	5,162.23	5,088.51	2,541.98	2,531.96	2,567 25	5,121.93	5,304.73	10,334.50	2,628.81	2,628.89	2,642.97	5,214.28	5,314.51	5,034 49
2% HNO3 Blank	1 58	1.19	18.39	0.41	50.72	0 03	3.90	-2.65	0.96	0.29	-0 47	-1.65	-90.02	33.93	1.68	0.10	-0.05	-0.35	-2 13	5.10
500 ppb CCV-7 (58483-42)	510.10	512.01	1,240.52	508.10	559 76	500.18	493.53	491 45	252.36	254.97	256.34	456 49	462.88	1,049 41	264 65	264 10	264.89	528.25	539.79	510 15
5K ppb CCV-9 (58483-42)	5,073 65	5,079.56	12,618.76	5,107 55	5,109.37	5,099.26	5,171 15	5,151.45	2,544.06	2,547.21	2,563.29	5,193.88	5,296.86	10,290.63	2,644 03	2,635.22	2,659.17	5,248.58	5,375.98	5,078.14

2% HNO3 Blank	1.20	1 56	5.41	1.61	64 02	-0.20	-0 69	-1 33	2 15	-0.09	-0.65	9.47	-90.35	24 06	1 69	0.08	0 00	-0.12	2.26	8.42
500 ppb CCV-7 (58483-42)	499.34	502.32	1,222.07	498.11	556.20	493.68	501.35	506.79	254.65	250.10	250.30	453.56	452.75	988.95	264.52	263.15	264.93	528.89	522.97	516.23
5K ppb CCV-9 (58483-42)	5,066 67	5,077.98	12,614.21	5,049.05	5,051 05	4,955.30	5,175 13	5,135 40	2,553 70	2,546.20	2,564.68	5,070.13	5,303 01	10,167 89	2,640.10	2,624.15	2,656 04	5,248.53	5,318 03	5,032.81
2% HNO3 Blank	1.76	1 06	11 99	-1 83	35.56	-0.07	3.20	-13.89	2.84	0.70	-0.45	0.40	-88.31	18.98	1 63	0.10	-0.01	-0.04	-1.37	10.01
500 ppb CCV-7 (58483-42)	504 70	509.35	1,246.98	500.26	515 53	505.11	500 07	494 78	255 72	252.04	251.72	456.62	460.63	1,045 68	266.07	263.84	266 48	531.10	528.07	510.56
5K ppb CCV-9 (58483-42)	5,099.82	5,128.02	12,705 46	5,038.82	5,039.13	5,028.04	5,188.32	5,185.41	2,574.29	2,584.26	2,580.61	5,138.85	5,344.94	10,104.35	2,666.02	2,640.49	2,678.86	5,295.24	5,323.39	5,039.23
2% HNO3 Blank	3.01	2.56	11.69	-0.83	33.26	0.69	2.26	-7 14	3.53	0.89	-0.42	4 19	-85.33	28.66	2.05	0.59	0 42	-0.25	3.82	3.99
500 ppb CCV-7 (58483-42)	506.76	508.89	1,250.42	499.71	542.11	504.82	499.37	530.83	257 83	256 86	252.95	464 67	466.45	1,009.50	267.16	262 75	266.91	532 58	530.98	512.35
5K ppb CCV-9 (58483-42)	5,106 68	5,141.49	12,715.13	5,025.86	5,054.84	5,099 81	5,201.08	5,217.78	2,587 31	2,616.92	2,583.45	5,217 23	5,362.20	9,896.61	2,682.89	2,640.76	2,697 08	5,331.58	5,338.16	5,065.73
2% HNO3 Blank	1.33	0.82	4 06	-1.72	57.43	0.01	-0.34	-13 72	3.81	0.97	-1.17	3.10	-86 71	37.37	1.58	0.21	0.01	0.01	-0.61	-0.17
500 ppb CCV-7 (58483-42)	506.98	510 43	1,246.88	499.28	534.83	497.34	504.67	520.18	258.69	259.17	253.03	459.80	467.95	998.63	267 77	262.26	267.38	534 58	530.60	500.26
5K ppb CCV-9 (58483-42)	5,081.95	5,118.88	12,672 16	4,986.34	5,013.78	5,077.44	5,207.48	5,222.41	2,587.07	2,605.79	2,574.39	5,180.62	5,358.97	9,919.52	2,654.97	2,602 74	2,668.42	5,283.55	5,320.65	5,048.07
2% HNO3 Blank	2.23	1.55	14 07	0.54	44 78	0 17	1.04	-0.84	5.93	0.21	-0.76	24.87	-83.84	21 45	1.74	0.35	0 12	0.38	-0.06	-5.94
500 ppb CCV-7 (58483-42)	509.75	515.46	1,255.18	499.25	540.98	512.57	506.39	533.26	260 47	262.34	256.14	468.12	473.71	990.31	269.37	261 93	268.85	537.98	539.21	522.49
5K ppb CCV-9 (58483-42)	5,100.71	5,139 49	12,696.89	4,979.37	5,029.12	5,100.46	5,222.41	5,275.95	2,603.60	2,636.34	2,581 16	5,263 71	5,390.01	9,846.29	2,674.73	2,608.64	2,689.85	5,335.52	5,328.43	5,074.59
2% HNO3 Blank	2.49	1 72	11 22	1.21	14.85	0.49	-1.03	-23.21	6.51	0.20	-1.23	12.52	-82.27	18.64	1 99	0.61	0.38	1.61	-0.81	2 76
500 ppb CCV-7 (58483-42)	510.89	517.09	1,257.33	502.07	532.35	498.17	503.37	524.93	260.26	265.06	255.29	469 87	478.87	1,022.20	268.04	259.06	267.00	536.75	538.89	519.34
5K ppb CCV-9 (58483-42)	5,051.12	5,104.52	12,561.76	4,904.59	4,994.99	5,011.05	5,172.17	5,242.42	2,583.78	2,641.67	2,557 41	5,166.34	5,337.66	9,601.41	2,660.01	2,571.14	2,665.30	5,297.94	5,263.38	5,008.73
2% HNO3 Blank	1.44	0.99	17 04	-0.38	29 81	-0 12	-2.96	3.41	6.89	-0.24	-1.08	22.03	-81.60	20.27	1.59	0.30	0.00	0.56	-1.24	-3.57
500 ppb CCV-7 (58483-42)	508.23	513.30	1,246.23	494.81	535.33	513.49	506.69	518.87	262.13	265.18	254.11	492.55	474.78	972.60	269.71	259.82	269.09	541.13	538.38	519.55
5K ppb CCV-9 (58483-42)	5,052.80	5,114.67	12,628 43	4,919.14	4,983.21	5,176.17	5,194.41	5,334.33	2,597.84	2,645.44	2,565.24	5,371.62	5,377 64	9,620.94	2,659.58	2,568.51	2,667.80	5,306.61	5,285.41	5,029.87
2% HNO3 Blank	2.11	0.60	17.28	-4.66	51.72	0.07	1.17	-13.15	8.52	-0.26	-1.70	26.85	-85.43	12.21	1.68	0 39	0.13	1 13	0.90	0.46
500 ppb CCV-7 (58483-42)	509.44	515 65	1,256.45	495.66	539.76	517.32	509.62	534.69	265.34	266.82	254.97	490.86	479.16	974.25	271.28	260.89	270.86	544 77	535.49	512.89
5K ppb CCV-9 (58483-42)	5,103.01	5,167.40	12,709.60	4,972.02	5,070.88	5,238.46	5,238.58	5,394.12	2,622.20	2,695.27	2,588.63	5,445.42	5,417.24	9,691.56	2,695.72	2,601.52	2,718.11	5,399.14	5,368.41	5,117.18
2% HNO3 Blank	1.60	0.74	18.04	-0.96	12.72	0.01	4.67	-21.65	6.84	-0.39	-0.69	22.25	-77.75	15.53	1.60	0.33	0.20	0.14	-0.23	2.25
500 ppb CCV-7 (58483-42)	515.77	521.79	1,267.95	503.05	544.45	519.39	507.07	549.38	265 12	271.85	258.88	503 04	490.39	976.60	272.14	260.90	271.43	545.86	541.25	510.90
5K ppb CCV-9 (58483-42)	5,097.77	5,173.31	12,708.80	4,981.25	5,032.50	5,213.33	5,215.03	5,414.17	2,620.67	2,710.70	2,586.30	5,417.52	5,411.30	9,528.53	2,695.24	2,580.15	2,701.01	5,383.56	5,376.62	5,117.03
2% HNO3 Blank	1.40	2.16	17.30	-1.67	71 57	0.02	4.79	5.87	6.10	0.35	-0.39	5.61	-75.97	21 27	1.76	0.45	0.19	0.37	-0.05	-2.40
500 ppb CCV-7 (58483-42)	514.37	524.99	1,257.51	504.00	554.32	527.37	508.22	538.22	265.84	273 76	259.20	486.55	490.14	999.15	272.94	260.30	271.75	547.66	546.50	529.67
5K ppb CCV-9 (58483-42)	5,109.33	5,188.84	12,693.86	4,960.70	5,045.67	5,208 74	5,221.20	5,413.87	2,626.62	2,740.74	2,592.94	5,379.58	5,418.15	9,526.49	2,700.17	2,571.86	2,699.63	5,391 74	5,372.62	5,110.54
2% HNO3 Blank	0.91	0.90	8.07	-0.66	40.42	-0.20	0.27	-7.11	5.96	-0.37	-0.50	-4.04	-74.78	35.71	1.57	0.26	-0.07	1.16	1.64	-4.53
500 ppb CCV-7 (58483-42)	518.92	529.11	1,256.25	511.88	548.26	517.25	508.77	546.90	265.21	277.60	259.49	486.60	494.54	991.84	272.64	259 17	271.40	546.40	543.55	524.27
5K ppb CCV-9 (58483-42)	5,113.67	5,187.59	12,742.13	4,926.99	5,049.92	5,248.23	5,244.79	5,402.51	2,632.51	2,730.50	2,591.56	5,394.68	5,439.96	9,384.68	2,657.22	2,531.05	2,658 49	5,307.24	5,321.92	5,085.07
2% HNO3 Blank	1 04	1.14	12.05	-0.41	47.49	-0.14	-0.77	-9.96	6.86	0.07	-0.78	6.95	-76.42	38.66	1.61	0.25	0.14	3.69	-0.70	17.44
500 ppb CCV-7 (58483-42)	510.00	519.66	1,241.70	494 57	532.67	527.86	506.43	532.36	267.10	271.62	256.39	484.90	485.32	947.42	273.20	260.12	272.48	547.77	541.06	515.70
5K ppb CCV-9 (58483-42)	5,114.61	5,184.91	12,738.48	4,972.03	5,082.48	5,297.82	5,226.35	5,456.09	2,630.46	2,741.50	2,589.90	5,483.15	5,432.40	9,557.75	2,713.67	2,582.85	2,713.69	5,414.01	5,392.22	5,145.20
2% HNO3 Blank	1.56	0.36	10 14	-2.21	35.61	-0.13	1.87	-1.21	7.11	-0.60	-0.70	-1.50	-77.51	32.63	1.54	0.25	-0.10	0.69	-1.76	11.77
500 ppb CCV-7 (58483-42)	522.35	530.24	1,280.19	506.78	569.38	529.01	513.40	546.29	266.97	277.11	261.50	482.49	501.20	987.05	273.71	260.33	272.84	549.08	548.34	532.17
5K ppb CCV-9 (58483-42)	5,110.34	5,189.34	12,699.33	4,954.00	5,065.45	5,219.09	5,236.32	5,450.98	2,638.10	2,732.94	2,591.29	5,385.11	5,448.21	9,419.52	2,700.97	2,568.59	2,705.90	5,403.01	5,374.16	5,124.27
2% HNO3 Blank	2.30	0.51	11.28	0.57	53.19	-0.30	0.76	-9.98	7.03	-0.49	-0.75	4.14	-75.67	26.01	1.57	0.28	-0.08	3.91	2.34	3.44
500 ppb CCV-7 (58483-42)	510.53	518.50	1,239.40	490.48	521.81	486.03	506.63	548.25	264.41	272.06	254.95	453.26	487.04	923.15	271.08	257.27	269.95	544.79	535.40	530.61
5K ppb CCV-9 (58483-42)	5,095 09	5,169.78	12,618.44	4,914.20	4,973.47	5,064.01	5,210.67	5,422.39	2,629.54	2,734 70	2,581.21	5,238.21	5,419.31	9,361.66	2,673.99	2,539.29	2,680.25	5,355.18	5,333.08	5,098.27
2% HNO3 Blank	1.07	0.91	5.95	2.27	53.64	-0.10	3.63	-1.30	6.83	0.94	-0.52	-5.39	-72.57	9.54	1 57	0.30	-0.18	0.40	0.98	10.47
500 ppb CCV-7 (58483-42)	514.04	523.23	1,259.11	499.26	543.60	521.36	505.74	561.64	260.28	277.40	257.30	474.89	497.45	969.56	273.64	259.14	272.83	549.63	540.49	528.66
5K ppb CCV-9 (58483-42)	5,140.41	5,246.84	12,755.90	4,953.03	4,999.81	5,188.35	5,229.40	5,484.38	2,639.65	2,794.87	2,608.39	5,363.15	5,457.23	9,424.38	2,761.68	2,610.01	2,760.32	5,515.36	5,396.68	5,150.34

ICP-OES Analysis: E-102 and 216-A-4 WE samples
PNNL Technical Procedure: PNNL-AGG-ICP-AES rev. 1
AG&G Batch ID: 1144
Date Samples Submitted: 3/26/07
Date Samples Analyzed: 3/26/07
Samples Analyzed by: Steven R. Baum
Data Processed by: Steven R. Baum

EQL = Estimated Quantification Limit
R = Radial mode
S = detector saturated
ISTD = Internal Standard
CCV standards w/in ±10%

Instrument EQL	10	50	100	50	5	2.5	50	50	25	25	6.25	25	50	50	1,250	50	100	10	2.5	25
Sample ID	Al 396 153	Al 394.401	As 193 696	B 208.957	Ba 455 403 R	Be 313.042	Bi 223.061	Ca 422.673 R	Cd 228.802	Co 228.616	Cr 267.716	Cu 324.752	Fe 259.939	Fe 273.955	K 766.490R	Li 610.362	Li 670 784 R	Mg 285.213	Mn 257.610	Mo 202.031
2% HNO3 Blank	0 00	-1.07	-4.34	-0.33	0 02	0.02	-3.97	-1.81	0.06	-0.07	0.20	-0.05	-0.41	-0 49	25 86	-1.26	8.38	-0.20	-0.02	0.38
500 ppb CCV-7 (58483-42)	481.32	461.35	503.20	503.85	250.97	256.50	474.73	481 39	246.01	256.37	125.98	507.22	505.98	519.75	1,206.55	484.31	491.04	489.82	261 43	502.30
5K ppb CCV-9 (58483-42)	5,062.93	5,034.03	5,048.84	5,099 61	2,509 81	2,565.53	4,737 31	5,111.41	2,461.09	2,555.86	1,268.85	5,152.32	5,031 86	5,133.84	12,623.15	5,178.22	5,033.09	5,039.15	2,590 17	4,995 47

2% HNO3 Blank	-0.05	0.37	11.87	12.84	0.54	0.70	-0.45	-2.71	0.30	-0.20	0.92	2.80	0.49	0.70	25.73	-0.92	6.03	1.20	0.29	2.12
500 ppb CCV-7 (58483-42)	483.88	462.88	507.21	519.83	251.37	261.71	478.70	489.84	245.43	257.74	127.82	514.61	513.57	521.69	1,227.54	492.47	492.65	494.95	266.37	503.97
5K ppb CCV-9 (58483-42)	5,083.56	4,999.29	5,079.82	5,116.34	2,601.60	2,590.08	4,764.76	5,296.77	2,448.79	2,561.91	1,272.19	5,203.63	5,078.94	5,126.86	13,104.50	5,216.59	5,218.43	5,075.36	2,619.08	5,008.81
2% HNO3 Blank	0.16	-0.67	6.44	2.39	0.44	0.02	-5.98	-3.51	-0.48	-1.30	0.55	-0.15	-0.46	-0.47	-3.13	-1.81	7.88	0.61	-0.12	3.18
500 ppb CCV-7 (58483-42)	483.64	458.90	520.27	513.18	250.62	258.03	470.47	495.19	245.00	255.58	126.36	509.28	507.95	518.71	1,246.55	487.74	488.28	491.39	263.68	503.80
5K ppb CCV-9 (58483-42)	5,109.05	4,985.08	5,039.36	5,096.71	2,588.64	2,627.48	4,748.67	5,309.52	2,452.08	2,575.50	1,274.71	5,218.56	5,101.22	5,136.93	13,111.51	5,265.77	5,210.81	5,085.91	2,632.18	4,998.28
2% HNO3 Blank	-0.90	0.33	9.44	-1.71	0.39	0.00	-7.06	1.73	-0.35	-1.32	-0.01	-0.90	-0.46	-0.13	71.26	-1.29	7.54	0.31	-0.16	-0.18
500 ppb CCV-7 (58483-42)	483.16	458.64	496.80	496.41	257.99	253.21	469.08	499.45	240.26	252.53	124.97	512.15	506.89	510.48	1,321.92	482.35	509.08	490.92	262.88	492.11
5K ppb CCV-9 (58483-42)	5,072.49	4,974.31	5,069.54	5,109.03	2,573.46	2,597.91	4,771.36	5,250.78	2,434.22	2,565.70	1,272.13	5,181.11	5,063.22	5,111.39	12,970.13	5,210.53	5,166.12	5,042.55	2,616.49	5,011.37
2% HNO3 Blank	-0.49	-1.22	-4.56	-5.31	0.38	0.01	-2.97	5.43	-0.42	-1.11	0.23	-1.09	-0.23	-0.35	38.66	-0.48	7.38	0.88	-0.15	0.84
500 ppb CCV-7 (58483-42)	485.23	456.67	508.37	500.62	252.20	256.19	472.88	491.85	241.59	254.40	126.07	510.29	506.87	513.13	1,282.66	484.30	497.55	490.98	263.19	495.91
5K ppb CCV-9 (58483-42)	5,169.05	4,963.97	5,081.84	5,129.73	2,583.50	2,604.07	4,776.51	5,301.08	2,421.53	2,552.07	1,266.87	5,267.20	5,121.65	5,078.47	13,147.54	5,304.03	5,206.27	5,115.90	2,648.39	5,041.14
2% HNO3 Blank	-1.39	0.02	11.08	-7.03	0.12	0.01	-6.85	38.14	-0.24	-1.30	0.05	-1.22	-0.63	-0.73	115.64	1.59	9.11	0.00	-0.19	2.88
500 ppb CCV-7 (58483-42)	488.51	459.68	490.65	497.15	256.43	259.41	481.06	526.52	239.25	254.65	125.33	514.17	508.67	508.98	1,345.97	499.31	505.42	493.14	264.39	495.81
5K ppb CCV-9 (58483-42)	5,131.95	4,975.92	5,143.96	5,130.43	2,584.22	2,618.17	4,791.07	5,340.93	2,413.43	2,558.35	1,268.81	5,218.72	5,071.98	5,069.72	13,166.10	5,282.80	5,235.49	5,065.10	2,625.54	5,036.17
2% HNO3 Blank	-0.12	-0.87	11.27	-12.11	0.95	0.10	-7.90	3.08	-0.22	-1.00	0.02	-2.18	-0.44	-0.29	23.17	-2.25	7.63	0.48	-0.16	1.51
500 ppb CCV-7 (58483-42)	487.84	456.93	506.92	490.89	260.47	256.82	477.18	502.01	239.90	255.42	126.51	510.14	511.44	512.28	1,287.66	487.47	508.56	491.90	266.04	497.97
5K ppb CCV-9 (58483-42)	5,113.64	4,948.54	5,009.44	5,042.13	2,595.12	2,606.07	4,816.33	5,310.73	2,418.62	2,577.18	1,276.19	5,195.26	5,081.23	5,091.46	13,114.76	5,276.56	5,200.88	5,046.43	2,632.94	4,970.92
2% HNO3 Blank	-0.38	-1.84	15.80	-16.23	1.73	0.14	-5.71	-3.16	-0.44	-2.29	0.26	-2.56	-0.51	-0.61	10.44	-4.14	6.09	0.44	-0.13	-1.04
500 ppb CCV-7 (58483-42)	489.04	454.82	515.75	489.42	257.53	263.21	474.68	495.26	241.10	255.83	127.02	508.87	511.96	514.04	1,278.94	500.19	501.01	490.94	266.61	501.11
5K ppb CCV-9 (58483-42)	5,097.93	4,891.57	5,057.66	5,087.50	2,611.42	2,607.81	4,795.95	5,300.15	2,407.16	2,577.90	1,273.60	5,155.66	5,067.34	5,077.43	13,110.21	5,300.59	5,187.23	5,019.59	2,629.10	5,032.36
2% HNO3 Blank	-0.58	0.70	5.44	-17.35	1.19	0.13	-12.36	-0.99	-0.62	-2.10	-0.03	-2.35	-0.58	-0.85	63.61	-2.76	7.45	0.24	-0.14	0.46
500 ppb CCV-7 (58483-42)	485.09	453.61	512.54	488.93	261.08	258.35	479.52	504.00	239.50	256.20	126.71	508.83	509.55	513.25	1,305.84	496.56	511.59	489.04	265.63	503.34
5K ppb CCV-9 (58483-42)	5,179.70	4,892.71	5,076.42	5,085.91	2,651.77	2,618.84	4,796.61	5,433.44	2,394.24	2,564.21	1,269.55	5,248.77	5,139.70	5,056.48	13,365.15	5,385.20	5,305.54	5,099.45	2,667.37	5,012.66
2% HNO3 Blank	-0.49	-0.15	9.19	-15.96	0.53	0.12	-3.68	6.46	-0.55	-1.59	0.40	-2.00	-0.56	-0.32	8.65	-0.83	7.39	-0.02	-0.18	1.76
500 ppb CCV-7 (58483-42)	489.27	455.31	514.06	485.95	258.82	260.06	483.96	516.69	238.56	255.81	126.03	511.54	510.06	510.23	1,357.00	505.04	508.92	490.72	265.87	498.36
5K ppb CCV-9 (58483-42)	5,097.35	4,922.71	4,960.65	4,976.62	2,626.02	2,562.93	4,796.09	5,416.10	2,370.11	2,547.95	1,261.00	5,174.49	5,033.27	5,008.08	13,296.28	5,284.10	5,297.57	5,010.91	2,612.82	4,903.97
2% HNO3 Blank	-1.20	-0.63	7.26	-17.48	0.72	0.10	-10.66	6.79	-0.71	-1.60	0.27	-1.89	-0.64	-0.77	26.81	-0.58	6.83	0.06	-0.13	1.66
500 ppb CCV-7 (58483-42)	488.56	453.13	507.19	477.44	258.46	255.84	473.85	507.11	233.36	250.56	123.39	510.00	507.98	498.97	1,269.51	491.07	507.90	488.80	265.06	489.15
5K ppb CCV-9 (58483-42)	5,063.17	4,926.69	5,059.54	5,073.11	2,613.82	2,590.48	4,819.32	5,391.00	2,384.01	2,558.36	1,265.27	5,143.79	5,017.49	5,023.80	13,211.77	5,272.89	5,259.13	4,984.52	2,605.54	4,999.78
2% HNO3 Blank	-1.06	-0.90	0.19	-15.78	0.66	0.11	-5.60	3.38	-0.34	-1.75	0.37	-2.00	-0.56	-0.22	18.64	-0.54	7.84	-0.06	-0.11	1.57
500 ppb CCV-7 (58483-42)	487.70	455.11	497.93	483.33	257.64	256.53	479.87	513.12	237.56	253.99	125.31	511.36	508.48	507.18	1,308.05	495.75	508.44	489.83	264.98	496.69
5K ppb CCV-9 (58483-42)	5,189.81	4,899.82	5,031.01	5,108.29	2,622.81	2,609.75	4,788.54	5,393.23	2,381.40	2,553.73	1,263.02	5,250.88	5,097.34	5,022.42	13,267.71	5,374.13	5,285.86	5,087.22	2,644.37	5,031.88
2% HNO3 Blank	-1.32	-0.22	-7.73	-15.62	0.83	0.12	-0.93	2.53	-0.48	-1.91	0.18	-1.97	-0.41	-1.05	-3.48	-0.39	7.03	0.18	-0.13	0.99
500 ppb CCV-7 (58483-42)	489.86	455.60	497.62	486.86	261.35	261.20	481.94	510.25	237.40	255.02	125.90	512.17	509.90	508.96	1,282.10	503.35	515.29	491.23	265.74	496.95
5K ppb CCV-9 (58483-42)	5,109.46	4,945.03	4,993.89	5,058.48	2,571.11	2,569.67	4,800.55	5,273.19	2,382.39	2,551.90	1,263.31	5,190.49	5,029.82	5,023.27	13,045.17	5,291.95	5,153.58	5,023.47	2,608.14	4,970.88
2% HNO3 Blank	-0.59	-0.25	4.11	-18.40	0.93	0.16	-5.36	2.00	-0.54	-1.20	0.19	-1.80	-0.08	-0.59	-9.26	-0.76	6.45	0.38	-0.10	1.10
500 ppb CCV-7 (58483-42)	487.60	455.71	509.78	504.95	257.69	255.64	479.96	515.67	238.38	254.09	125.82	512.66	508.20	509.41	1,327.82	489.48	508.68	489.84	264.85	495.80
5K ppb CCV-9 (58483-42)	5,144.33	4,946.24	4,987.10	5,070.03	2,624.52	2,600.38	4,808.29	5,400.18	2,384.00	2,550.02	1,262.67	5,209.92	5,044.84	5,018.83	13,319.57	5,307.89	5,290.65	5,044.00	2,615.79	4,968.66
PB-032207-1 AB		1.15E+02	<5.00E+02	8.03E+02	(1.10E+01)	(2.00E+00)	<2.50E+02	(1.16E+02)	(2.23E+00)	(6.57E+00)	(6.96E+00)	8.51E+01	(3.31E+01)	(5.71E+02)	(8.82E+00)	(2.45E+01)	(1.04E+00)	(6.50E+00)	(9.08E+00)	<3.13E+02

Instrument EQL:	25	25	125	25	500	5	50	10,000	25	5,000	25	100	500	10,000	5	5	5	25	50	500
Sample ID	Ni 231.604	Ni 221.648	P 213.617	Pb 220.353	Se 196.026	Sr 421.552 R	Tl 351.924	Ti 190.801	V 290.880	Zn 206.200	Zn 213.857	Na 589.592 R	Si 251.611	S 180.669	Ti 334.940	Ti 336.121	Zr 343.823	Ag 328.068	Re 197.248	Sb 206.836
2% HNO3 Blank	0.62	-0.74	-1.28	-0.57	-30.97	0.39	-0.54	9.02	0.52	-0.76	-0.25	12.04	-69.74	-57.73	-0.14	-0.15	-0.15	0.60	1.12	-5.76
500 ppb CCV-7 (58483-42)	508.68	511.05	1,239.32	511.16	507.59	494.15	501.59	524.99	246.54	257.20	256.00	469.24	476.79	1,008.64	261.27	260.25	271.18	519.00	538.46	513.22
5K ppb CCV-9 (58483-42)	5,062.66	5,080.66	12,603.00	5,093.00	5,107.85	4,917.14	5,138.06	5,144.27	2,515.41	2,564.89	2,567.70	5,041.39	5,262.69	10,192.72	2,602.85	2,584.28	2,730.77	5,128.79	5,314.94	5,062.24
2% HNO3 Blank	1.49	0.86	4.73	-2.05	4.96	-0.29	4.35	2.47	-1.22	-0.29	-0.58	16.84	-65.90	6.84	0.30	0.33	-0.24	0.86	-2.21	-3.96
500 ppb CCV-7 (58483-42)	512.15	516.47	1,257.80	514.72	508.40	493.17	507.93	547.76	250.12	265.25	257.27	467.88	486.78	992.26	266.74	261.74	270.77	527.19	537.11	516.27
5K ppb CCV-9 (58483-42)	5,064.05	5,094.20	12,588.46	5,078.34	5,158.05	5,091.81	5,142.58	5,295.60	2,525.19	2,618.12	2,568.14	5,215.92	5,272.84	10,022.63	2,637.54	2,590.57	2,715.19	5,185.66	5,339.28	5,071.63
2% HNO3 Blank	0.71	-0.98	57.36	4.54	-5.80	-0.26	0.87	2.56	0.22	-1.54	-0.31	8.09	-67.62	-23.57	-0.26	-0.15	-0.16	0.11	-1.87	-2.18
500 ppb CCV-7 (58483-42)	509.30	513.17	1,295.13	507.97	504.90	492.15	505.74	517.48	248.82	264.64	256.63	470.26	483.46	958.81	264.61	257.85	269.93	523.23	540.55	525.38
5K ppb CCV-9 (58483-42)	5,091.09	5,130.11	12,721.88	5,059.80	5,122.24	5,081.37	5,141.78	5,288.71	2,533.22	2,661.55	2,577.38	5,226.45	5,278.59	9,901.59	2,651.81	2,585.49	2,707.53	5,209.81	5,348.02	5,047.94
2% HNO3 Blank	0.54	-0.59	17.42	1.81	-33.32	-0.02	3.50	11.10	0.75	-1.50	-0.11	17.21	-72.82	-13.47	-0.27	-0.19	-0.03	0.56	1.51	-7.44
500 ppb CCV-7 (58483-42)	502.75	509.22	1,235.72	501.95	494.16	506.88	505.89	548.18	250.48	262.11	252.60	479.46	471.16	957.24	265.25	256.63	273.21	525.09	533.58	508.02
5K ppb CCV-9 (58483-42)	5,067.69	5,132.82	12,625.83	5,041.33	5,082.85	5,032.36	5,155.29	5,349.27	2,541.88	2,689.74	2,567.10	5,172.24	5,274.94	9,757.75	2,642.23	2,554.27	2,707.86	5,188.10	5,383.88	5,091.69
2% HNO3 Blank	0.80	0.13	13.40	-1.71	-8.25	-0.17	-2.70	9.46	1.17	-1.07	-0.49	17.66	-72.00	-23.33	-0.27	-0.10	-0.13	0.37	-0.65	-1.71
500 ppb CCV-7 (58483-42)	505.49	513.96	1,242.37	502.77	516.79	495.14	510.74	546.44	250.62	269.15	255.17	460.75	475.65	911.11	265.63	254.83	267.19	525.83	542.95	513.08
5K ppb CCV-9 (58483-42)	5,046.32	5,108.05	12,498.38	5,040.75	5,116.30	5,054.86	5,163.08	5,445.48	2,538.62	2,690.16	2,562.39	5,199.85	5,263.73	9,654.71	2,684.91	2,572.63	2,706.45	5,273.69	5,411.06	5,115.54
2% HNO3 Blank	-0.13	0.05	113.54	0.36	-16.11	0.29	3.80	11.95	2.56	-1.37	-0.89	328.16	-73.88	-13.88	-0.25	-0.10	-0.23	0.42	1.71	-5.48
500 ppb CCV-7 (58483-42)	504.41	511.46	1,317.81	501.35	455.96	504.67	509.77	540.10	253.19	270.44	254.53	664.08	473.72	904.63	267.86	254.47	274.40	528.46	541.88	513.19
5K ppb CCV-9 (58483-42)	5,044.22	5,123.13	12,592.43	5,028.95	5,165.80	5,055.62	5,174.39	5,436.44	2,548.92	2,715.57	2,563.78	5,397.38	5,278.82	9,614.92	2,664.63	2,532.13	2,709.70	5,223.09	5,418.99	5,135.74
2% HNO3 Blank	0.45	-0.04	31.17	1.07	-3.37	-0.13	8.77	8.09	0.64	-1.64	-0.15	55.29	-69.71	-18.87	-0.27	-0.04	-0.13	0.75	0.59	-9.70
500 ppb CCV-7 (58483-42)	506.78	518.01	1,267.43	501.32	504.23	509.09	508.76	576.68	252.52	278.41	256.60	508.58	478.42	889.54	268.33	253.19	262.53	529.67	547.35	494.68
5K ppb CCV-9 (58483-42)	5,077.95	5,160.49	12,610.08	4,957.09	5,061.95	5,069.74	5,171.76	5,424.58	2,561.56	2,764.75	2,576.41	5,241.06	5,301.53	9,356.01	2,666.70	2,516.85	2,664.24	5,227.61	5,365.02	5,037.76
2% HNO3 Blank	0.16	-0.05	20.77	-0.21	9.06	-0.09	6.34	3.56	0.20	-1.58	0.64	36.41	-67.66	-33.33	-0.27	-0.07	-0.21	0.67	1.21	-2.54
500 ppb CCV-7 (58483-42)	510.22	519.15	1,263.57	507.71	532.54	501.98	504.54	571.35	252.38	280.11	259.16	500.09	483.90	905.74	268.64	252.53	257.87	529.92	548.46	520.67

5K ppb CCV-9 (58483-42)	5,077 09	5,169.45	12,565.04	5,013.80	5,107.16	5,093.24	5,146.66	5,531.97	2,558.95	2,801.89	2,578.68	5,227.16	5,283.96	9,419.52	2,657 02	2,499.26	2,590.59	5,212.25	5,429 63	5,113 78
2% HNO3 Blank	0.40	-0.16	13 83	1.99	-24.64	0 02	0.59	-3 43	1.12	-1.49	-0 14	26.31	-72.22	-45 04	-0.27	-0 04	-0.09	0.30	0 14	-7.61
500 ppb CCV-7 (58483-42)	508.90	520.00	1,244.70	502 74	519.83	509.65	507.61	571.66	252.32	281.26	257 04	496.82	480 43	877.99	268.36	251.18	263.00	528.92	548.07	509.27
5K ppb CCV-9 (58483-42)	5,057.60	5,158.36	12,578.78	4,991 98	5,110.57	5,168.92	5,155.80	5,515.66	2,552.54	2,799.80	2,570.90	5,372.68	5,280.08	9,316 65	2,702.37	2,527 36	2,649 78	5,295.85	5,417 58	5,116.95
2% HNO3 Blank	0.32	0.23	3.29	0.35	-28.20	-0.13	-0.35	-4 76	2.77	-1.79	-0 42	22.86	-72.97	-34.03	-0.32	-0.02	-0 13	0.54	1.03	-12.58
500 ppb CCV-7 (58483-42)	507.80	518.26	1,240.26	499.60	510 86	506.56	504.56	552 49	254 19	279.61	257 31	511.74	479 71	895.27	269.18	250.80	264.42	530.52	545.07	508.38
5K ppb CCV-9 (58483-42)	5,012.21	5,121.71	12,501.17	4,855.65	4,951.97	5,124.50	5,170.01	5,457.75	2,551.04	2,769.59	2,550.33	5,338.57	5,270.63	9,011.27	2,657 53	2,475.04	2,682.04	5,209 46	5,306.01	4,996.32
2% HNO3 Blank	0.58	-0.58	15.42	1.70	-29.48	-0.18	3.98	-2.57	2.32	-1.42	-0.74	27.64	-70.69	-34 47	-0.29	0 00	-0.15	0.59	4.21	-6.38
500 ppb CCV-7 (58483-42)	497 48	505.17	1,231.99	488.32	472.92	504.96	499.88	559.14	253.84	276.14	251.01	484.33	469.98	870.87	268.37	249.41	268 60	528.95	537.51	506 74
5K ppb CCV-9 (58483-42)	5,033.43	5,123.58	12,474.10	4,944.75	5,058.93	5,097.16	5,174.03	5,556.53	2,558.33	2,781 31	2,564 70	5,331.76	5,292.19	9,129.24	2,647.79	2,460.45	2,640 90	5,191 12	5,410.22	5,081.50
2% HNO3 Blank	0.90	-0.63	3.36	-0.90	8.28	-0.20	5.88	19 25	2 64	-2.01	-0.50	22.33	-70.24	-37 00	-0.26	-0 05	-0.22	0.60	1.51	-0.77
500 ppb CCV-7 (58483-42)	503.83	514.57	1,234.06	494.32	465.50	504 11	505.54	567.03	254.10	278.08	253.81	492.53	479 17	885.32	268.91	250.48	269.38	529.82	543.50	507.69
5K ppb CCV-9 (58483-42)	5,031.89	5,132.50	12,424.96	4,983.47	5,120.59	5,119.52	5,156.68	5,593.24	2,552.89	2,779.53	2,558.10	5,319 46	5,262.97	9,200.56	2,692.37	2,509.74	2,683 69	5,280.87	5,456.81	5,135.08
2% HNO3 Blank	1.11	-0 19	8 75	3.25	-10.66	-0.17	1.57	1.14	2.36	-1.13	-0 77	33.26	-67 56	-10.83	-0.28	0.01	-0 12	0.43	1.95	-5.31
500 ppb CCV-7 (58483-42)	505.41	514 64	1,230.44	498.95	485.19	510.93	503.39	560.85	253.94	276.91	255.34	508.29	480.89	877 07	269.09	251.66	267.51	530.01	544.49	505.65
5K ppb CCV-9 (58483-42)	5,017.18	5,112.39	12,408.94	4,934.37	5,080.20	5,015.42	5,179.28	5,490.65	2,550.27	2,744.40	2,548.57	5,191.76	5,266.57	9,076.97	2,656.55	2,487 20	2,688.01	5,211.44	5,376.18	5,076.36
2% HNO3 Blank	0.34	-0.63	12.26	2.68	-1.21	-0 12	4.37	-5.04	1.91	-1.01	-0.35	24.88	-63 04	-63.24	-0.22	-0 07	-0.20	0.57	2.25	-7 20
500 ppb CCV-7 (58483-42)	506.29	514.89	1,238.58	501.59	486.92	503.86	506.35	559.95	253.77	276.37	255.17	479 44	487.79	873.00	268.79	251.36	272.01	529.52	544.24	498.01
5K ppb CCV-9 (58483-42)	5,016.74	5,096.32	12,432.78	4,927.00	5,059.44	5,120.74	5,181.24	5,527.42	2,547.92	2,739.94	2,551.76	5,289.11	5,276.18	9,162.60	2,664.19	2,495.69	2,674.42	5,231.47	5,388.82	5,073.12

ICP-OES Analysis: E-102 & 216-A-4 AE samples
PNNL Technical Procedure: PNNL-AGG-ICP-ABS rev. 1
AG&G Batch ID: 1144
Date Samples Submitted: 3/26/07
Date Samples Analyzed: 3/27/07
Samples Analyzed by: Steven R. Baum
Data Processed by: Steven R. Baum

R = radial mode
S = detector saturated
Dilution Value of 1 = no dilution

Spike recovery: 75% ≤ x ≤ 125%

Input Sample ID	Input Spike µg/L	Calc % Recovery	
Al 396.153			
B1L504 AE	500	128	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration.
B1L524 AE	500	140	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration.
Al 394.401			
B1L504 AE	500	117	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration.
B1L524 AE	500	124	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration.
As 193.696			
B1L504 AE	500	99	
B1L524 AE	500	94	
B 208.957			
B1L504 AE	500	98	
B1L524 AE	500	96	
Ba 455.403 R			
B1L504 AE	250	98	
B1L524 AE	250	100	
Be 313.042			
B1L504 AE	250	101	
B1L524 AE	250	100	
Bi 223.061			
B1L504 AE	500	93	
B1L524 AE	500	92	

Ca 422.673 R			
B1L504 AE	500	91	Matrix spike is not applicable The sample concentration is 5 times greater than the spike concentration.
B1L524 AE	500	148	Matrix spike is not applicable The sample concentration is 5 times greater than the spike concentration
Cd 228.802			
B1L504 AE	250	98	
B1L524 AE	250	97	
Co 228.616			
B1L504 AE	250	99	
B1L524 AE	250	97	
Cr 267.716			
B1L504 AE	125	99	
B1L524 AE	125	98	
Cu 324.752			
B1L504 AE	500	98	
B1L524 AE	500	97	
Fe 259.939			
B1L504 AE	500	139	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration
B1L524 AE	500	168	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration
Fe 273.955			
B1L504 AE	500	123	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration.
B1L524 AE	500	128	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration
K 766.490R			
B1L504 AE	1,250	96	
B1L524 AE	1,250	96	
Li 610.362			
B1L504 AE	500	97	
B1L524 AE	500	96	
Li 670.784 R			
B1L504 AE	500	95	
B1L524 AE	500	96	
Mg 285.213			
B1L504 AE	500	126	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration
B1L524 AE	500	132	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration.
Mn 257.610			
B1L504 AE	250	103	
B1L524 AE	250	102	
Mo 202.031			
B1L504 AE	500	98	
B1L524 AE	500	96	
Ni 231.604			
B1L504 AE	500	97	
B1L524 AE	500	96	
Ni 221.648			
B1L504 AE	500	97	
B1L524 AE	500	96	
P 213.617			
B1L504 AE	1,250	98	
B1L524 AE	1,250	97	

Pb 220.353		
B1L504 AE	500	100
B1L524 AE	500	99
Se 196.026		
B1L504 AE	500	96
B1L524 AE	500	94
Sr 421.552 R		
B1L504 AE	500	97
B1L524 AE	500	98
Tl 351.924		
B1L504 AE	500	100
B1L524 AE	500	98
Tl 190.801		
B1L504 AE	500	102
B1L524 AE	500	93
V 290.880		
B1L504 AE	250	98
B1L524 AE	250	97
Zn 206.200		
B1L504 AE	250	98
B1L524 AE	250	96
Zn 213.857		
B1L504 AE	250	102
B1L524 AE	250	101
Na 589.592 R		
B1L504 AE	500	89
B1L524 AE	500	90
Si 251.611		
B1L504 AE	500	106
B1L524 AE	500	105
S 180.669		
B1L504 AE	1,000	104
B1L524 AE	1,000	106
Ti 334.940		
B1L504 AE	250	105
B1L524 AE	250	105
Ti 336.121		
B1L504 AE	250	109
B1L524 AE	250	106
Zr 343.823		
B1L504 AE	250	101
B1L524 AE	250	98
Ag 328.068		
B1L504 AE	500	101
B1L524 AE	500	99
Ba 197.248		
B1L504 AE	500	104
B1L524 AE	500	103

Sb 206.836		
B1L504 AE	500	99
B1L524 AE	500	97

ICP-OES Analysis: E-102 & 216-A-4 AE samples, dups, & spikes
PNNL Technical Procedure. PNNL-AGG-ICP-AES rev. 1
AG&G Batch ID: 1144
Date Samples Submitted 3/26/07
Date Samples Analyzed: 3/27/07
Samples Analyzed by. Steven R. Baum
Data Processed by: Steven R. Baum

EQL = Estimated Quantification Limit
R = Radial mode
S = detector saturated
ISTD = Internal Standard
CCV standards w/in ±10%; ICS standards w/in ±20%

Instrument EQL:	10	25	100	100	2.5	5	50	50	5	25	2.5	10	25	25	2,500	50	50	25	2.5	25
Sample ID	Al 396.153	Al 394.401	As 193.696	B 208.957	Ba 455.403 R	Be 313.042	Bi 223.061	Ca 422.673 R	Cd 228.802	Co 228.616	Cr 267.716	Cu 324.752	Fe 259.939	Fe 273.955	*K 766.490R*	Li 610.362	Li 670.784 R	Mg 285.213	Mn 257.610	Mo 202.031
2% HNO3 Blank	3.24	3.26	-0.94	8.15	-0.38	0 08	-4.63	14.51	-0.24	0.95	0 28	0.99	11.26	11 77	23.87	0.68	8.71	4.94	-0.01	0.00
500 ppb CCV-7 (58483-42)	480.58	473.58	503.80	504.20	246.97	252.94	467.56	487.85	244.67	253.21	124.81	510.71	512.97	521.21	1,199 45	468.75	486.11	499.65	260.27	492.54
5K ppb CCV-9 (58483-42)	5,056.25	5,118.11	5,019.42	5,064.85	2,531.03	2,576.44	4,723.61	5,169.80	2,483.88	2,560.52	1,273.70	5,172.30	5,022.53	5,147.59	12,792.57	5,245.66	5,147.94	5,062.54	2,579.74	4,960.95
2% HNO3 Blank	3.70	4.11	-7 97	0.51	-0.01	0.03	-3.05	11.27	-0.31	1.15	-0.03	0.44	13.77	14.73	26 41	1.01	7.57	6.28	0.02	-1.61
500 ppb CCV-7 (58483-42)	485.14	477.09	505.07	496.92	253.67	255.04	471 92	492.43	244.75	253.58	125.26	514.24	516.17	524.25	1,238.18	472.23	503.77	504 16	260.66	490.93
5K ppb CCV-9 (58483-42)	5,095.21	5,128.69	5,014.69	5,051.57	2,550.91	2,583 42	4,721.70	5,192.48	2,478.21	2,544.24	1,268.87	5,222.24	5,051.29	5,137 80	12,918.98	5,280.97	5,176.28	5,105.88	2,591.72	4,963.59
2% HNO3 Blank	5.18	4.84	-5.52	0.13	0.08	0.03	-7.08	7.71	-0.05	0.23	0.17	0.17	13.61	14.27	93.38	0.64	6.86	6.75	0.05	-0.19
500 ppb CCV-7 (58483-42)	488.26	479.55	491.35	501.49	254.90	255.01	470.23	502.22	246.57	256.13	126.09	516.05	521.11	527.72	1,296.74	474.98	504.51	507.00	263.16	499.03
5K ppb CCV-9 (58483-42)	5,162.99	5,145.19	5,063.61	5,109.21	2,556 78	2,588.08	4,751.57	5,196.21	2,501.49	2,565.86	1,279.38	5,288.18	5,118.97	5,171.09	12,925.41	5,354.32	5,178.16	5,171.21	2,625.84	5,032.80
2% HNO3 Blank	6.95	6.36	-4 82	-3.69	-0.05	0.01	-1.58	6.61	-0.26	1.16	-0.10	0.36	21.59	22 14	21.86	0.86	6.83	9.18	0.13	-0.47
500 ppb CCV-7 (58483-42)	486.37	479.81	491.91	494.17	255.35	252.49	462.70	500.24	246.61	254.31	126.05	515.51	526.71	532.32	1,271.67	473 43	500.60	507.99	262.82	493.45
5K ppb CCV-9 (58483-42)	5,042.36	5,155.84	5,006.31	5,055.85	2,573.19	2,556.17	4,731.83	5,238.71	2,489.18	2,565 78	1,276.12	5,176.83	5,023.57	5,168.58	13,069.52	5,232.02	5,223.16	5,066.55	2,574.41	4,963 79
2% HNO3 Blank	0.83	0.28	0.37	-1.28	0.45	0.17	-2.04	1.19	0.38	1.16	0.02	1.53	6.32	7.25	1.24	2.10	7.62	3.63	-0.05	0.72
500 ppb CCV-7 (58483-42)	489.81	481.88	512.38	513.87	259.98	260.93	484.16	500.82	254.09	261.68	129.46	519.40	519.93	535.55	1,347.80	486.84	513 86	509.63	265.45	509.59
5K ppb CCV-9 (58483-42)	5,229.56	5,204.94	5,134.58	5,143.62	2,643.30	2,623.98	4,789.77	5,378.63	2,521.74	2,592.29	1,292.10	5,375.89	5,197.66	5,220.48	13,252.53	5,426.73	5,376.40	5,253.61	2,668.10	5,063.67
2% HNO3 Blank	0.99	1.42	-2 00	-3.01	0.38	0.14	-0.64	2.86	0.40	0.95	-0.03	0.96	6.40	7 32	96.99	0.38	6.08	3.37	-0.09	0.21
500 ppb CCV-7 (58483-42)	496.87	485.18	505.92	506.38	264.91	256.62	473.51	502.96	249.80	257.74	127.49	523.43	521.22	525.83	1,247.34	479.48	519.44	512.08	265.78	500.87
5K ppb CCV-9 (58483-42)	5,217.84	5,209.95	5,079.76	5,104.90	2,613.13	2,621.74	4,802.89	5,307 30	2,523.96	2,597.13	1,292.25	5,339.56	5,161.93	5,230.12	13,153.86	5,430.92	5,303.18	5,218.64	2,649.30	5,029.95
2% HNO3 Blank	0.91	0.41	-12.21	-4.27	0.19	0.07	-0.26	1.44	-0.04	0.89	0.26	1.04	4.95	5.88	80.80	1.16	6.33	2.75	-0.11	-0.05
500 ppb CCV-7 (58483-42)	495.38	485.20	503.36	497.32	258.88	257.19	470.53	500.45	249.10	256.66	127.09	524.56	520.80	523.15	1,336.84	479.59	504.63	512.45	266.13	498.65
5K ppb CCV-9 (58483-42)	5,172.58	5,188.54	5,104.41	5,132.81	2,583.99	2,608.75	4,752.91	5,245.78	2,519.73	2,593.66	1,292.25	5,296.36	5,119.70	5,222.63	12,908.69	5,367.04	5,251.03	5,184.56	2,628.81	5,044.42
2% HNO3 Blank	1.48	1.34	0.60	-8.33	-0.04	0.03	-4.32	3 10	0.04	0.51	0.08	0.99	5.73	6.51	140.68	1.60	4.68	2.64	-0.13	1.39
500 ppb CCV-7 (58483-42)	495.10	487.72	482.22	492.12	260.31	252.69	470.35	507.17	246.90	254.94	125.70	527.23	520.07	520.57	1,396.52	474.37	513.09	512.11	265.69	495.97
5K ppb CCV-9 (58483-42)	5,206.22	5,241.99	5,105.12	5,166.09	2,622.41	2,599.49	4,791.94	5,364 09	2,531.94	2,595.61	1,293.79	5,347.53	5,128.81	5,221.82	13,427.56	5,418.54	5,347.54	5,214.79	2,632.87	5,073.87
2% HNO3 Blank	0.74	-0.01	3.32	-8.83	-0.23	0 07	-0.40	1.98	0.36	1.20	0.20	0.89	5.32	6 15	119.06	0.66	5.35	2.61	-0.06	-0.04
500 ppb CCV-7 (58483-42)	498.41	489 85	505 71	499.95	256 11	259 41	481.68	502.29	252.09	260 28	128.33	529.06	521.25	528.28	1,398.71	486.92	504.27	514.77	266.28	502.56
5K ppb CCV-9 (58483-42)	5,251.22	5,260 13	5,056.36	5,126.51	2,626.08	2,602.17	4,821.66	5,368.02	2,541.87	2,600 82	1,297.59	5,379.60	5,165.68	5,239.87	13,292.47	5,444.93	5,361 96	5,254.39	2,652.26	5,035.13
2% HNO3 Blank	1.21	1.22	4 82	-7.38	0.32	0.03	0.36	-0.97	0 10	0.97	0.07	0.82	6.79	7.57	121 40	0.34	5.97	3.24	-0.12	0.01
500 ppb CCV-7 (58483-42)	495.66	485.96	512.83	509.58	262.48	260.81	486.10	503 19	256.03	261.11	129.66	528.24	522.58	536.01	1,370.67	481.93	512.12	513.75	266.20	509 68
5K ppb CCV-9 (58483-42)	5,199.19	5,248.08	5,092.28	5,141.26	2,623.38	2,605.98	4,792.65	5,330.27	2,532.24	2,594.20	1,292.32	5,338.07	5,141.69	5,228.34	13,105.86	5,387.99	5,321.85	5,211.90	2,636.96	5,057.88
2% HNO3 Blank	0 73	0 98	1.29	-7 11	0.10	0 02	-1.48	-1.87	0.14	1.05	0.12	0.60	1.76	2.38	98.35	-0.30	6.49	1.59	-0 19	-0.01
500 ppb CCV-7 (58483-42)	498.65	487 87	500.11	495.55	264.13	260.32	470.22	499.37	251.05	257 47	127.69	529.38	519.10	524.21	1,348.92	485.47	513.86	515.31	266.06	500.16
5K ppb CCV-9 (58483-42)	5,233.53	5,261.50	5,087.08	5,141.24	2,625.06	2,622.49	4,803 74	5,314.09	2,542.80	2,600.34	1,299.83	5,346.28	5,140.23	5,236.59	13,223 84	5,425.21	5,293.59	5,228.78	2,636.28	5,062.99

Instrument EQL:	5	5	62.5	25	500	5	100	500	50	5	5	500	500	1,000	2.5	2.5	5	10	25	100
Sample ID	Ni 231.604	Ni 221.648	P 213.617	Pb 220.353	Se 196.026	Sr 421.552 R	Ti 351.924	Tl 190.801	V 290.880	Zn 206.200	Zn 213.857	*Na 589.592 R*	Si 251 611	*S 180.669*	Ti 334.940	Ti 336.121	*Zr 343.823*	Ag 328.068	*Re 197.248*	Sb 206.836
2% HNO3 Blank	0.40	0.73	9.70	0.44	13.62	-0.11	0.26	3.95	-2 13	-0.56	-0.30	27.95	-71 05	21.20	0.29	0.19	0 05	-1.05	0.59	-10.31
500 ppb CCV-7 (58483-42)	501.83	502.04	1,220.86	505.48	516.48	488.52	495.28	478.92	244.70	246.98	252.79	459 82	472.98	1,052.31	257.73	261 19	259.90	518 15	532.92	504.68
5K ppb CCV-9 (58483-42)	5,073 19	5,042.93	12,671 24	5,072.83	5,037 23	4,976.63	5,181.57	4,995.30	2,509.00	2,493.34	2,570.21	5,126.93	5,282.14	10,423.52	2,556.88	2,591.79	2,560 78	5,120.83	5,289.21	4,999 43
2% HNO3 Blank	0.67	0.04	7.46	-3.19	-11.44	0.03	-4 01	20.05	-1.36	-0.05	-0.41	21 13	-68.30	-30.94	0.38	0.31	0.06	-0.58	-1.49	-7.87
500 ppb CCV-7 (58483-42)	503.58	503.09	1,232.34	506.38	477.37	501.30	493.59	511.76	244.80	246.57	253.81	463.27	475 76	1,035.05	258 79	263.30	263.44	520.66	530.85	494.50
5K ppb CCV-9 (58483-42)	5,051.58	5,024.85	12,527.84	5,085.14	5,051 44	5,016 18	5,166.28	4,999 62	2,496.78	2,469.35	2,561 91	5,142.85	5,273.53	10,432 71	2,572.71	2,616.24	2,584 77	5,152.28	5,282 14	5,013.30
2% HNO3 Blank	0.07	0.53	-8.37	0.13	-1.20	0.12	-5 90	2 25	-1.95	0.04	-0.49	17.64	-67 77	2.24	0.46	0.46	0.07	-0.34	1 43	-7 82
500 ppb CCV-7 (58483-42)	505.55	505 70	1,224.15	508.56	519 21	502.87	498.16	514.65	247 02	247 17	255.60	477.09	482.05	1,084.08	260.61	265.31	261 79	523.91	534 83	500.75
5K ppb CCV-9 (58483-42)	5,085.23	5,067.65	12,625.58	5,146.06	5,098.83	5,075.08	5,198 72	5,086 71	2,513.34	2,483.72	2,583.03	5,150 97	5,307.03	10,584.29	2,605.24	2,653.83	2,591.27	5,218.03	5,345.71	5,070.94

2% HNO3 Blank	0.52	-0.28	-2.04	-3.63	27.34	-0.09	-3.15	-4.16	-1.54	-0.31	-0.61	16.64	-63.03	7.93	0.75	0.67	0.23	-0.67	-0.24	-2.61
500 ppb CCV-7 (58483-42)	505.76	504.80	1,234.99	510.96	498.88	505.72	502.39	515.80	246.84	246.93	254.18	473.99	481.77	1,083.60	260.61	265.11	264.80	522.84	533.64	499.84
5K ppb CCV-9 (58483-42)	5,081.64	5,048.54	12,562.15	5,082.93	5,028.99	5,057.21	5,185.02	5,011.99	2,509.40	2,465.38	2,573.35	5,233.95	5,293.13	10,563.66	2,551.84	2,604.44	2,599.80	5,106.60	5,277.72	4,987.88
2% HNO3 Blank	0.77	1.16	2.65	-2.41	7.32	0.15	-6.47	-13.24	-1.14	0.03	-0.32	10.54	-65.10	30.46	0.27	0.11	0.13	-0.71	1.24	-0.70
500 ppb CCV-7 (58483-42)	521.08	519.40	1,272.51	522.17	513.99	513.16	503.56	517.62	248.53	254.87	262.56	483.90	497.37	1,085.96	262.30	266.85	259.94	528.10	547.34	523.35
5K ppb CCV-9 (58483-42)	5,139.28	5,113.38	12,723.95	5,184.82	5,122.95	5,191.49	5,251.64	5,140.05	2,536.04	2,512.03	2,609.56	5,326.89	5,362.72	10,562.05	2,647.45	2,697.16	2,631.95	5,299.29	5,386.31	5,078.21
2% HNO3 Blank	0.86	0.93	-3.70	-1.97	2.11	0.30	-2.90	16.95	-2.17	0.43	-0.05	22.78	-67.17	-16.78	0.26	0.13	0.10	-0.52	1.61	-3.33
500 ppb CCV-7 (58483-42)	511.15	510.90	1,250.25	513.22	518.73	523.29	503.84	524.11	249.59	249.87	257.95	473.91	487.99	1,098.34	263.68	268.11	263.43	529.97	539.84	500.59
5K ppb CCV-9 (58483-42)	5,145.87	5,113.70	12,757.33	5,150.44	5,084.39	5,127.59	5,249.19	5,087.84	2,540.75	2,513.23	2,608.36	5,286.29	5,371.60	10,796.34	2,628.87	2,676.81	2,646.62	5,259.91	5,347.48	5,048.63
2% HNO3 Blank	-0.31	1.18	-3.06	-1.34	-12.35	0.14	-2.69	-2.54	-0.95	-0.33	-0.11	16.19	-69.36	12.54	0.18	0.05	0.16	-0.71	2.04	-10.59
500 ppb CCV-7 (58483-42)	511.38	508.50	1,233.27	517.40	503.32	510.98	507.64	482.10	250.03	248.25	257.77	472.11	487.04	1,050.96	263.90	268.97	263.03	531.83	535.73	512.93
5K ppb CCV-9 (58483-42)	5,134.84	5,108.42	12,705.89	5,156.75	5,161.86	5,073.05	5,236.75	5,087.04	2,534.03	2,501.29	2,605.41	5,193.92	5,353.71	10,712.73	2,606.32	2,658.78	2,612.08	5,221.59	5,374.42	5,082.29
2% HNO3 Blank	0.08	0.51	0.02	-1.34	0.11	0.06	-11.66	-8.74	-1.13	-0.08	0.06	23.78	-68.78	-20.63	0.20	0.07	0.13	-0.93	-0.98	3.39
500 ppb CCV-7 (58483-42)	504.02	502.74	1,222.35	509.88	526.11	512.78	509.03	513.11	250.46	244.82	255.53	488.86	478.02	1,053.86	264.02	269.57	268.11	531.87	538.32	511.18
5K ppb CCV-9 (58483-42)	5,132.99	5,105.87	12,732.60	5,176.03	5,104.80	5,274.68	5,281.87	5,085.62	2,542.87	2,485.19	2,614.62	5,335.32	5,372.97	10,759.76	2,619.41	2,674.22	2,616.47	5,255.01	5,384.17	5,108.03
2% HNO3 Blank	-0.75	-0.04	2.87	0.16	34.64	0.07	-8.90	8.08	-1.87	-0.30	0.10	21.41	-66.44	-21.63	0.20	0.11	0.12	-0.35	0.00	-0.17
500 ppb CCV-7 (58483-42)	514.52	510.79	1,244.24	515.53	540.29	504.41	508.18	492.86	250.59	248.97	259.92	479.74	490.58	1,090.12	264.45	270.12	265.45	533.56	544.40	520.21
5K ppb CCV-9 (58483-42)	5,158.17	5,118.61	12,760.02	5,153.65	5,159.02	5,220.36	5,293.53	5,071.13	2,549.28	2,487.30	2,619.25	5,301.70	5,393.72	10,750.19	2,637.18	2,695.17	2,636.82	5,290.32	5,363.76	5,094.15
2% HNO3 Blank	-0.66	0.25	3.17	-2.70	12.24	0.21	-7.13	20.97	-1.75	-0.56	0.19	21.76	-63.56	-0.56	0.34	0.19	0.08	-0.47	-0.45	3.17
500 ppb CCV-7 (58483-42)	520.70	518.46	1,269.02	523.93	539.00	517.50	506.81	528.18	248.86	249.15	263.37	477.89	501.91	1,090.64	264.59	271.52	265.16	532.98	549.86	526.01
5K ppb CCV-9 (58483-42)	5,136.27	5,086.87	12,710.31	5,170.65	5,161.85	5,147.67	5,267.90	5,026.16	2,535.16	2,462.92	2,612.69	5,249.88	5,377.94	10,727.36	2,618.55	2,683.31	2,610.92	5,254.24	5,367.51	5,089.46
2% HNO3 Blank	-0.27	0.60	2.68	-2.53	-14.46	0.08	-3.93	3.74	-2.69	-0.50	-0.10	13.50	-60.45	23.65	0.10	-0.06	0.06	-0.63	0.05	-3.74
500 ppb CCV-7 (58483-42)	512.37	508.81	1,233.45	521.99	492.26	520.75	503.38	509.15	248.64	243.18	259.05	480.69	496.63	1,078.37	263.91	272.27	269.74	533.27	540.03	504.48
5K ppb CCV-9 (58483-42)	5,152.20	5,110.44	12,730.53	5,190.45	5,153.14	5,138.99	5,261.70	4,967.01	2,536.22	2,454.19	2,624.33	5,276.50	5,393.89	10,896.61	2,615.73	2,692.78	2,640.04	5,255.44	5,356.03	5,103.23

ICPMS Summary for Chris Brown / Mike Lindberg / Michelle Valenta
Technical Procedure PNNL-AGG-415, rev 1
Analyzed by Eric Clayton
Reviewed by Keith Geiszler — Tc & U
Sample Set #1144
Samples submitted for analysis: 03-23-07

ICPMS Summary for Chris Brown / Mike Lindberg / Michelle Valenta
Technical Procedure PNNL-AGG-415, rev 1
Analyzed by Eric Clayton
Reviewed by Keith Geiszler — RCRA
Sample Set #1144
Samples submitted for analysis 03-23-07

AE notes

Analyst note: Ag109 results do not match Ag107 results due to some unknown interferent, results suspect.

Project Manager acceptance date 4/12/2007

Calculated concentrations in Porewater based upon ICP-MS analysis of contact water

Sample ID	dilution factor	Tc 99 ug/l	Tc 99 pCi/l	U 238 ug/l	U 238 pCi/l	As 75 ug/l	Se 82 ug/l	Ru 101 ug/l	Ru 102 ug/l	Ru 104 ug/l	Ag 107 ug/l	Ag 109 ug/l	Cd 111 ug/l	Cd 114 ug/l	Sb 121 ug/l	Pb 206 ug/l	Pb 208 ug/l
Water Extracts																	
E-102																	
B1L1L1 WE	17.14	1.14E+00	1.93E+04	1.67E+01	5.62E+00	(1.84E+01)	(2.24E+00)	(4.47E+00)	(2.23E+00)	(4.30E+00)	(1.45E+00)	(1.35E+00)	(2.49E+00)	(2.06E+00)	1.30E+01	(7.54E-01)	(7.63E-01)
A-4																	
B1L4Y7 WE	14.21	<1.42E-01	<2.41E+03	4.39E+01	1.48E+01	6.42E+01	(3.14E+00)	(4.26E-02)	<7.10E+00	(3.27E-01)	(1.40E+00)	(1.17E+00)	(4.76E-01)	(8.45E-01)	3.53E+00	3.60E+00	3.69E+00
B1L500 WE	26.25	<2.63E-01	<4.45E+03	4.83E+02	1.62E+02	3.24E+02	(3.78E+00)	(1.18E-01)	(3.02E-01)	(8.40E-01)	(4.59E-01)	(6.04E-01)	(6.17E-01)	(2.49E-01)	6.98E+00	(1.43E+00)	(1.84E+00)
B1L504 WE	18.99	<1.90E-01	<3.22E+03	3.56E+00	1.20E+00	3.96E+02	(7.60E-01)	(7.60E-02)	(2.85E-02)	(7.22E-01)	(6.93E-01)	(7.03E-01)	(2.66E-01)	(2.85E-01)	5.93E+00	(2.16E+00)	(1.79E+00)
B1M5X1 WE	7.92	1.49E-01	2.52E+03	2.14E+04	7.20E+03	2.47E+01	(1.60E+00)	(3.42E+00)	(1.66E+00)	(4.02E+00)	(3.58E-01)	(1.23E-01)	(9.97E-01)	(6.67E-01)	3.05E+01	(2.65E-01)	(2.65E-01)
B1L512 WE	44.85	<4.49E-01	<7.61E+03	2.66E+01	8.94E+00	3.49E+02	(1.57E+01)	(2.22E+00)	(1.08E+00)	(1.95E+00)	(3.81E-01)	(3.81E-01)	<1.12E+01	(6.28E-01)	8.39E+00	(2.49E+00)	(2.47E+00)
B1L517 WE	47.56	<4.76E-01	<8.07E+03	4.98E+01	1.67E+01	4.18E+02	<1.19E+02	(4.28E-01)	(1.43E-01)	(2.24E+00)	(2.00E+00)	(1.97E+00)	<1.19E+01	(4.28E-01)	9.42E+00	(2.19E+00)	(2.50E+00)
B1L519 WE	47.31	<4.73E-01	<8.02E+03	3.38E+01	1.14E+01	4.07E+02	<1.18E+02	(3.78E-01)	(2.37E-02)	(2.48E+00)	(1.21E+00)	(1.54E+00)	(4.97E-01)	(4.97E-01)	7.74E+00	(1.47E+00)	(1.40E+00)
B1L524 WE	33.64	<3.36E-01	<5.71E+03	1.20E+01	4.04E+00	2.05E+02	<8.41E+01	<1.68E+01	(4.21E-01)	(2.69E+00)	(1.35E-01)	(1.85E-01)	(1.35E-01)	(4.88E-01)	6.47E+00	(3.90E+00)	(3.04E+00)
B1L528 WE	17.06	<1.71E-01	<2.89E+03	8.55E+00	2.88E+00	5.95E+01	(2.22E+01)	(1.11E-01)	(2.73E-01)	(1.90E+00)	<2.13E+00	(5.12E-02)	(2.39E-01)	(1.36E-01)	3.22E+00	(9.38E-02)	<2.13E+00
B1L531 WE	25.49	<2.55E-01	<4.32E+03	7.15E+00	2.40E+00	1.10E+02	(2.43E+01)	(1.91E-01)	(2.55E-01)	(3.19E+00)	(8.92E-02)	(2.55E-02)	(5.61E-01)	(4.46E-01)	5.24E+00	<3.19E+00	<3.19E+00
B1L531 Dup1 WE	25.51	<2.55E-01	<4.33E+03	5.80E+00	1.95E+00	1.15E+02	(1.50E+01)	(7.65E-02)	(5.61E-01)	(2.55E+00)	(2.55E-02)	<3.19E+00	(4.21E-01)	(3.19E-01)	4.52E+00	(3.19E-01)	(3.57E-01)
B1L536 WE	34.74	<3.47E-01	<5.89E+03	7.30E+00	2.45E+00	1.72E+02	(1.11E+01)	(1.22E-01)	(3.13E-01)	(3.30E+00)	(6.95E-02)	(5.21E-02)	<8.69E+00	(4.17E-01)	5.70E+00	<4.34E+00	(1.74E-02)
B1L540 WE	27.99	<2.80E-01	<4.75E+03	4.15E+00	1.40E+00	1.69E+02	(2.79E+01)	(4.20E-02)	(2.10E-01)	(2.23E+00)	(8.40E-02)	<3.50E+00	(1.20E+00)	(4.90E-01)	5.79E+00	(1.54E-01)	(4.76E-01)
B1L543 WE	21.74	<2.17E-01	<3.69E+03	4.46E+00	1.50E+00	1.86E+02	(1.13E+01)	(8.70E-02)	(3.15E-01)	(1.72E+00)	(4.35E-02)	(3.26E-02)	(5.54E-01)	(3.70E-01)	4.59E+00	(7.61E-02)	(1.09E-02)
B1L547 WE	17.66	<1.77E-01	<3.00E+03	7.57E+00	2.54E+00	1.63E+02	(2.74E+00)	(8.83E-02)	(3.18E-01)	(1.17E+00)	(9.71E-02)	(7.06E-02)	(3.97E-01)	(1.85E-01)	3.42E+00	(4.24E-01)	(2.91E-01)
B1L553 WE	23.60	<2.36E-01	<4.00E+03	6.56E+00	2.21E+00	2.02E+02	(1.49E+01)	(1.77E-01)	(3.07E-01)	(1.62E+00)	(5.90E-02)	(1.18E-02)	(7.67E-01)	(6.84E-01)	7.81E+00	(1.19E+00)	(9.91E-01)
B1L553 Dup2 WE	23.61	<2.36E-01	<4.00E+03	5.43E+00	1.83E+00	1.73E+02	(5.43E-01)	(4.72E-02)	(2.01E-01)	(1.27E+00)	(7.08E-02)	(7.08E-02)	(9.80E-01)	(5.08E-01)	8.01E+00	(7.44E-01)	(8.50E-01)
B1L557 WE	33.47	<3.35E-01	<5.68E+03	4.28E+00	1.44E+00	2.28E+02	(1.11E+01)	(1.00E-01)	(7.20E-01)	(2.74E+00)	(6.69E-02)	(3.35E-02)	<8.37E+00	(4.18E-01)	4.99E+00	(5.86E-01)	(3.01E-01)
B1L562 WE (rad)	40.57	<4.06E-01	<6.88E+03	1.06E+01	3.57E+00	4.52E+02	(3.03E+01)	(2.23E-01)	(5.68E-01)	(2.31E+00)	<5.07E+00	<5.07E+00	(7.51E-01)	(6.90E-01)	7.12E+00	(7.71E-01)	(5.48E-01)
B1L568 WE	31.61	<3.16E-01	<5.36E+03	1.71E+00	5.75E-01	1.55E+02	(5.91E+00)	(1.11E-01)	(7.90E-01)	(2.66E+00)	(1.58E-02)	<3.95E+00	<7.90E+00	(4.90E-01)	5.12E+00	(5.37E-01)	(3.79E-01)
B1L570 WE	26.26	<2.63E-01	<4.45E+03	1.31E+00	4.42E-01	1.29E+02	<6.57E+01	(1.58E-01)	(5.65E-01)	(2.70E+00)	(2.63E-02)	(9.19E-02)	(5.78E-01)	(2.49E-01)	6.97E+00	(8.14E-01)	(9.45E-01)
B1L577 WE	31.86	<3.19E-01	<5.40E+03	1.07E+00	3.59E-01	1.09E+02	<7.96E+01	(2.23E-01)	(1.39E+00)	(4.14E+00)	(3.19E-02)	<3.98E+00	(6.53E-01)	(4.46E-01)	4.92E+00	(4.78E-02)	(1.27E-01)
B1L582 WE	25.46	<2.55E-01	<4.32E+03	1.51E+00	5.07E-01	1.29E+02	(4.33E-01)	(1.78E-01)	(1.06E+00)	(4.39E+00)	<3.18E+00	(1.27E-02)	<6.36E+00	(2.67E-01)	4.19E+00	(4.71E-01)	(4.58E-01)
B1L587 WE	27.26	<2.73E-01	<4.62E+03	1.99E+00	6.68E-01	1.21E+02	<6.82E+01	(3.00E-01)	(9.41E-01)	(5.36E+00)	(4.09E-02)	<3.41E+00	(4.77E-01)	(4.23E-01)	5.34E+00	<3.41E+00	(1.36E-01)
B1L592 WE	24.67	<2.47E-01	<4.18E+03	2.06E+00	6.93E-01	1.06E+02	<6.17E+01	(2.10E-01)	(1.11E+00)	(5.04E+00)	(1.23E-01)	(7.40E-02)	(6.66E-01)	(3.70E-01)	4.90E+00	(4.44E-01)	(5.18E-01)
B1L596 WE	31.94	<3.19E-01	<5.42E+03	2.05E+00	6.90E-01	9.42E+01	<7.99E+01	(1.60E-02)	(7.35E-01)	(3.74E+00)	(1.60E-01)	<3.99E+00	(8.30E-01)	(1.17E+00)	9.87E+00	(1.26E+00)	(1.10E+00)
B1L5B1 WE	5.09	<5.09E-02	<8.62E+02	6.39E+00	2.15E+00	2.87E+01	(4.94E+00)	(7.37E-02)	(7.30E-01)	(3.31E+00)	<6.36E-01	(2.54E-02)	(2.64E-01)	(1.30E-01)	1.42E+00	(5.34E-01)	(5.42E-01)
B1L5B1 Dup3 WE	5.09	<5.09E-02	<8.63E+02	6.33E+00	2.13E+00	2.74E+01	(2.36E+00)	(4.58E-02)	(8.24E-01)	(3.45E+00)	<6.36E-01	<6.36E-01	(2.03E-01)	(1.81E-01)	1.08E+00	(3.33E-01)	(3.76E-01)
B1L5B3 WE	4.97	<4.97E-02	<8.43E+02	7.55E+00	2.54E+00	(7.03E+00)	<1.24E+01	(2.49E-03)	(7.46E-01)	(3.90E+00)	<6.21E-01	(1.99E-02)	(3.70E-01)	(2.76E-01)	1.11E+00	1.35E+00	1.26E+00
B1L5B5 WE	4.11	<4.11E-02	<6.97E+02	1.35E+01	4.52E+00	(3.76E+00)	(9.90E-01)	(3.49E-02)	(5.93E-01)	(4.18E+00)	(3.08E-02)	(2.05E-02)	(5.33E-01)	(3.18E-01)	9.41E-01	5.89E-01	5.30E-01
B1L5B7 WE	4.34	<4.34E-02	<7.36E+02	7.67E+00	2.58E+00	(1.02E+01)	<1.09E+01	(1.74E-02)	(4.73E-01)	(3.03E+00)	(1.09E-02)	(1.52E-02)	(2.11E-01)	(2.15E-01)	9.42E-01	(3.02E-01)	(2.17E-01)
B1L5C0 WE	29.59	<2.96E-01	<5.02E+03	3.71E+00	1.25E+00	7.79E+01	(1.14E+00)	(1.63E-01)	(2.51E-01)	(3.14E+00)	<3.70E+00	(8.88E-02)	(1.54E+00)	(9.62E-01)	6.82E+00	(6.51E-01)	(6.06E-01)
B1L5C4 WE	25.00	<2.50E-01	<4.24E+03	5.84E+00	1.96E+00	(4.08E+01)	<6.25E+01	(6.25E-02)	(3.12E-01)	(3.70E+00)	<3.12E+00	(3.75E-02)	(2.27E+00)	(1.32E+00)	1.61E+01	(1.99E+00)	(1.95E+00)

Calculated concentrations in soil based upon ICP-MS analysis of contact water

sample ID	water:soil ratio	Tc 99 ug/g soil	Tc 99 pCi/g soil	U 238 ug/g soil	U 238 pCi/g soil	As 75 ug/g soil	Se 82 ug/g soil	Ru 101 ug/g soil	Ru 102 ug/g soil	Ru 104 ug/g soil	Ag 107 ug/g soil	Ag 109 ug/g soil	Cd 111 ug/g soil	Cd 114 ug/g soil	Sb 121 ug/g soil	Pb 206 ug/g soil	Pb 208 ug/g soil
WATER EXTRACTS																	
E-102																	
B1L1L1 WE	1.00	6.63E-05	1.12E+00	9.75E-04	3.28E-04	(1.07E-03)	(1.31E-04)	(2.61E-04)	(1.30E-04)	(2.51E-04)	(8.45E-05)	(7.90E-05)	(1.45E-04)	(1.20E-04)	7.58E-04	(4.40E-05)	(4.45E-05)
A-4																	
B1L4Y7 WE	1.00	<1.00E-05	<1.70E-01	3.09E-03	1.04E-03	4.52E-03	(2.21E-04)	(3.00E-06)	<5.00E-04	(2.30E-05)	(9.85E-05)	(8.25E-05)	(3.35E-05)	(5.95E-05)	2.49E-04	2.54E-04	2.60E-04
B1L500 WE	1.00	<1.00E-05	<1.70E-01	1.84E-02	6.19E-03	1.23E-02	(1.44E-04)	(4.50E-06)	(1.15E-05)	(3.20E-05)	(1.75E-05)	(2.30E-05)	(2.35E-05)	(9.50E-06)	2.66E-04	(5.45E-05)	(7.00E-05)
B1L504 WE	1.00	<1.00E-05	<1.70E-01	1.88E-04	6.31E-05	2.09E-02	(4.00E-05)	(4.00E-06)	(1.50E-06)	(3.80E-05)	(3.65E-05)	(3.70E-05)	(1.40E-05)	(1.50E-05)	3.13E-04	(1.14E-04)	(9.40E-05)
B1M5X1 WE	1.00	1.88E-05	3.19E-01	2.70E+00	9.09E-01	3.13E-03	(2.02E-04)	(4.33E-04)	(2.09E-04)	(5.08E-04)	(4.53E-05)	(1.55E-05)	(1.26E-04)	(8.43E-05)	3.86E-03	(3.35E-05)	(3.35E-05)
B1L512 WE	1.00	<1.00E-05	<1.70E-01	5.93E-04	1.99E-04	7.79E-03	(3.49E-04)	(4.95E-05)	(2.40E-05)	(4.35E-05)	(8.50E-06)	(8.50E-06)	<2.50E-04	(1.40E-05)	1.87E-04	(5.55E-05)	(5.50E-05)
B1L517 WE	1.00	<1.00E-05	<1.70E-01	1.05E-03	3.52E-04	8.80E-03	<2.50E-03	(9.00E-06)	(3.00E-06)	(4.70E-05)	(4.20E-05)	(4.15E-05)	<2.50E-04	(9.00E-06)	1.98E-04	(4.60E-05)	(5.25E-05)

B1L519 WE	1.00	<1.00E-05	<1.70E-01	7.14E-04	2.40E-04	8.61E-03	<2.50E-03	(8.00E-06)	(5.00E-07)	(5.25E-05)	(2.55E-05)	(3.25E-05)	(1.05E-05)	(1.05E-05)	1.64E-04	(3.10E-05)	(2.95E-05)
B1L524 WE	1.00	<1.00E-05	<1.70E-01	3.57E-04	1.20E-04	6.09E-03	<2.50E-03	<5.00E-01	(1.25E-05)	(8.00E-05)	(4.00E-06)	(5.50E-06)	(4.00E-06)	(1.45E-05)	1.92E-04	(1.16E-04)	(9.05E-05)
B1L528 WE	1.00	<1.00E-05	<1.70E-01	5.03E-04	1.69E-04	3.50E-03	(1.31E-03)	(6.52E-06)	(1.61E-05)	(1.12E-04)	<1.25E-04	(3.01E-06)	(1.40E-05)	(8.03E-06)	1.89E-04	(5.52E-06)	<1.25E-04
B1L531 WE	1.00	<1.00E-05	<1.70E-01	2.80E-04	9.43E-05	4.33E-03	(9.53E-04)	(7.50E-06)	(1.00E-05)	(1.25E-04)	(3.50E-06)	(1.00E-06)	(2.20E-05)	(1.75E-05)	2.05E-04	<1.25E-04	<1.25E-04
B1L531 Dup1 WE	1.00	<1.00E-05	<1.70E-01	2.27E-04	7.64E-05	4.52E-03	(5.89E-04)	(3.00E-06)	(2.20E-05)	(1.00E-04)	(1.00E-06)	<1.25E-04	(1.65E-05)	(1.25E-05)	1.77E-04	(1.25E-05)	(1.40E-05)
B1L536 WE	1.00	<1.00E-05	<1.70E-01	2.10E-04	7.06E-05	4.96E-03	(3.20E-04)	(3.50E-06)	(9.00E-06)	(9.50E-05)	(2.00E-06)	(1.50E-06)	<2.50E-04	(1.20E-05)	1.64E-04	<1.25E-04	(5.00E-07)
B1L540 WE	1.00	<1.00E-05	<1.70E-01	1.48E-04	4.99E-05	6.05E-03	(9.98E-04)	(1.50E-06)	(7.50E-06)	(7.95E-05)	(3.00E-06)	<1.25E-04	(4.30E-05)	(1.75E-05)	2.07E-04	(5.50E-06)	(1.70E-05)
B1L543 WE	1.00	<1.00E-05	<1.70E-01	2.05E-04	6.89E-05	8.58E-03	(5.21E-04)	(4.00E-06)	(1.45E-05)	(7.90E-05)	(2.00E-06)	(1.50E-06)	(2.55E-05)	(1.70E-05)	2.11E-04	(3.50E-06)	(5.00E-07)
B1L547 WE	1.00	<1.00E-05	<1.70E-01	4.29E-04	1.44E-04	9.22E-03	(1.55E-04)	(5.00E-06)	(1.80E-05)	(6.60E-05)	(5.50E-06)	(4.00E-06)	(2.25E-05)	(1.05E-05)	1.94E-04	(2.40E-05)	(1.65E-05)
B1L553 WE	1.00	<1.00E-05	<1.70E-01	2.78E-04	9.36E-05	8.54E-03	(6.32E-04)	(7.50E-06)	(1.30E-05)	(6.85E-05)	(2.50E-06)	(5.00E-07)	(3.25E-05)	(2.90E-05)	3.31E-04	(5.05E-05)	(4.20E-05)
B1L553 Dup2 WE	1.00	<1.00E-05	<1.70E-01	2.30E-04	7.74E-05	7.32E-03	(2.30E-05)	(2.00E-06)	(8.51E-06)	(5.41E-05)	(3.00E-06)	(3.00E-06)	(4.15E-05)	(2.15E-05)	3.40E-04	(3.15E-05)	(3.60E-05)
B1L557 WE	1.09	<1.09E-05	<1.85E-01	1.40E-04	4.70E-05	7.45E-03	(3.62E-04)	(3.27E-06)	(2.35E-05)	(8.95E-05)	(2.18E-06)	(1.09E-06)	<2.73E-04	(1.36E-05)	1.63E-04	(1.91E-05)	(9.82E-06)
B1L562 WE (rad)	1.52	<1.52E-05	<2.59E-01	3.99E-04	1.34E-04	1.70E-02	(1.14E-03)	(8.39E-06)	(2.13E-05)	(8.69E-05)	<1.91E-04	<1.91E-04	(2.82E-05)	(2.59E-05)	2.68E-04	(2.90E-05)	(2.06E-05)
B1L568 WE	1.00	<1.00E-05	<1.70E-01	5.41E-05	1.82E-05	4.91E-03	(1.87E-04)	(3.50E-06)	(2.50E-05)	(8.40E-05)	(5.00E-07)	<1.25E-04	<2.50E-04	(1.55E-05)	1.62E-04	(1.70E-05)	(1.20E-05)
B1L570 WE	1.00	<1.00E-05	<1.70E-01	5.01E-05	1.68E-05	4.91E-03	<2.50E-03	(6.01E-06)	(2.15E-05)	(1.03E-04)	(1.00E-06)	(3.50E-06)	(2.20E-05)	(9.51E-06)	2.66E-04	(3.10E-05)	(3.60E-05)
B1L577 WE	1.00	<1.00E-05	<1.70E-01	3.36E-05	1.13E-05	3.43E-03	<2.50E-03	(7.01E-06)	(4.35E-05)	(1.30E-04)	(1.00E-06)	<1.25E-04	(2.05E-05)	(1.40E-05)	1.55E-04	(1.50E-06)	(4.00E-06)
B1L582 WE	1.00	<1.00E-05	<1.70E-01	5.93E-05	1.99E-05	5.06E-03	(1.70E-05)	(7.00E-06)	(4.15E-05)	(1.73E-04)	<1.25E-04	(5.00E-07)	<2.50E-04	(1.05E-05)	1.65E-04	(1.85E-05)	(1.80E-05)
B1L587 WE	1.00	<1.00E-05	<1.70E-01	7.29E-05	2.45E-05	4.45E-03	<2.50E-03	(1.10E-05)	(3.45E-05)	(1.96E-04)	(1.50E-06)	<1.25E-04	(1.75E-05)	(1.55E-05)	1.96E-04	<1.25E-04	(5.00E-06)
B1L592 WE	1.00	<1.00E-05	<1.70E-01	8.35E-05	2.81E-05	4.29E-03	<2.50E-03	(8.50E-06)	(4.50E-05)	(2.04E-04)	(5.00E-06)	(3.00E-06)	(2.70E-05)	(1.50E-05)	1.98E-04	(1.80E-05)	(2.10E-05)
B1L596 WE	1.00	<1.00E-05	<1.70E-01	6.42E-05	2.16E-05	2.95E-03	<2.50E-03	(5.00E-07)	(2.30E-05)	(1.17E-04)	(5.00E-06)	<1.25E-04	(2.60E-05)	(3.65E-05)	3.09E-04	(3.95E-05)	(3.45E-05)
B1L5B1 WE	1.00	<1.00E-05	<1.70E-01	1.26E-03	4.22E-04	5.65E-03	(9.72E-04)	(1.45E-05)	(1.44E-04)	(6.51E-04)	<1.25E-04	(5.00E-06)	(5.20E-05)	(2.55E-05)	2.79E-04	(1.05E-04)	(1.07E-04)
B1L5B1 Dup3 WE	1.00	<1.00E-05	<1.70E-01	1.24E-03	4.18E-04	5.38E-03	(4.65E-04)	(9.00E-06)	(1.62E-04)	(6.79E-04)	<1.25E-04	<1.25E-04	(4.00E-05)	(3.55E-05)	2.13E-04	(6.55E-05)	(7.40E-05)
B1L5B3 WE	1.00	<1.00E-05	<1.70E-01	1.52E-03	5.11E-04	(1.42E-03)	<2.50E-03	(5.00E-07)	(1.50E-04)	(7.85E-04)	<1.25E-04	(4.00E-06)	(7.45E-05)	(5.55E-05)	2.23E-04	2.71E-04	2.54E-04
B1L5B5 WE	1.00	<1.00E-05	<1.70E-01	3.27E-03	1.10E-03	(9.15E-04)	(2.41E-04)	(8.50E-06)	(1.44E-04)	(1.02E-03)	(7.50E-06)	(5.00E-06)	(1.30E-04)	(7.75E-05)	2.29E-04	1.43E-04	1.29E-04
B1L5B7 WE	1.01	<1.01E-05	<1.71E-01	1.78E-03	5.99E-04	(2.36E-03)	<2.52E-03	(4.03E-06)	(1.10E-04)	(7.03E-04)	(2.52E-06)	(3.53E-06)	(4.89E-05)	(4.99E-05)	2.19E-04	(7.00E-05)	(5.04E-05)
B1L5C0 WE	1.00	<1.00E-05	<1.70E-01	1.26E-04	4.22E-05	2.63E-03	(3.85E-05)	(5.50E-06)	(8.50E-06)	(1.06E-04)	<1.25E-04	(3.00E-06)	(5.20E-05)	(3.25E-05)	2.30E-04	(2.20E-05)	(2.05E-05)
B1L5C4 WE	1.00	<1.00E-05	<1.70E-01	2.34E-04	7.86E-05	(1.63E-03)	<2.50E-03	(2.50E-06)	(1.25E-05)	(1.48E-04)	<1.25E-04	(1.50E-06)	(9.10E-05)	(5.30E-05)	6.46E-04	(7.95E-05)	(7.80E-05)

Calculated concentrations in soil based upon ICP-MS analysis of contact Acid

sample ID	acid:soil ra	Tc 99	Tc 99	U 238	U 238	As 75	Se 82	Ru 101	Ru 102	Ru 104	Ag 107	Ag 109	Cd 111	Cd 114	Sb 121	Pb 206	Pb 208
	ml/g	ug/g soil	pCi/g soil	ug/g soil	pCi/g soil	ug/g soil	ug/g soil	ug/g soil	ug/g soil	ug/g soil	ug/g soil	ug/g soil	ug/g soil	ug/g soil	ug/g soil	ug/g soil	ug/g soil
ACID EXTRACTS																	
E-102																	
B1L1L1 AE	4.60	(1.44E-03)	(2.43E+01)	3.58E-01	1.20E-01	2.33E+00	(5.00E-02)	(7.39E-03)	(1.00E-02)	(5.16E-02)	8.32E-02	4.78E-02	6.42E-02	7.91E-02	2.11E-02	3.82E+00	3.80E+00
A-4																	
B1LAY7 AE	5.36	<2.68E-03	<4.55E+01	3.88E-01	1.30E-01	1.06E+00	<5.36E-01	(4.83E-04)	(9.49E-03)	(4.38E-02)	7.06E-02	3.91E-02	(4.43E-02)	6.74E-02	(1.20E-02)	2.89E+00	2.87E+00
B1L500 AE	5.16	<2.58E-03	<4.38E+01	7.60E-01	2.56E-01	2.60E+00	<5.16E-01	(2.58E-04)	(1.55E-02)	(5.99E-02)	5.33E-02	2.69E-02	(4.86E-02)	6.39E-02	(1.17E-02)	3.28E+00	3.25E+00
B1L504 AE	5.49	<2.74E-03	<4.65E+01	3.97E-01	1.33E-01	2.71E+00	<5.49E-01	(8.78E-04)	(1.16E-02)	(4.47E-02)	5.27E-02	3.01E-02	(5.43E-02)	6.84E-02	(1.37E-02)	3.56E+00	3.56E+00
B1M5X1 AE	5.30	<2.65E-03	<4.49E+01	9.17E+01	3.08E+01	1.28E+00	(4.89E-02)	(6.12E-03)	(1.45E-02)	(5.69E-02)	4.33E-02	3.08E-02	5.85E-02	6.61E-02	1.51E-02	4.20E+00	4.14E+00
B1L512 AE	5.21	<2.61E-03	<4.42E+01	3.71E-01	1.25E-01	1.85E+00	(4.48E-03)	(6.77E-04)	(1.15E-02)	(4.49E-02)	4.46E-02	2.40E-02	(4.29E-02)	(4.97E-02)	(1.02E-02)	2.72E+00	2.77E+00
B1L517 AE	5.62	<2.81E-03	<4.77E+01	4.92E-01	1.66E-01	3.15E+00	<5.62E-01	(6.75E-04)	(1.47E-02)	(5.08E-02)	5.25E-02	2.91E-02	6.02E-02	6.57E-02	(1.38E-02)	3.42E+00	3.31E+00
B1L519 AE	5.28	<2.64E-03	<4.47E+01	4.32E-01	1.45E-01	2.80E+00	<5.28E-01	<2.64E-02	(1.47E-02)	(5.33E-02)	5.46E-02	3.18E-02	(5.21E-02)	6.29E-02	(1.16E-02)	3.55E+00	3.52E+00
B1L524 AE	5.17	<2.59E-03	<4.39E+01	4.00E-01	1.35E-01	1.64E+00	<5.17E-01	(9.31E-04)	(1.17E-02)	(5.07E-02)	4.37E-02	2.51E-02	(4.94E-02)	6.02E-02	(6.31E-03)	3.35E+00	3.27E+00
B1L528 AE	5.23	<2.62E-03	<4.44E+01	3.61E-01	1.21E-01	2.05E+00	(1.49E-02)	(8.90E-04)	(1.22E-02)	(4.59E-02)	5.47E-02	3.31E-02	(4.91E-02)	6.11E-02	(6.80E-03)	3.48E+00	3.25E+00
B1L531 AE	5.32	<2.66E-03	<4.51E+01	4.23E-01	1.42E-01	2.99E+00	<5.32E-01	(7.97E-04)	(1.17E-02)	(4.86E-02)	5.62E-02	2.53E-02	(5.18E-02)	5.88E-02	(7.92E-03)	3.40E+00	3.32E+00
B1L531 Dup1 AE	5.54	<2.77E-03	<4.70E+01	4.00E-01	1.35E-01	2.73E+00	<5.54E-01	(8.87E-04)	(1.19E-02)	(4.66E-02)	5.34E-02	2.78E-02	(4.61E-02)	5.94E-02	(9.04E-03)	3.45E+00	3.48E+00
B1L536 AE	5.37	<2.69E-03	<4.55E+01	3.16E-01	1.06E-01	1.80E+00	<5.37E-01	(6.98E-04)	(1.11E-02)	(4.79E-02)	4.60E-02	2.47E-02	(4.08E-02)	(5.16E-02)	(5.69E-03)	2.85E+00	2.86E+00
B1L540 AE	5.44	<2.72E-03	<4.61E+01	3.19E-01	1.07E-01	1.28E+00	<5.44E-01	(1.09E-03)	(1.19E-02)	(4.18E-02)	4.34E-02	2.04E-02	(3.89E-02)	(4.90E-02)	(4.35E-03)	2.68E+00	2.73E+00
B1L543 AE	5.27	<2.63E-03	<4.47E+01	4.03E-01	1.35E-01	2.44E+00	(8.95E-04)	(4.74E-04)	(1.34E-02)	(4.61E-02)	5.58E-02	3.60E-02	5.93E-02	6.29E-02	(7.37E-03)	4.19E+00	4.20E+00
B1L547 AE	5.21	<2.61E-03	<4.42E+01	3.92E-01	1.32E-01	2.45E+00	(2.66E-02)	<2.61E-02	(1.06E-02)	(4.48E-02)	5.54E-02	2.78E-02	6.80E-02	7.02E-02	(6.83E-03)	3.89E+00	3.73E+00
B1L553 AE	5.27	<2.63E-03	<4.47E+01	3.49E-01	1.17E-01	1.57E+00	<5.27E-01	(1.11E-03)	(8.01E-03)	(4.02E-02)	4.87E-02	3.37E-02	(4.91E-02)	5.34E-02	(7.75E-03)	3.42E+00	3.42E+00
B1L553 Dup2 AE	5.93	<2.97E-03	<5.03E+01	4.06E-01	1.37E-01	1.83E+00	<5.93E-01	(1.78E-04)	(8.96E-03)	(3.81E-02)	4.55E-02	2.83E-02	(4.80E-02)	5.94E-02	(8.07E-03)	3.01E+00	2.98E+00
B1L557 AE	5.38	<2.69E-03	<4.56E+01	3.65E-01	1.23E-01	1.72E+00	<5.38E-01	(1.61E-04)	(1.17E-02)	(4.34E-02)	5.63E-02	3.09E-02	(5.08E-02)	5.41E-02	(8.23E-03)	2.52E+00	2.55E+00
B1L562 AE (rad)	7.00	<3.50E-03	<5.94E+01	4.62E-01	1.55E-01	2.20E+00	(8.33E-03)	(7.00E-04)	(1.02E-02)	(3.73E-02)	7.28E-02	4.86E-02	(5.66E-02)	7.13E-02	(8.56E-03)	2.59E+00	2.64E+00
B1L568 AE	5.28	<2.64E-03	<4.48E+01	3.91E-01	1.32E-01	1.63E+00	(8.22E-02)	(1.11E-03)	(1.01E-02)	(4.46E-02)	6.42E-02	2.96E-02	(5.23E-02)	7.78E-02	(5.92E-03)	2.37E+00	2.37E+00
B1L570 AE	5.31	<2.66E-03	<4.51E+01	3.24E-01	1.09E-01	1.58E+00	<5.31E-01	(1.97E-03)	(8.77E-03)	(4.02E-02)	5.16E-02	3.19E-02	(5.14E-02)	5.81E-02	(5.47E-03)	2.52E+00	2.52E+00
B1L577 AE	5.39	<2.70E-03	<4.57E+01	3.31E-01	1.11E-01	1.58E+00	<5.39E-01	(1.02E-03)	(9.98E-03)	(3.75E-02)	5.70E-02	3.11E-02	(5.01E-02)	5.78E-02	(6.85E-03)	2.36E+00	2.35E+00
B1L582 AE	5.29	<2.64E-03	<4.48E+01	4.13E-01	1.39E-01	2.73E+00	<5.29E-01	(1.22E-03)	(1.31E-02)	(4.99E-02)	5.47E-02	3.23E-02	6.89E-02	7.55E-02	(9.63E-03)	2.81E+00	2.72E+00
B1L587 AE	5.31	<2.66E-03	<4.51E+01	4.29E-01	1.44E-01	2.30E+00	<5.31E-01	<2.66E-02	(1.08E-02)	(5.31E-02)	5.32E-02	2.91E-02	5.72E-02	6.02E-02	(9.09E-03)	2.75E+00	2.75E+00
B1L592 AE	5.36	<2.68E-03	<4.55E+01	3.86E-01	1.30E-01	1.78E+00	<5.36E-01	(5.90E-04)	(8.96E-03)	(4.99E-02)	4.69E-02	2.98E-02	6.49E-02	7.01E-02	(5.20E-03)	2.58E+00	2.47E+00
B1L596 AE	5.22	<2.61E-03	<4.43E+01	3.28E-01	1.10E-01	1.28E+00	<5.22E-01	(1.10E-03)	(9.53E-03)	(3.71E-02)	6.06E-02	3.21E-02	(5.01E-02)	5.87E-02	(7.15E-03)	2.42E+00	2.47E+00
B1L5B1 AE	5.18	<2.59E-03	<4.39E+01	8.03E-01	2.70E-01	6.97E+00	<5.18E-01	(1.35E-03)	(1.88E-02)	(7.93E-02)	8.18E-02	5.21E-02	1.51E-01	1.74E-01	(1.19E-02)	5.50E+00	5.50E+00
B1L5B1 Dup3 AE	6.19	<3.09E-03	<5.25E+01	8.30E-01	2.79E-01	7.02E+00	<6.19E-01	(1.79E-03)	(1.81E-02)	(8.38E-02)	8.19E-02	5.46E-02	1.71E-01	1.92E-01	(1.44E-02)	5.87E+00	5.91E+00

B1L5B3 AE	5.41	<2.70E-03	<4.58E+01	9.85E-01	3.31E-01	2.70E+00	<5.41E-01	(5.41E-05)	(2.02E-02)	(8.58E-02)	1.14E-01	8.74E-02	2.36E-01	2.43E-01	(1.14E-02)	7.62E+00	7.46E+00
B1L5B5 AE	5.52	<2.76E-03	<4.68E+01	1.29E+00	4.33E-01	2.83E+00	<5.52E-01	(2.54E-03)	(2.46E-02)	(1.05E-01)	1.61E-01	1.31E-01	4.80E-01	4.94E-01	5.47E-02	1.15E+01	1.09E+01
B1L5B7 AE	5.30	<2.65E-03	<4.49E+01	8.39E-01	2.82E-01	4.20E+00	<5.30E-01	(1.70E-03)	(1.88E-02)	(8.64E-02)	1.18E-01	8.40E-02	2.00E-01	2.13E-01	(8.32E-03)	7.30E+00	7.29E+00
B1L5C0 AE	4.91	<2.46E-03	<4.17E+01	4.80E-01	1.61E-01	1.34E+00	<4.91E-01	(1.13E-03)	(5.34E-03)	(3.51E-02)	6.75E-02	2.73E-02	6.00E-02	6.95E-02	(7.64E-03)	3.18E+00	3.23E+00
B1L5C4 AE	5.01	<2.51E-03	<4.25E+01	5.55E-01	1.87E-01	1.18E+00	(8.69E-02)	(1.49E-03)	(8.12E-03)	(3.93E-02)	8.75E-02	3.27E-02	7.36E-02	1.07E-01	(9.23E-03)	2.72E+00	2.78E+00

ICPMS Spike Recoveries for Chris Brown / Mike Lindberg / Michelle Valenta
Samples submitted for analysis: 03-23-07
Analyzed by Eric Clayton

Sample ID	% Recovery
Cr 52	
B1L1L1 WE	96
B1M5X1 WE	92
Cr 53	
B1L1L1 WE	93
B1M5X1 WE	93
Cu 63	
B1L1L1 WE	89
B1M5X1 WE	90
Cu 65	
B1L1L1 WE	85
B1M5X1 WE	86
As 75	
B1L1L1 WE	95
B1M5X1 WE	94
Se 82	
B1L1L1 WE	99
B1M5X1 WE	96
Mo 95	
B1L1L1 WE	93
B1M5X1 WE	105
Mo 97	
B1L1L1 WE	95
B1M5X1 WE	119
Mo 98	
B1L1L1 WE	98
B1M5X1 WE	116
Ru 101	
B1L1L1 WE	101
B1M5X1 WE	104
Ru 102	
B1L1L1 WE	100
B1M5X1 WE	100
Ru 104	
B1L1L1 WE	98
B1M5X1 WE	100
Ag 107	
B1L1L1 WE	99
B1M5X1 WE	93
Ag 109	
B1L1L1 WE	96
B1M5X1 WE	91
Cd 111	
B1L1L1 WE	98
B1M5X1 WE	100
Cd 114	
B1L1L1 WE	97
B1M5X1 WE	96
Sb 121	

B1L1L1 WE	98
B1M5X1 WE	100
Pb 206	
B1L1L1 WE	99
B1M5X1 WE	98
Pb 208	
B1L1L1 WE	101
B1M5X1 WE	102

MS032707 WE ICPMS CCVs pass within +/-10%, INTs pass within +/-20%

Samples reprocessed on another page

Sample ID	52Cr ppb	53Cr ppb	63Cu ppb	65Cu ppb	75As ppb	82Se ppb	95Mo ppb	97Mo ppb	98Mo ppb	101Ru ppb	102Ru ppb	104Ru ppb	107Ag ppb	109Ag ppb	111Cd ppb	114Cd ppb	121Sb ppb	206Pb ppb	208Pb ppb
Blank 7	-0.0382	-0.0047	-0.0167	-0.0201	0.0106	0.0402	0.0145	0.0144	0.0163	-0.0012	-0.0006	0.0012	0	0.0017	0.0023	-0.001	-0.001	-0.0051	-0.0047
0.25 ppb IND Check (58483-54)	0.2205	0.253	0.2628	0.2449	0.2255	0.2994	0.2558	0.2627	0.2598	0.2532	0.249	0.2566	0.2485	0.2521	0.2378	0.2325	0.2431	0.2662	0.2593
1.0 ppb IND Check (58483-54)	0.9782	0.9677	1.2871	1.2501	1.0082	1.0103	0.9957	1.0248	1.0035	0.9999	1.0059	0.9998	0.9966	0.9729	0.9471	0.9639	0.9945	1.0556	1.0153
Blank 9	-0.0291	-0.009	-0.0139	-0.0228	-0.015	-0.0343	0.0163	0.0264	0.023	-0.0005	0.0007	0.0012	0.0016	0.0036	-0.0004	0.0011	0.0009	-0.0023	-0.0024
0.25 ppb IND Check (58483-54)	0.2329	0.2545	0.2543	0.2471	0.2336	0.2728	0.2618	0.262	0.2695	0.2516	0.2519	0.2484	0.2558	0.2475	0.2483	0.2382	0.2558	0.2735	0.2698
1.0 ppb IND Check (58483-54)	0.9529	0.949	0.9332	0.964	0.9881	1.0915	1.0311	1.0158	1.0368	1.0513	1.0445	1.045	1.0244	1.0101	0.9902	0.9896	0.9963	1.0382	1.0101
Blank 11	-0.0045	-0.0029	-0.0103	-0.0175	0.0024	0.0108	0.0326	0.0396	0.0361	0.0001	-0.001	0.0006	-0.001	0.0006	-0.0006	-0.0011	-0.0013	-0.003	-0.0034
0.25 ppb IND Check (58483-54)	0.2327	0.2306	0.2549	0.2482	0.2357	0.2813	0.2524	0.2731	0.2706	0.2591	0.2535	0.2494	0.2495	0.2483	0.2588	0.2447	0.2443	0.2709	0.2572
1.0 ppb IND Check (58483-54)	0.9714	0.9878	0.9383	0.9429	0.9505	1.0222	1.0208	1.0209	1.0432	1.0494	1.0398	1.0399	1.0303	1.0223	0.9924	1	1.0109	1.0334	1.0072
Blank 7	-0.0174	-0.0279	-0.0848	-0.0483	-0.0045	0.0309	0.0145	0.0263	0.0184	0.0007	-0.0005	-0.0008	0.0014	0.0006	0.0027	-0.0004	0.0039	-0.0012	-0.0018
0.25 ppb IND Check (58483-54)	0.2602	0.2116	0.1932	0.229	0.2272	0.1431	0.24	0.2444	0.2489	0.2288	0.23	0.237	0.2345	0.2455	0.2521	0.2491	0.2546	0.2478	0.2478
1.0 ppb IND Check (58483-54)	0.9929	0.9279	0.9637	0.9941	0.9117	0.9073	0.9346	0.9185	0.9205	0.9325	0.921	0.9303	0.9645	0.9743	0.9719	0.9606	0.9722	1.0272	0.9785
Blank 11	-0.0077	-0.0154	-0.0907	-0.0494	-0.0874	-0.1595	0.0183	0.0321	0.0177	-0.0006	0.0003	0.0001	0.0007	-0.0006	0.0014	-0.001	0.0007	-0.0006	-0.0029
0.25 ppb IND Check (58483-54)	0.268	0.2504	0.1892	0.2347	0.1569	0.2663	0.2287	0.2371	0.2251	0.2225	0.2265	0.228	0.2409	0.2383	0.2436	0.2483	0.2491	0.2512	0.2391
1.0 ppb IND Check (58483-54)	1.0356	0.9185	0.9211	0.98	0.865	0.9962	0.8929	0.8975	0.8894	0.9187	0.9067	0.9059	0.9583	0.9566	1.0191	0.974	0.9883	1.0194	0.9925
Blank 13	-0.0112	-0.0227	-0.0861	-0.0522	-0.0098	0.0387	0.0362	0.0513	0.0309	0.0009	0.0007	-0.0009	-0.0006	-0.0006	-0.0013	-0.0004	0.0006	-0.0008	-0.0017
0.25 ppb IND Check (58483-54)	0.2636	0.2397	0.1959	0.231	0.1555	0.2287	0.2439	0.2261	0.2159	0.2218	0.2249	0.2276	0.2321	0.24	0.2318	0.2385	0.241	0.2571	0.2418
1.0 ppb IND Check (58483-54)	1.009	0.9645	0.95	1.006	0.9047	1.0568	0.9135	0.8738	0.8679	0.8781	0.9122	0.9016	0.9569	0.9815	0.9529	0.964	0.9927	0.9974	0.9769
Blank 7	-0.0431	-0.0059	-0.0183	-0.0222	0.0163	0.0449	0.0133	0.0133	0.0157	-0.0014	-0.0008	0.0011	-0.0001	0.0016	0.0021	-0.001	-0.001	-0.0051	-0.0047
0.25 ppb IND Check (58483-54)	0.2268	0.2569	0.2614	0.2431	0.228	0.3026	0.254	0.2609	0.2585	0.2521	0.248	0.2559	0.2479	0.2516	0.2375	0.2324	0.2431	0.2662	0.2593
1.0 ppb IND Check (58483-54)	1.0012	0.9835	1.2824	1.2459	1.0121	1.0171	1.0004	1.0293	1.0078	1.0035	1.0092	1.0027	0.9987	0.9744	0.9481	0.9641	0.9945	1.0556	1.0153
Blank 9	-0.0235	-0.0082	-0.0145	-0.0236	-0.0142	-0.0317	0.0166	0.027	0.0235	-0.0005	0.0007	0.0013	0.0016	0.0036	-0.0004	0.0011	0.0009	-0.0023	-0.0024
0.25 ppb IND Check (58483-54)	0.248	0.264	0.2626	0.255	0.2394	0.2822	0.2657	0.2656	0.273	0.2543	0.2544	0.2505	0.2574	0.2487	0.2491	0.2384	0.2558	0.2735	0.2698
1.0 ppb IND Check (58483-54)	0.9856	0.9756	0.9491	0.9777	0.9924	1.0869	1.0178	1.0039	1.0257	1.0421	1.0361	1.0378	1.0192	1.0063	0.9876	0.9889	0.9963	1.0382	1.0101
Blank 11	-0.0058	-0.0033	-0.0112	-0.0186	0.0052	0.0143	0.0323	0.0392	0.036	-0.0001	-0.0011	0.0006	-0.001	0.0005	-0.0006	-0.0011	-0.0013	-0.003	-0.0034
0.25 ppb IND Check (58483-54)	0.2355	0.2328	0.2536	0.2465	0.2378	0.2808	0.2496	0.2673	0.2682	0.2572	0.2518	0.2481	0.2485	0.2476	0.2582	0.2446	0.2443	0.2709	0.2572
1.0 ppb IND Check (58483-54)	0.9873	1.0017	0.9468	0.95	0.9549	1.0247	1.0152	1.0157	1.0383	1.0456	1.0361	1.0369	1.0281	1.0207	0.9913	0.9997	1.0109	1.0334	1.0072
Blank 13	-0.0075	-0.015	-0.0101	-0.0193	0.0241	0.0341	0.0287	0.0352	0.0321	0.0015	-0.0006	0.0012	0.0003	0.0022	0.0007	0.0009	0	-0.0018	-0.002
0.25 ppb IND Check (58483-54)	0.2562	0.2628	0.2632	0.2508	0.2308	0.2417	0.2492	0.2659	0.2706	0.2658	0.2527	0.2644	0.2532	0.2479	0.2462	0.2429	0.2477	0.2746	0.2652
1.0 ppb IND Check (58483-54)	1.0006	0.9986	0.986	0.9736	0.9395	1.112	0.9982	0.9777	1.0336	1.0299	1.0266	1.0527	1.0342	1.0159	1.014	0.9965	1.009	1.0402	1.0119
Blank 14	-0.0147	0.0028	-0.0027	-0.0059	0.0179	0.0881	0.0054	0.0074	0.0084	0.0003	0.0003	0.0031	0.002	0.0028	0.0014	-0.0004	0.0001	0.0016	0.002

ICPMS Spike Recoveries for Chris Brown / Mike Lindberg / Michelle Valenta
Samples submitted for analysis: 08-23-07
Analyzed by Eric Clayton

Sample ID	% Recovery	
Cr 52		
B1L1L1 AE	340	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration
B1M5X1 AE	133	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration
Cr 53		
B1L1L1 AE	343	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration.
B1M5X1 AE	139	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration.
Cu 63		
B1L1L1 AE	169	Matrix spike is not applicable The sample concentration is 5 times greater than the spike concentration.
B1M5X1 AE	116	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration
Cu 65		
B1L1L1 AE	196	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration
B1M5X1 AE	130	Matrix spike is not applicable The sample concentration is 5 times greater than the spike concentration.

As 75		
B1L1L1 AE	97	
B1M5X1 AE	93	
Se 82		
B1L1L1 AE	79	
B1M5X1 AE	95	
Mo 95		
B1L1L1 AE	161	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration
B1M5X1 AE	95	
Mo 97		
B1L1L1 AE	158	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration.
B1M5X1 AE	97	
Mo 98		
B1L1L1 AE	160	Matrix spike is not applicable. The sample concentration is 5 times greater than the spike concentration.
B1M5X1 AE	96	
Ru 101		
B1L1L1 AE	99	
B1M5X1 AE	102	
Ru 102		
B1L1L1 AE	99	
B1M5X1 AE	101	
Ru 104		
B1L1L1 AE	104	
B1M5X1 AE	103	
Ag 107		
B1L1L1 AE	95	
B1M5X1 AE	98	
Ag 109		
B1L1L1 AE	92	
B1M5X1 AE	96	
Cd 111		
B1L1L1 AE	90	
B1M5X1 AE	98	
Cd 114		
B1L1L1 AE	92	
B1M5X1 AE	93	
Sb 121		
B1L1L1 AE	88	
B1M5X1 AE	94	
Pb 206		
B1L1L1 AE	122	
B1M5X1 AE	95	
Pb 208		
B1L1L1 AE	120	
B1M5X1 AE	93	

MS032707 AE ICPMS

Samples reprocessed on another page

Sample ID	52Cr ppb	53Cr ppb	63Cu ppb	65Cu ppb	75As ppb	82Se ppb	95Mo ppb	97Mo ppb	98Mo ppb	101Ru ppb	102Ru ppb	104Ru ppb	107Ag ppb	109Ag ppb	111Cd ppb	114Cd ppb	121Sb ppb	206Pb ppb	208Pb ppb
0.25 ppb IND Check (58483-54)	0.24	0.253	0.2568	0 245	0.226	0.2355	0.2469	0.2638	0.2684	0.2641	0.2511	0.263	0.2522	0.2471	0.2457	0.2428	0.2477	0.2746	0.2652
1 0 ppb IND Check (58483-54)	0.9645	0.9685	0.9632	0.9544	0.9314	1.1054	1.011	0.9893	1.0448	1.0389	1.0349	1.0599	1.0394	1.0197	1.0166	0.9972	1 009	1.0402	1.0119
Blank 14	-0.0141	0.0031	-0.0018	-0.0048	0.0141	0.0849	0.0063	0.0083	0.0089	0.0005	0.0005	0 0032	0.0021	0.0029	0.0015	-0 0003	0.0001	0.0016	0.002
0.25 ppb IND Check (58483-54)	0.2438	0.2452	0 2593	0.2577	0.2339	0.2505	0.269	0.2572	0.267	0.2483	0.2514	0.2549	0.2607	0.2509	0.2462	0.2474	0.2391	0.2752	0.2684
1.0 ppb IND Check (58483-54)	1.0174	1.0012	0.9657	0.9262	0.9122	1.0233	1.0243	1.0136	1 0494	1.0438	1.0425	1.0483	1.0489	1.0208	1.0211	0.987	1.017	1.0271	1.016
Blank 17	0.0202	0.0353	0.0419	0.0337	0.0043	0.0242	0.0116	0.0113	0.0126	-0.0005	-0.0017	0.0002	0.0003	0.0015	-0.0002	0.0009	-0.001	0.0231	0.0239
0.25 ppb IND Check (58483-54)	0.2633	0.2662	0.286	0.2717	0.2599	0.3158	0.2721	0.2412	0.2669	0.2518	0.2601	0.2614	0.2532	0.2517	0.2358	0.2405	0.2466	0.2881	0.28
1.0 ppb IND Check (58483-54)	1.0273	1.0154	0.9472	0.9426	0.9469	1.0751	1.028	1.0519	1.044	1.0391	1.0418	1.0623	1 041	1.012	0.9808	0.9835	1.002	1 0589	1.0232
Blank 19	0 0837	0.1118	0.0828	0.0723	0.0093	0.0413	0.0523	0 0587	0.0559	-0.0006	-0.0008	0.0001	0.0011	0.0019	-0.0002	0.0006	-0 0011	0 0159	0.0158
0.25 ppb IND Check (58483-54)	0.2399	0.2613	0.2577	0.2554	0.2354	0.2669	0.2586	0.2721	0.2868	0.2586	0.2628	0.264	0 2572	0.2433	0.2469	0.2458	0.2469	0.2747	0.2691
1.0 ppb IND Check (58483-54)	1.0198	0.979	0.9479	0.9491	0.9537	1.0439	1.0392	1.0766	1 0587	1.0477	1.0551	1.0462	1 0284	1.0189	0.9929	0.9807	1 0079	1.0439	1 0016
Blank 15	-0.0044	-0.0085	-0.0783	-0 0367	0 0137	0.0143	0.006	0.0156	0.0098	-0.0006	-0.0004	-0.0006	0.0011	0.0011	-0.0001	0.0006	0.0036	0.0036	0.0038
0.25 ppb IND Check (58483-54)	0.2633	0.2141	0.1913	0.2426	0 1952	0.1839	0.2477	0 2489	0.2375	0.2191	0.2244	0.2319	0.2451	0.2461	0.2387	0.2407	0.241	0.2511	0.2404
1.0 ppb IND Check (58483-54)	1.0227	0.9347	0.9463	0.9907	0.9553	1.1385	0.8827	0.8574	0.8515	0.8936	0.9092	0.9364	0.9688	0.9761	0.9375	0.9705	0.9877	1 0249	0.9903

Blank 17	0.0024	-0.0027	-0.0727	-0 0332	-0.0543	-0.0549	0.0042	0.0103	0.0071	0.0004	-0.001	-0.001	0.0011	0.0005	0.0012	0.0003	-0.0003	0.0073	0.0068
0.25 ppb IND Check (58483-54)	0.2909	0.2475	0.2074	0.2533	0.1493	0.0504	0.2218	0 2221	0.2121	0.2169	0 2289	0.2268	0.2354	0.242	0.23	0.2482	0.2571	0 2721	0.2606
1 0 ppb IND Check (58483-54)	1 0468	1.0202	0.9764	0.9824	0 9603	1.0784	0.8829	0.888	0.8668	0.88	0.8828	0.8965	0.9465	0.9662	0.9514	0.9536	0 9797	1.0255	0.9847
Blank 19	0 0302	-0.0005	-0 0694	-0.031	-0.0509	-0.0957	0.0103	0.0127	0.0112	0.0009	-0 0011	-0.0017	0.0005	0.0002	-0.0047	-0.0017	-0.0005	0.0035	0.0043
0.25 ppb IND Check (58483-54)	0.278	0.2302	0.2013	0.2508	0 194	0 2249	0.2445	0.2498	0.2296	0.2267	0.2267	0 2293	0.2423	0.2439	0.2551	0.2384	0.2536	0.2588	0.2495
1.0 ppb IND Check (58483-54)	1	0.9632	0.9659	0.9848	0.9179	0 7295	0.9077	0.9	0.8574	0.8945	0.9084	0.9026	0.9542	0.9751	0.9429	0.971	0.9891	1.0204	0.9755
Blank 15	0.0259	0 0276	0.0223	0.0257	-0.0215	-0.0237	0.0082	0.0194	0.0121	-0 0021	-0.0023	0.0022	-0.0007	0.001	-0.0006	-0.0001	0.0007	0.0119	0.0133
0.25 ppb IND Check (58483-54)	0.2608	0.2562	0.2724	0.2702	0.2407	0.2593	0.2716	0.2594	0.2693	0.25	0.253	0.2564	0.2618	0.2517	0.2467	0.2475	0.2391	0.2667	0.2684
1.0 ppb IND Check (58483-54)	1.0965	1 0659	1 0259	0.9826	0.9565	1.0713	1 0559	1.0419	1.077	1.0664	1.0636	1.0661	1.0619	1.0304	1.0275	0.9886	1.017	1.0271	1 016
Blank 17	0.0319	0.0394	0.0475	0 0386	0.0031	0.0281	0.0116	0.0114	0.0128	-0 0005	-0.0017	0.0002	0.0003	0.0016	-0.0002	0.0009	-0.001	0.0231	0.0239
0.25 ppb IND Check (58483-54)	0.2867	0.2622	0.3063	0.2715	0.2706	0.3286	0.2757	0.2443	0.2703	0.2544	0.2626	0.2635	0.2546	0.2529	0.2365	0.2407	0.2466	0.2881	0.28
1.0 ppb IND Check (58483-54)	1 0848	1 0666	1.0118	1 0053	0.894	1.0898	1 058	1.0795	1.0698	1.0602	1.0616	1.0793	1.0532	1.0208	0.9866	0.985	1.002	1.0589	1 0232
Blank 19	0.095	0.1185	0.092	0.0811	0.006	0.0468	0.0558	0.0622	0.0589	-0.0005	-0.0007	0.0002	0.0012	0.0019	-0.0001	0.0006	-0.0011	0.0159	0.0158
0.25 ppb IND Check (58483-54)	0.2493	0.2689	0.27	0.267	0.2418	0.275	0.2604	0.2738	0.2887	0.26	0.2642	0.2651	0.258	0.2439	0.2473	0.2459	0.2469	0.2747	0.2691
1.0 ppb IND Check (58483-54)	1 0665	1.0198	1 0019	1.0016	0.9936	1 0847	1.0641	1 0998	1.0801	1.0655	1.0715	1 06	1 0383	1.0263	0.9978	0.9819	1 0079	1.0439	1.0016
Blank 20	0.0256	0.007	0.0046	-0.0062	0.0092	0.0296	0.0086	0.0183	0.0115	0.0005	0.0001	0 0022	0.0002	0.0024	0.0013	0.0005	-0.0012	-0 0018	0.0003
0.25 ppb IND Check (58483-54)	0.2929	0.2684	0.2743	0.2616	0.2316	0.2618	0.2705	0.2572	0.2595	0.2508	0.264	0.2581	0.2555	0.2519	0.2446	0.2363	0.252	0.2803	0.2669
1.0 ppb IND Check (58483-54)	1.0686	1 1051	0.9956	0.9695	0.9923	1.0119	1 077	1.0661	1.0631	1.0595	1.0734	1.0562	1.0435	1.0213	1.0088	0.9747	1.0115	1.0455	1.0229

ICPMS Summary for Chris Brown / Mike Lindberg / Michelle Valenta
Technical Procedure: PNNL-AGG-415, rev 1
Analyzed by Eric Clayton
Reviewed by Keith Geiszler
Sample Set #1148 Project Manager acceptance date: 4/12/2007
Samples submitted for analysis 03-28-07

Calculated concentrations in Porewater based upon ICP-MS analysis of contact water

Sample ID	dilution factor	I 129 DRC ug/l
B1L1L1 WE	17.14	5.68E+01
B1L4Y7 WE	14.21	3.98E+00
B1L500 WE	26.25	7.02E+00
B1L504 WE	18.99	(8.32E-01)
B1M5X1 WE	7.92	2.65E+01
B1L512 WE	44.85	3.40E+01
B1L517 WE	47.56	1.78E+02
B1L519 WE	47.31	1.05E+02
B1L524 WE	33.64	1.67E+01
B1L528 WE	17.06	3.59E+00
B1L531 WE	25.49	7.68E+00
B1L531 Dup1 WE	25.51	6.71E+00
B1L536 WE	34.74	5.20E+00
B1L540 WE	27.99	9.50E+00
B1L543 WE	21.74	9.16E+00
B1L547 WE	17.66	4.43E+00
B1L553 WE	23.60	2.06E+01
B1L553 Dup2 WE	23.61	1.81E+01
B1L557 WE	33.47	6.77E+00
B1L562 (rad) WE	40.57	1.14E+01
B1L568 WE	31.61	9.08E+00
B1L570 WE	26.26	1.36E+01
B1L577 WE	31.86	1.32E+01
B1L582 WE	25.46	1.04E+01
B1L587 WE	27.26	1.14E+01
B1L592 WE	24.67	7.68E+00
B1L596 WE	31.94	2.75E+01
B1L5B1 WE	5.09	5.23E+00
B1L5B1 Dup3 WE	5.09	5.64E+00
B1L5B3 WE	4.97	7.89E+00
B1L5B5 WE	4.11	1.02E+01
B1L5B7 WE	4.34	6.07E+00
B1L5C0 WE	29.59	4.04E+01
B1L5C4 WE	25.00	3.68E+01

Calculated concentrations in soil based upon ICP-MS analysis of contact water

sample ID	water:soil ratio	I 129 DRC ug/g soil
B1L1L1 WE	1.00	3.31E-03
B1L4Y7 WE	1.00	2.80E-04
B1L500 WE	1.00	2.67E-04
B1L504 WE	1.00	(4.38E-05)
B1M5X1 WE	1.00	3.35E-03
B1L512 WE	1.00	7.59E-04
B1L517 WE	1.00	3.74E-03
B1L519 WE	1.00	2.22E-03
B1L524 WE	1.00	4.96E-04
B1L528 WE	1.00	2.11E-04
B1L531 WE	1.00	3.01E-04
B1L531 Dup1 WE	1.00	2.63E-04
B1L536 WE	1.00	1.50E-04
B1L540 WE	1.00	3.40E-04
B1L543 WE	1.00	4.22E-04
B1L547 WE	1.00	2.51E-04
B1L553 WE	1.00	8.74E-04
B1L553 Dup2 WE	1.00	7.66E-04
B1L557 WE	1.09	2.21E-04
B1L562 (rad) WE	1.52	4.30E-04
B1L568 WE	1.00	2.87E-04
B1L570 WE	1.00	5.19E-04
B1L577 WE	1.00	4.15E-04
B1L582 WE	1.00	4.07E-04
B1L587 WE	1.00	4.17E-04
B1L592 WE	1.00	3.11E-04
B1L596 WE	1.00	8.60E-04
B1L5B1 WE	1.00	1.03E-03
B1L5B1 Dup3 WE	1.00	1.11E-03
B1L5B3 WE	1.00	1.59E-03
B1L5B5 WE	1.00	2.48E-03
B1L5B7 WE	1.01	1.41E-03
B1L5C0 WE	1.00	1.36E-03
B1L5C4 WE	1.00	1.47E-03

Sample ID	Spike % Recovery
B1L1L1 WE	98
B1M5X1 WE	117
B1L517 WE	90
B1L519 WE	92
B1L547 WE	99
B1L577 WE	95
B1L5B1 WE	119
B1L5B3 WE	102

0.25 ppb IND check (58483-59)	0.2403
Blank 8	<0.025
0.25 ppb IND check (58483-59)	0.2368
Blank 10	<0.025
0.25 ppb IND check (58483-59)	0.2388
Blank 12	<0.025
0.25 ppb IND check (58483-59)	0.2401
Blank 14	<0.025
0.25 ppb IND check (58483-59)	0.2361
Blank 16	<0.025

Analysis Type: Anions by Ion Chromatography: SW846 method 9056 Modified by Use of Hydroxide Eluent
Analysis Requested By:
Samples received 3/20/2007
Sample Analysis Date: 3/21/2007 re-run 3/23/07 B1L562 3/14/07
Approximate Concentration/Type of Solve water Preliminary Data until reviewed
Special Analysis Requirements: Analyst name: Michelle Valenta
Calibration and Standards Prep. Date: As run Peer reviewer name: Michael Lindberg
Stock Standards: BNW LRB 57971 Project Manager acceptance date: 4/12/2007
Please contact Mike Lindberg (372-2483) for analysis requests or questions.

N/A-values not reported due to peak interferant
Extract ratio corrected
Conc. (µg in extract water per g of soil)

Sample ID	water:s oil ratio	Amount ug/g Fluoride	Amount ug/g Chloride	Amount ug/g Nitrite	Amount ug/g Nitrate	Amount ug/g Sulfate	Amount ug/g Phosphate
B1L1L1	1.00	5.32E-01	5.41E+00	<1.00E+00	<1.00E+00	2.79E+01	<1.50E+00
B1L14Y7	1.00	6.52E-01	<5.00E-01	<1.00E+00	2.89E+00	2.38E+00	<1.50E+00
B1L500	1.00	N/A	4.69E-01	<1.00E+00	1.13E+00	3.58E+00	<1.50E+00
B1L504	1.00	<2.00E-01	<5.00E-01	<1.00E+00	<1.00E+00	1.47E+00	<3.49E+00
B1M5X1	1.00	N/A	7.88E-01	<1.00E+00	1.29E+00	7.41E+01	<1.50E+00
B1L512	1.00	N/A	4.82E-01	<1.00E+00	<1.00E+00	3.63E+00	<1.50E+00
B1L517	1.00	2.28E-01	<5.00E-01	<1.00E+00	<1.00E+00	7.06E+00	<1.50E+00
B1L519	1.00	N/A	<5.00E-01	<1.00E+00	<1.00E+00	8.60E+00	<1.50E+00
B1L524	1.00	3.23E-01	<5.00E-01	<1.00E+00	1.32E+01	8.52E+00	<1.50E+00
B1L528	1.00	N/A	9.29E+00	<1.00E+00	1.20E+01	3.25E+01	<1.51E+00
B1L531	1.00	N/A	8.45E+00	<1.00E+00	8.46E+00	2.30E+01	<1.50E+00
B1L531 DUP	1.00	N/A	7.69E+00	<1.00E+00	8.00E+00	2.11E+01	<1.50E+00
B1L536	1.00	N/A	5.26E+00	<1.00E+00	3.31E+00	1.54E+01	<1.50E+00
B1L540	1.00	2.53E-01	6.81E+00	<1.00E+00	3.07E+00	9.50E+00	<1.50E+00
B1L543	1.00	2.85E-01	6.79E+00	<1.00E+00	2.32E+00	7.20E+00	<1.50E+00
B1L547	1.00	2.45E-01	2.28E+00	<1.00E+00	1.62E+00	1.58E+01	<1.50E+00
B1L553	1.00	N/A	1.15E+00	<1.00E+00	1.66E+00	5.15E+00	<1.50E+00
B1L553 DUP	1.00	N/A	1.12E+00	<1.00E+00	1.53E+00	4.42E+00	<1.50E+00
B1L557	1.09	N/A	5.57E-01	<1.09E+00	3.29E+00	2.83E+00	<1.64E+00
B1L562	1.52		<7.62E-01	<1.52E+00	<1.52E+00	2.37E+00	<2.29E+00
B1L568	1.00	N/A	7.30E-01	<1.00E+00	2.01E+01	2.39E+00	<1.50E+00
B1L570	1.00	N/A	3.54E-01	<1.00E+00	3.57E+01	1.78E+00	<1.50E+00
B1L577	1.00	N/A	5.01E-01	<1.00E+00	4.54E+01	2.15E+00	<1.50E+00
B1L582	1.00	N/A	<5.00E-01	<1.00E+00	5.14E+01	2.76E+00	<1.50E+00
B1L587	1.00	N/A	<5.00E-01	<1.00E+00	5.57E+01	2.51E+00	<1.50E+00
B1L592	1.00	N/A	<5.00E-01	<1.00E+00	5.57E+01	2.51E+00	<1.50E+00
B1L596	1.00	2.79E-01	5.52E-01	<1.00E+00	2.67E+01	3.18E+00	<1.50E+00
B1L5B1	1.00	N/A	8.64E-01	<1.00E+00	2.04E+02	1.20E+01	<1.50E+00
B1L5B1 DUP	1.00	N/A	8.66E-01	<1.00E+00	2.10E+02	1.22E+01	<1.50E+00
B1L5B3	1.00	3.56E-01	1.02E+00	<1.00E+00	2.05E+02	1.86E+01	<1.50E+00
B1L5B5	1.00	4.23E-01	8.45E-01	<1.00E+00	2.33E+02	3.09E+01	<1.50E+00
B1L5B7	1.01	N/A	6.28E-01	<1.01E+00	2.19E+02	2.87E+01	<1.51E+00
B1L5C0	1.00	N/A	1.17E+00	<1.00E+00	2.52E+01	1.75E+01	<1.50E+00
B1L5C4	1.00	N/A	1.13E+00	<1.00E+00	2.67E+01	1.06E+01	<1.50E+00
B1L5C0	1.00	N/A	1.17E+00	<1.00E+00	2.52E+01	1.75E+01	<1.50E+00
B1L5C4	1.00	N/A	1.13E+00	<1.00E+00	2.67E+01	1.06E+01	<1.50E+00

Dilution Factor corrected
Conc. (µg in water extract per mL Pore Water)

Sample ID	water Dilution Factor	Amount ug/ml Fluoride	Amount ng/ml Chloride	Amount ng/ml Nitrite	Amount ug/ml Nitrate	Amount ug/ml Sulfate	Amount ug/ml Phosphate
B1L1L1	17.14	9.12E+00	9.27E+01	<1.71E+01	<1.71E+01	4.79E+02	<2.57E+01
B1L14Y7	14.21	9.26E+00	<7.10E+00	<1.42E+01	4.10E+01	3.37E+01	<2.13E+01
B1L500	26.25	N/A	1.23E+01	<2.63E+01	2.96E+01	9.41E+01	<3.94E+01
B1L504	18.99	<3.80E+00	<9.50E+00	<1.90E+01	<1.90E+01	2.79E+01	<6.63E+01
B1M5X1	7.92	N/A	6.23E+00	<7.92E+00	1.02E+01	5.86E+02	<1.19E+01
B1L512	44.85	N/A	2.16E+01	<4.49E+01	<4.49E+01	1.63E+02	<6.73E+01
B1L517	47.56	1.08E+01	<2.38E+01	<4.76E+01	<4.76E+01	3.36E+02	<7.13E+01
B1L519	47.31	N/A	<2.37E+01	<4.73E+01	<4.73E+01	4.07E+02	<7.10E+01
B1L524	33.64	1.09E+01	<1.68E+01	<3.36E+01	4.44E+02	2.87E+02	<5.05E+01
B1L528	17.06	N/A	1.58E+02	<1.71E+01	2.03E+02	5.53E+02	<2.56E+01
B1L531	25.49	N/A	2.15E+02	<2.55E+01	2.16E+02	5.86E+02	<3.82E+01
B1L531 DUP	25.51	N/A	1.96E+02	<2.55E+01	2.04E+02	5.38E+02	<3.83E+01
B1L536	34.74	N/A	1.83E+02	<3.47E+01	1.15E+02	5.35E+02	<5.21E+01
B1L540	27.99	7.07E+00	1.91E+02	<2.80E+01	8.59E+01	2.66E+02	<4.20E+01
B1L543	21.74	6.20E+00	1.48E+02	<2.17E+01	5.05E+01	1.56E+02	<3.26E+01
B1L547	17.66	4.32E+00	4.02E+01	<1.77E+01	2.85E+01	2.79E+02	<2.65E+01
B1L553	23.60	N/A	2.72E+01	<2.36E+01	3.91E+01	1.22E+02	<3.54E+01
B1L553 DUP	23.61	N/A	2.65E+01	<2.36E+01	3.61E+01	1.04E+02	<3.54E+01
B1L557	33.47	N/A	1.71E+01	<3.35E+01	1.01E+02	8.68E+01	<5.02E+01
B1L562	40.57	N/A	<2.03E+01	<4.06E+01	4.06E+01	6.31E+01	<6.09E+01
B1L568	31.61	N/A	2.31E+01	<3.16E+01	6.36E+02	7.56E+01	<4.74E+01
B1L570	26.26	N/A	9.30E+00	<2.63E+01	9.35E+02	4.67E+01	<3.94E+01
B1L577	31.86	N/A	1.59E+01	<3.19E+01	1.44E+03	6.83E+01	<4.78E+01
B1L582	25.46	N/A	<1.27E+01	<2.55E+01	1.31E+03	7.03E+01	<3.82E+01
B1L587	27.26	N/A	<1.36E+01	<2.73E+01	1.52E+03	6.84E+01	<4.09E+01
B1L592	24.67	N/A	<1.23E+01	<2.47E+01	1.37E+03	6.19E+01	<3.70E+01
B1L596	31.94	8.91E+00	1.76E+01	<3.19E+01	8.55E+02	1.02E+02	<4.79E+01
B1L5B1	5.09	N/A	4.39E+00	<5.09E+00	1.04E+03	6.11E+01	<7.63E+00
B1L5B1 DUP	5.09	N/A	4.41E+00	<5.09E+00	1.07E+03	6.19E+01	<7.63E+00
B1L5B3	4.97	1.77E+00	5.05E+00	<4.97E+00	1.02E+03	9.26E+01	<7.46E+00
B1L5B5	4.11	1.74E+00	3.47E+00	<4.11E+00	9.58E+02	1.27E+02	<6.16E+00
B1L5B7	4.34	N/A	2.71E+00	<4.34E+00	9.43E+02	1.24E+02	<6.51E+00
B1L5C0	29.59	N/A	3.47E+01	<2.96E+01	7.44E+02	5.18E+02	<4.44E+01
B1L5C4	25.00	N/A	2.84E+01	<2.50E+01	6.66E+02	2.66E+02	<3.75E+01
B1L5C0	29.59	N/A	3.47E+01	<2.96E+01	7.44E+02	5.18E+02	<4.44E+01
B1L5C4	25.00	N/A	2.84E+01	<2.50E+01	6.66E+02	2.66E+02	<3.75E+01

Quality Control

Standard Recoveri	Fluoride	Chloride	Nitrite	Nitrate	Sulfate	Phosphate
CCV1	90.24	91.65	104.50	95.34	92.92	94.10
CCV2	93.94	91.65	103.71	95.51	90.23	91.45
CCV3	91.57	90.27	98.16	93.95	90.94	90.97
CCV4	94.98	90.31	106.31	94.12	93.04	93.47
CCV5	96.30	90.76	95.21	97.42	90.04	93.25

Spike Recoveries (	Fluoride	Chloride	Nitrite	Nitrate	Sulfate	Phosphate
B1L1L1 Spk	98.02	95.79	96.80	97.09	97.69	90.64
B1L531 SPK	92.49	99.53	102.35	99.86	97.37	91.27
B1L570 SPK	93.88	95.35	100.67	102.12	96.30	91.47

Duplicates-RPD	Fluoride	Chloride	Nitrite	Nitrate	Sulfate	Phosphate
B1L1L1 IC Dup	4.87%	1.14%	N/A	N/A	0.42%	N/A
B1L531 IC DUP	N/A	1.50%	N/A	1.82%	0.29%	N/A
B1L570 IC DUP	N/A	1.29%	N/A	1.16%	0.13%	N/A

Blanks	Fluoride	Chloride	Nitrite	Nitrate	Sulfate	Phosphate
CCB	<0.02	<0.05	<0.1	<0.1	<0.15	<0.15
CCB2	<0.02	<0.05	<0.1	<0.1	<0.15	<0.15
CCB3	<0.02	<0.05	<0.1	<0.1	<0.15	<0.15
CCB 4	<0.02	<0.05	<0.1	<0.1	<0.15	<0.15
CCB5	<0.02	<0.05	<0.1	<0.1	<0.15	<0.15
PB032007 1	<0.02	<0.05	<0.1	<0.1	<0.15	<0.15
PB032007 2	0.03	<0.05	<0.1	<0.1	<0.15	<0.15
PB032007 3	<0.02	<0.05	<0.1	<0.1	<0.15	<0.15

Analysis Type: Alkalinity — Standard Methods for the Examination of Water and Wastewater 20th Edition Method 2320 B
Analysis Requested By:
Samples Received:
Sample Analysis Date: 4/5/2007 — Preliminary Data until reviewed
Type of Solvent Matrix: water leachates — Analyst name: IVK 3/20/07, 3/26/07 (rad sample), 3/30/07, B1L547 ran 4/5/07 MMV
Special Analysis Requirements: — Peer reviewer name: MMV
Calibration and Standards Prep. Date: As run — Project Manager acceptance date: 4/12/2007
Stock Standards:
Performed on a Denver Instrument Titrator 295 with Titrosoft 2.11 located in RPL Room 312
Please contact Mike Lindberg (372-2483) for analysis requests or questions.

INSF=insufficient sample volume for analysis

Sample ID	CaCO3 at pH 4.5 Endpoint (mg/L)	dilution factor	alkalinity CaCO3 at pH 4.5 Endpoint (mg/L)
E-102			
B1L1L1-1E10	126.16	17.14	2.16E+03
A-4			
B1L4Y7	50.92	14.21	7.23E+02
B1L500	46.36	26.25	1.22E+03
B1L504	41.04	18.99	7.79E+02
B1M5X1	66.12	7.92	5.23E+02
B1L512	36.48	44.85	1.64E+03
B1L517	44.84	47.56	2.13E+03
B1L519	45.60	47.31	2.16E+03
B1L524	44.84	33.64	1.51E+03
B1L528	37.24	17.06	6.35E+02
B1L531	38.00	25.49	9.69E+02
B1L531 Dup1	38.76	25.51	9.89E+02
B1L536	36.48	34.74	1.27E+03
B1L540	41.80	27.99	1.17E+03
B1L543	46.36	21.74	1.01E+03
B1L547	51.68	17.66	9.13E+02
B1L553	51.68	23.60	1.22E+03
B1L553 Dup2	50.16	23.61	1.18E+03
B1L557	49.40	33.47	1.65E+03
B1L562	38.76	40.57	1.57E+03
B1L568	42.56	31.61	1.35E+03
B1L570	43.32	26.26	1.14E+03
B1L577	38.76	31.86	1.23E+03
B1L582	38.76	25.46	9.87E+02
B1L587	42.56	27.26	1.16E+03
B1L592	44.08	24.67	1.09E+03
B1L596	44.84	31.94	1.43E+03
B1L5B1	62.32	5.09	3.17E+02
B1L5B1 Dup1	47.12	5.09	2.40E+02
B1L5B3	65.36	4.97	3.25E+02
B1L5B5	66.12	4.11	2.72E+02
B1L5B7	INSF	4.34	
B1L5C0	52.44	29.59	1.55E+03
B1L5C4	41.80	25.00	1.04E+03

***Quality Control**

	Total alkalinity CaCO3 at pH 4.5 Endpoint	% recovery
Standard Initi	1048.80	104%
Blank	7.60	
Standard	1048.80	104%
Blank	7.60	
Standard	1010.80	100%
Blank	6.08	
PB1	14.44	
PB2	15.20	
PB3	18.24	

3/30/2007

	Total alkalinity CaCO3 at pH 4.5 Endpoint	% recovery
Std	1068.00	106%
Blank	7.60	
Std1	1064.00	105%
Blank	7.60	
Std3	1071.60	106%
Blank	11.40	
Blank	7.60	

4/5/2007

	Total alkalinity CaCO3 at pH 4.5 Endpoint	
blk 1	11.40	
std 1	1094.40	108%
std 2	1086.80	108%
b;l 2	7.60	

Analysis Type: Soil total, inorganic and organic (by difference) carbon

A-4 Project

Analysis Requested By:	Chris Brown
Sample Analysis Date:	03/14/2007-03/21/2007
Approximate Concentration/Type of Solvent I	Soil
Special Analysis Requirements:	NA

Analyst name: Igor Kutnyakov
Peer reviewer: CF Brown
Project Manager acceptance date: 4/12/2007

Please contact Igor Kutnyakov (373-9790) for analysis requests or questions.

Sample ID	Total Carbon	Mean TC	Inorg.Carbon	Mean IC	Organic Carbon	IC as CaCO3
	%	%	%	%	(by difference)	
E-102						
B1L1L1 rep1	0.69	0.69	0.13	0.14	0.54	1.19
B1L1L1 rep2	0.68		0.15			
A-4						
B1L4Y7	0.13		0.06		0.07	0.48
B1L500 rep1	0.41	0.41	0.43	0.40	0.00	3.36
B1L500 rep2	0.40		0.38			
B1L504	0.27		0.26		0.02	2.13
B1M5X1 rep1	0.89	0.88	0.19	0.19	0.69	1.58
B1M5X1 rep2	0.86		0.19			
B1L512	0.33		0.25		0.07	2.12
B1L517	0.27		0.21		0.06	1.75
B1L519	0.31		0.27		0.05	2.22
B1L524	0.27		0.21		0.06	1.77
B1L528	0.30		0.23		0.07	1.92
B1L531	0.23		0.19		0.04	1.59
B1L531 Dup1	0.25		0.22		0.04	1.82
B1L536	0.30		0.25		0.05	2.08
B1L540 rep1	0.24	0.24	0.21	0.20	0.04	1.68
B1L540 rep2	0.24		0.20		0.05	1.63
B1L543	0.28		0.22		0.06	1.87
B1L547	0.29		0.24		0.04	2.02
B1L553	0.22		0.18		0.04	1.50
B1L553 Dup2	0.21		0.18		0.03	1.50
B1L557	0.16		0.11		0.05	0.94
B1L562	0.23		0.13		0.09	1.12
B1L568	0.14		0.10		0.04	0.86
B1L570	0.17		0.12		0.05	1.01
B1L577	0.16		0.12		0.04	1.00
B1L582	0.18		0.15		0.03	1.25
B1L587	0.16		0.11		0.05	0.92
B1L592	0.17		0.14		0.03	1.18
B1L596	0.18		0.14		0.04	1.17
B1L5B1	0.29		0.26		0.03	2.18
B1L5B1 Dup3	0.30		0.27		0.03	2.27
B1L5B3 rep1	0.38	0.38	0.32	0.33	0.05	2.71
B1L5B3 rep2	0.38		0.33			
B1L5B5 rep1	0.64	0.63	0.62	0.61	0.02	5.11
B1L5B5 rep2	0.63		0.61			
B1L5B7	0.24		0.17		0.07	1.44
B1L5C0	0.06		0.01		0.05	0.09
B1L5C4	0.06		0.03		0.04	0.23

Total Carbon

Standards	%	Mean %	STD %,Recovery	Mean %,Recovery
1.0% Std	0.9842	0.98	98.42	98.33
1.0% Std	0.9887		98.87	
1.0% Std	0.9827		98.27	
1.0% Std	0.9809		98.09	
1.0% Std	0.9800		98.00	
1.0% Std	0.9777		97.77	
1.0% Std	0.9891		98.91	
0.40% Std	0.3928	0.40	98.20	98.82
0.40% Std	0.3886		97.15	
0.40% Std	0.4018		100.45	
0.40% Std	0.4098		102.45	
0.40% Std	0.3924		98.10	
0.40% Std	0.3862		96.55	

Inorganic Carbon

Standards	%	Mean %	STD %,Recovery	Mean %,Recovery
1.0% Std	1.0000	0.99	100.00	99.07
1.0% Std	0.9783		97.83	
1.0% Std	0.9743		97.43	
1.0% Std	0.9646		96.46	
1.0% Std	1.042		104.20	
1.0% Std	0.9850		98.50	
0.40% Std	0.3965	0.40	99.13	100.52
0.40% Std	0.3768		94.20	
0.40% Std	0.4076		101.90	
0.40% Std	0.4304		107.60	
0.40% Std	0.3990		99.75	

Gamma Energy Analysis Isotopic report, 325 Counting room Lab 425
Data report by: Igor Kutsyakov 3/6/07 b-102
Data reviewed by: Robert Orr 3/9/2007
Procedure: AOO-ELL-002

Gamma Energy Analysis Isotopic report, 325 Counting room Lab 425
Data report by: Igor Kutsyakov 3/1/07 A-4 data
Data reviewed by: Robert Orr 3/19/2007
Procedure: AOO-ELL-002

Project Manager acceptance date: 4/12/2007

B-102	Units	K-40	Error	CS-137	Error	Bi-214	Error	AM-241	Error
B-102 BIL.11.1-Soil	(pCi/g)	1.596E+01	8.870E-01	8.285E-01	5.879E-02	7.394E-01	3.360E-01	2.827E+00	4.326E-01

A-4	Units	K-40	Error	CS-137	Error	Tl-208	Error	Pb-212	Error	Bi-214	Error	Pb-214	Error	RA-228	Error	RA-226	Error	AM-241	Error
BIL4Y7 Soil Dose	(pCi/g)	1.599E+01	9.761E-01	4.847E+00	1.438E-01	4.273E-01	6.765E-02	4.962E-01	1.460E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL4Y7 Rs2 Thoron	(pCi/g)	1.804E+01	9.747E-01	5.239E+00	1.643E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL500 Soil	(pCi/g)	1.724E+01	8.822E-01	ND	ND	3.597E-01	5.279E-02	1.406E+00	1.545E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL504 Soil	(pCi/g)	1.923E+01	9.738E-01	ND	ND	3.481E-01	5.180E-02	6.325E-01	1.113E-01	ND	ND	2.367E+00	2.875E+00	ND	ND	ND	ND	ND	ND
BIL505 K1 Soil Thoron	(pCi/g)	1.814E+01	9.545E-01	8.649E+00	2.209E-01	3.678E-01	7.015E-02	ND	ND	ND	ND	ND	ND	ND	ND	3.178E+01	2.918E+00	3.025E+01	1.563E+00
BIL505X1 Rs1 Thoron	(pCi/g)	1.774E+01	9.826E-01	8.478E+00	1.913E-01	2.997E-01	5.617E-02	9.915E-01	1.099E-01	1.111E+00	3.745E-01	7.795E+00	3.554E+00	ND	ND	3.216E+01	2.414E+00	1.572E+01	1.244E+00
BIL512 Soil	(pCi/g)	1.837E+01	8.895E-01	ND	ND	3.071E-01	4.984E-02	9.545E-01	1.243E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL517 Soil	(pCi/g)	1.719E+01	8.516E-01	ND	ND	3.235E-01	4.782E-02	8.202E-01	1.892E-01	ND	ND	1.840E+00	3.854E-01	ND	ND	ND	ND	ND	ND
BIL519 Soil	(pCi/g)	1.905E+01	8.642E-01	ND	ND	3.042E-01	4.589E-02	8.878E-01	1.393E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL524 Soil	(pCi/g)	2.155E+01	9.449E-01	ND	ND	3.086E-01	4.174E-02	7.814E-01	6.631E-02	ND	ND	2.070E+00	2.980E+00	ND	ND	ND	ND	ND	ND
BIL528 Soil	(pCi/g)	2.135E+01	8.264E-01	ND	ND	3.114E-01	4.650E-02	1.096E+00	8.637E-02	8.108E-01	2.796E-01	1.636E+00	1.717E+00	ND	ND	ND	ND	ND	ND
BIL531 Soil	(pCi/g)	2.008E+01	9.574E-01	ND	ND	2.395E-01	4.336E-02	9.650E-01	1.264E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL536 Soil	(pCi/g)	1.871E+01	8.637E-01	ND	ND	2.981E-01	4.504E-02	5.421E-01	1.157E-01	ND	ND	1.517E+00	5.806E-01	ND	ND	ND	ND	ND	ND
BIL540 Soil	(pCi/g)	2.006E+01	7.467E-01	ND	ND	2.336E-01	2.544E-02	7.251E-01	7.921E-02	ND	ND	9.667E-01	3.185E-01	ND	ND	ND	ND	ND	ND
BIL543 Soil	(pCi/g)	2.136E+01	9.929E-01	ND	ND	3.519E-01	5.217E-02	8.936E-01	1.445E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL547 Soil	(pCi/g)	1.744E+01	9.196E-01	ND	ND	2.567E-01	4.307E-02	7.076E-01	1.058E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL553 Soil	(pCi/g)	1.890E+01	7.691E-01	ND	ND	2.293E-01	4.571E-02	7.648E-01	8.244E-02	5.674E-01	2.842E-01	8.900E-01	3.411E-01	ND	ND	ND	ND	ND	ND
BIL557 Soil	(pCi/g)	1.526E+01	7.839E-01	ND	ND	ND	ND	9.213E-01	1.157E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL562 Soil	(pCi/g)	1.570E+01	8.720E-01	ND	ND	ND	ND	7.821E-01	1.288E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL568 Soil	(pCi/g)	1.714E+01	8.342E-01	ND	ND	1.929E-01	3.888E-02	3.122E-01	9.484E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL570 Soil	(pCi/g)	2.015E+01	8.005E-01	ND	ND	1.905E-01	3.415E-02	6.442E-01	1.226E-01	ND	ND	9.058E-01	4.915E-01	ND	ND	ND	ND	ND	ND
BIL577 Soil	(pCi/g)	1.645E+01	7.929E-01	ND	ND	1.848E-01	3.327E-02	6.502E-01	9.956E-02	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL582 Soil	(pCi/g)	1.855E+01	8.245E-01	ND	ND	2.351E-01	2.575E-02	5.632E-01	1.491E-01	ND	ND	6.342E-01	2.971E-01	ND	ND	ND	ND	ND	ND
BIL587 Soil	(pCi/g)	1.988E+01	1.030E+00	ND	ND	1.715E-01	3.314E-02	6.529E-01	7.502E-02	ND	ND	1.235E+00	5.867E-01	ND	ND	ND	ND	ND	ND
BIL593 Soil	(pCi/g)	1.936E+01	9.789E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL596 Soil	(pCi/g)	1.839E+01	8.927E-01	ND	ND	2.337E-01	3.519E-02	6.635E-01	1.095E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL581 Soil	(pCi/g)	2.344E+01	9.136E-01	ND	ND	3.609E-01	2.335E-01	1.326E+00	1.062E-01	8.676E-01	3.416E-01	2.206E+00	8.110E-01	5.902E+00	6.820E-01	ND	ND	ND	ND
BIL583 Soil	(pCi/g)	2.125E+01	1.061E+00	ND	ND	5.127E-01	6.747E-02	1.655E+00	1.792E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL585 Soil	(pCi/g)	2.372E+01	1.266E+00	ND	ND	5.445E-01	6.513E-02	1.124E+00	2.504E-01	ND	ND	2.878E+00	9.140E-01	ND	ND	ND	ND	ND	ND
BIL587 Soil	(pCi/g)	2.110E+01	1.182E+00	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BIL500 Soil	(pCi/g)	1.739E+01	7.115E-01	ND	ND	1.443E-01	2.305E-02	8.080E-01	8.047E-02	7.092E-01	2.715E-01	8.642E-01	3.203E-01	ND	ND	ND	ND	ND	ND
BIL504 Soil	(pCi/g)	1.409E+01	8.343E-01	ND	ND	2.117E-01	3.571E-02	4.922E-01	1.173E-01	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Gamma Energy Analysis Isotopic report. 325 Counting room Lab 425
Data report by: Igor Kutnyakov 3/6/07 E-102
Data reviewed by: Robert Orr 3/9/2007
Procedure: AGG-RLL-002

Gamma Energy Analysis Isotopic report. 325 Counting room Lab 425
Data report by 3/1/07 A-4 data
Data reviewed 3/19/2007
Procedure: AGG-RLL-002

Project Manager acceptance date: 4/12/2007

MDA	Units	NA-22	K-40	CR-51	MN-54	CO-57	FE-59	CO-60	ZN-65	SE-75	RB-83	SR-85	RB-86	Y-88	NB-94
E-102															
B1L1L1-Soil	(pCi/g)	2.400E-01	2.200E+00	2.100E+00	1.970E-01	2.820E-01	3.640E-01	1.820E-01	4.970E-01	3.750E-01	3.970E-01	2.540E-01	2.250E+00	1.500E-01	1.970E-01
A-4															
B1L4Y7_Soil Elmo	(pCi/g)	2.710E-01	2.480E+00	2.560E+00	2.330E-01	2.910E-01	4.370E-01	2.270E-01	5.410E-01	4.530E-01	5.350E-01	3.170E-01	2.750E+00	1.810E-01	2.090E-01
B1L4Y7_Re2 Thelma	(pCi/g)	2.760E-01	2.050E+00	3.260E+00	2.860E-01	3.640E-01	4.910E-01	2.310E-01	6.150E-01	5.650E-01	8.330E-01	3.810E-01	3.330E+00	2.180E-01	2.770E-01
B1L500_Soil	(pCi/g)	2.650E-01	1.900E+00	2.390E+00	2.440E-01	2.820E-01	4.360E-01	2.260E-01	5.540E-01	4.180E-01	5.930E-01	2.760E-01	2.820E+00	1.770E-01	2.330E-01
B1L504_Soil	(pCi/g)	2.350E-01	2.060E+00	2.220E+00	2.100E-01	2.550E-01	3.740E-01	2.090E-01	5.150E-01	3.670E-01	4.180E-01	2.820E-01	2.460E+00	1.450E-01	2.020E-01
B1M5X1_Soil Thelma	(pCi/g)	2.960E-01	1.830E+00	3.970E+00	3.020E-01	4.950E-01	5.320E-01	2.660E-01	6.470E-01	6.500E-01	9.270E-01	4.320E-01	3.350E+00	2.230E-01	2.900E-01
B1M5X1_Re1 Bertha	(pCi/g)	1.910E-01	2.080E+00	3.010E+00	1.910E-01	4.200E-01	3.300E-01	1.590E-01	4.410E-01	5.440E-01	5.130E-01	2.820E-01	2.080E+00	1.210E-01	1.740E-01
B1L512_Soil	(pCi/g)	2.500E-01	1.840E+00	2.300E+00	2.400E-01	2.600E-01	4.240E-01	1.980E-01	5.180E-01	3.940E-01	5.780E-01	2.650E-01	2.870E+00	1.650E-01	2.160E-01
B1L517_Soil	(pCi/g)	2.000E-01	1.820E+00	1.840E+00	1.780E-01	2.150E-01	3.500E-01	1.780E-01	4.030E-01	3.060E-01	3.650E-01	2.330E-01	2.000E+00	1.430E-01	1.720E-01
B1L519_Soil	(pCi/g)	2.300E-01	1.710E+00	2.200E+00	2.080E-01	2.470E-01	4.040E-01	2.110E-01	4.890E-01	3.590E-01	5.510E-01	2.570E-01	2.730E+00	1.580E-01	2.100E-01
B1L524_Soil	(pCi/g)	2.040E-01	1.710E+00	1.860E+00	1.760E-01	2.250E-01	3.260E-01	1.670E-01	4.620E-01	3.210E-01	3.730E-01	2.410E-01	2.140E+00	1.170E-01	1.850E-01
B1L528_Soil	(pCi/g)	1.570E-01	2.020E+00	1.700E+01	1.620E-01	3.240E-01	9.370E-01	1.300E-01	4.250E-01	5.590E-01	6.250E-01	4.710E-01	4.100E+01	1.740E-01	1.220E-01
B1L531_Soil	(pCi/g)	2.450E-01	2.300E+00	2.280E+00	2.190E-01	2.590E-01	4.040E-01	2.000E-01	5.170E-01	3.700E-01	5.440E-01	2.560E-01	2.790E+00	1.600E-01	2.150E-01
B1L536_Soil	(pCi/g)	1.890E-01	1.820E+00	1.770E+00	1.750E-01	2.020E-01	2.990E-01	1.530E-01	4.290E-01	2.960E-01	3.260E-01	2.140E-01	2.140E+00	1.170E-01	1.590E-01
B1L540_Soil	(pCi/g)	1.400E-01	1.390E+00	1.660E+01	1.550E-01	3.190E-01	9.270E-01	1.260E-01	4.030E-01	5.420E-01	5.860E-01	4.380E-01	4.170E+01	1.560E-01	1.200E-01
B1L543_Soil	(pCi/g)	2.550E-01	2.230E+00	2.350E+00	2.290E-01	2.760E-01	4.620E-01	2.210E-01	5.300E-01	3.900E-01	5.800E-01	2.730E-01	2.730E+00	1.860E-01	2.310E-01
B1L547_Soil	(pCi/g)	2.050E-01	2.240E+00	1.920E+00	2.030E-01	2.280E-01	3.580E-01	1.840E-01	4.640E-01	3.280E-01	3.780E-01	2.430E-01	2.130E+00	1.620E-01	1.770E-01
B1L553_Soil	(pCi/g)	1.690E-01	1.660E+00	1.900E+01	1.760E-01	3.650E-01	1.060E+00	1.510E-01	4.490E-01	6.260E-01	6.770E-01	5.150E-01	4.760E+01	1.750E-01	1.330E-01
B1L557_Soil	(pCi/g)	2.310E-01	1.700E+00	2.030E+00	2.090E-01	2.440E-01	3.860E-01	1.960E-01	4.620E-01	3.640E-01	5.310E-01	2.470E-01	2.560E+00	1.580E-01	2.000E-01
B1L562_Soil	(pCi/g)	2.760E-01	1.850E+00	2.600E+00	2.680E-01	2.910E-01	4.250E-01	2.110E-01	5.440E-01	4.270E-01	6.270E-01	2.930E-01	3.220E+00	1.980E-01	2.350E-01
B1L568_Soil	(pCi/g)	1.790E-01	1.770E+00	1.600E+00	1.680E-01	1.970E-01	3.100E-01	1.590E-01	4.200E-01	2.880E-01	3.270E-01	2.160E-01	1.800E+00	1.160E-01	1.490E-01
B1L570_Soil	(pCi/g)	1.390E-01	1.980E+00	1.840E+00	1.280E-01	2.530E-01	2.390E-01	1.260E-01	3.050E-01	3.280E-01	2.950E-01	1.750E-01	1.510E+00	9.590E-02	1.240E-01
B1L577_Soil	(pCi/g)	2.150E-01	1.730E+00	2.010E+00	2.020E-01	2.280E-01	3.360E-01	1.860E-01	4.330E-01	3.310E-01	5.060E-01	2.320E-01	2.400E+00	1.550E-01	1.920E-01
B1L582_Soil	(pCi/g)	1.840E-01	1.420E+00	1.710E+00	1.650E-01	1.980E-01	2.920E-01	1.650E-01	4.010E-01	2.830E-01	3.150E-01	2.080E-01	2.010E+00	1.320E-01	1.510E-01
B1L587_Soil	(pCi/g)	1.490E-01	1.460E+00	1.880E+00	1.360E-01	2.640E-01	2.480E-01	1.190E-01	3.170E-01	3.410E-01	3.010E-01	1.770E-01	1.590E+00	9.460E-02	1.250E-01
B1L592_Soil	(pCi/g)	2.700E-01	1.750E+00	2.520E+00	2.630E-01	2.810E-01	4.830E-01	2.090E-01	5.640E-01	4.070E-01	5.960E-01	2.770E-01	3.130E+00	2.230E-01	2.420E-01
B1L596_Soil	(pCi/g)	2.000E-01	1.930E+00	1.720E+00	1.760E-01	2.110E-01	3.210E-01	1.770E-01	4.210E-01	2.970E-01	3.690E-01	2.270E-01	2.020E+00	1.470E-01	1.730E-01
B1L5B1_Soil	(pCi/g)	1.850E-01	1.920E+00	2.450E+00	1.790E-01	3.460E-01	3.210E-01	1.720E-01	4.260E-01	4.540E-01	4.160E-01	2.440E-01	1.990E+00	1.290E-01	1.570E-01
B1L5B3_Soil	(pCi/g)	2.830E-01	2.180E+00	3.000E+00	2.930E-01	3.390E-01	5.380E-01	2.660E-01	6.670E-01	5.000E-01	7.300E-01	3.380E-01	3.740E+00	2.260E-01	2.890E-01
B1L5B5_Soil	(pCi/g)	2.990E-01	3.060E+00	2.810E+00	2.940E-01	3.310E-01	4.750E-01	2.270E-01	6.650E-01	4.840E-01	5.650E-01	3.560E-01	2.830E+00	1.680E-01	2.660E-01
B1L5B7_Soil	(pCi/g)	3.410E-01	2.830E+00	3.190E+00	3.220E-01	3.680E-01	6.110E-01	2.970E-01	7.340E-01	5.640E-01	8.160E-01	3.860E-01	4.280E+00	2.420E-01	3.320E-01
B1L5C0_Soil	(pCi/g)	1.430E-01	1.720E+00	1.850E+00	1.340E-01	2.590E-01	2.310E-01	1.260E-01	3.080E-01	3.300E-01	2.980E-01	1.740E-01	1.530E+00	9.040E-02	1.240E-01
B1L5C4_Soil	(pCi/g)	2.040E-01	2.280E+00	1.750E+00	1.730E-01	2.120E-01	3.290E-01	1.630E-01	4.100E-01	3.140E-01	3.480E-01	2.280E-01	2.060E+00	1.340E-01	1.760E-01

Gamma Energy Analysis Isotopic repc
Data report by: Igor Katsnyakov
Data reviewed by: Robert Orr
Procedure: AGG-RLL-002

MDA	NB-95	NB-95M	Tc-95m	ZR-95	TC-99M	RU-103	RU-106	AG-108m	CD-109	AG-110	AG-110M	SN-113	SB-124	SB-125	I-131	BA-133
E-102																
B1L1L1-Soil	2.050E-01	1.060E+00	3.700E-01	3.550E-01	2.580E-01	2.050E-01	2.090E+00	2.260E-01	8.500E+00	2.530E-01	2.530E-01	3.340E-01	2.030E-01	6.950E-01	2.560E-01	4.370E-01
A-4																
B1L4Y7 Soil Elmo	2.350E-01	1.290E+00	4.430E-01	3.680E-01	2.900E-01	2.900E-01	2.410E+00	2.540E-01	8.490E+00	2.780E-01	2.790E-01	4.070E-01	2.540E-01	8.800E-01	3.250E-01	5.190E-01
B1L4Y7 Re2 Thelma	2.820E-01	1.460E+00	5.390E-01	5.230E-01	3.520E-01	3.920E-01	3.730E+00	3.030E-01	1.060E+01	3.570E-01	3.570E-01	5.100E-01	3.890E-01	1.150E+00	4.280E-01	6.030E-01
B1L500 Soil	2.500E-01	1.190E+00	3.970E-01	4.450E-01	2.730E-01	2.780E-01	2.900E+00	2.490E-01	8.590E+00	2.350E-01	2.360E-01	3.540E-01	3.000E-01	7.650E-01	3.240E-01	4.530E-01
B1L504 Soil	2.080E-01	1.150E+00	3.770E-01	3.600E-01	2.520E-01	2.240E-01	2.050E+00	2.220E-01	7.430E+00	2.350E-01	2.360E-01	3.210E-01	2.150E-01	6.940E-01	2.590E-01	4.300E-01
B1M5X1 Soil Thelma	3.430E-01	1.760E+00	6.520E-01	6.160E-01	4.630E-01	4.530E-01	3.920E+00	3.370E-01	1.890E+01	3.960E-01	3.960E-01	6.080E-01	4.010E-01	1.370E+00	5.080E-01	6.890E-01
B1M5X1_Re1 Bertha	2.180E-01	1.400E+00	5.330E-01	3.400E-01	4.210E-01	2.780E-01	2.160E+00	2.090E-01	1.650E+01	2.380E-01	2.380E-01	4.110E-01	2.600E-01	9.030E-01	3.380E-01	5.170E-01
B1L512 Soil	2.130E-01	1.110E+00	3.730E-01	3.850E-01	2.520E-01	2.620E-01	2.720E+00	2.310E-01	8.010E+00	2.660E-01	2.660E-01	3.280E-01	2.840E-01	7.350E-01	3.010E-01	4.180E-01
B1L517 Soil	1.910E-01	4.720E-01	3.070E-01	2.910E-01	2.070E-01	1.930E-01	1.750E+00	1.990E-01	6.360E+00	1.860E-01	1.860E-01	2.630E-01	1.940E-01	5.910E-01	2.160E-01	3.650E-01
B1L519 Soil	2.250E-01	1.030E+00	3.500E-01	3.870E-01	2.370E-01	2.530E-01	2.630E+00	2.160E-01	7.500E+00	2.190E-01	2.190E-01	3.040E-01	2.680E-01	6.640E-01	2.790E-01	3.930E-01
B1L524 Soil	1.890E-01	9.570E-01	3.270E-01	3.380E-01	2.120E-01	1.940E-01	1.780E+00	1.930E-01	6.410E+00	1.960E-01	1.970E-01	2.720E-01	1.920E-01	5.900E-01	2.230E-01	3.720E-01
B1L528 Soil	7.740E-01	2.200E+07	8.840E-01	6.010E-01	1.000E+26	7.400E-01	1.580E+00	1.560E-01	9.600E+00	1.740E-01	1.740E-01	4.070E-01	5.170E-01	5.340E-01	4.140E+02	3.350E-01
B1L531 Soil	2.260E-01	1.060E+00	3.570E-01	4.020E-01	2.550E-01	2.580E-01	2.690E+00	2.390E-01	7.920E+00	2.360E-01	2.360E-01	3.300E-01	2.780E-01	7.410E-01	2.960E-01	4.220E-01
B1L536 Soil	1.610E-01	8.680E-01	2.980E-01	2.870E-01	1.920E-01	1.790E-01	1.600E+00	1.770E-01	6.150E+00	1.700E-01	1.700E-01	2.570E-01	1.750E-01	5.630E-01	2.000E-01	3.400E-01
B1L540 Soil	7.550E-01	2.090E+07	8.520E-01	5.910E-01	1.000E+26	7.100E-01	1.540E+00	1.480E-01	5.950E+00	1.710E-01	1.710E-01	4.120E-01	4.460E-01	5.290E-01	3.990E+02	3.200E-01
B1L543 Soil	2.370E-01	1.120E+00	3.860E-01	4.060E-01	2.620E-01	2.790E-01	2.740E+00	2.420E-01	8.250E+00	2.400E-01	2.410E-01	3.420E-01	2.830E-01	7.600E-01	3.110E-01	4.300E-01
B1L547 Soil	1.960E-01	9.840E-01	3.430E-01	3.340E-01	2.230E-01	2.040E-01	1.830E+00	1.930E-01	6.770E+00	2.010E-01	2.010E-01	2.880E-01	1.930E-01	5.720E-01	2.290E-01	3.900E-01
B1L553 Soil	8.880E-01	2.400E+07	9.990E-01	6.530E-01	1.000E+26	8.160E-01	1.730E+00	1.650E-01	1.060E+01	2.010E-01	2.020E-01	4.750E-01	5.760E-01	6.180E-01	4.710E+02	3.690E-01
B1L557 Soil	2.100E-01	9.900E-01	3.460E-01	3.830E-01	2.340E-01	2.400E-01	2.490E+00	2.230E-01	7.450E+00	2.220E-01	2.220E-01	3.020E-01	2.560E-01	6.810E-01	2.810E-01	3.870E-01
B1L562 Soil	2.400E-01	1.180E+00	4.140E-01	4.360E-01	2.790E-01	2.950E-01	2.870E+00	2.580E-01	8.750E+00	2.590E-01	2.590E-01	3.740E-01	3.060E-01	8.230E-01	3.330E-01	4.630E-01
B1L568 Soil	1.730E-01	8.280E-01	2.860E-01	2.940E-01	1.860E-01	1.730E-01	1.490E+00	1.720E-01	5.760E+00	1.630E-01	1.630E-01	2.430E-01	1.570E-01	5.420E-01	2.010E-01	3.390E-01
B1L570 Soil	1.280E-01	8.940E-01	3.150E-01	2.340E-01	2.460E-01	1.540E-01	1.310E+00	1.450E-01	8.330E+00	1.360E-01	1.360E-01	2.400E-01	1.820E-01	5.070E-01	1.990E-01	3.100E-01
B1L577 Soil	2.020E-01	9.370E-01	3.170E-01	3.520E-01	2.180E-01	2.340E-01	2.290E+00	2.060E-01	7.050E+00	2.060E-01	2.070E-01	2.920E-01	2.540E-01	6.490E-01	2.600E-01	3.620E-01
B1L582 Soil	1.620E-01	8.550E-01	2.790E-01	2.950E-01	1.880E-01	1.720E-01	1.590E+00	1.730E-01	5.700E+00	1.710E-01	1.710E-01	2.470E-01	1.650E-01	5.430E-01	2.050E-01	3.340E-01
B1L587 Soil	1.320E-01	9.210E-01	3.340E-01	2.230E-01	2.570E-01	1.580E-01	1.310E+00	1.540E-01	8.390E+00	1.390E-01	1.390E-01	2.460E-01	1.810E-01	5.110E-01	2.090E-01	3.310E-01
B1L592 Soil	2.400E-01	1.140E+00	4.020E-01	4.480E-01	2.700E-01	2.780E-01	2.900E+00	2.520E-01	8.780E+00	2.420E-01	2.430E-01	3.600E-01	3.080E-01	7.570E-01	3.200E-01	4.510E-01
B1L596 Soil	1.830E-01	9.190E-01	3.040E-01	3.030E-01	2.050E-01	1.960E-01	1.770E+00	1.910E-01	6.250E+00	1.940E-01	1.940E-01	2.710E-01	1.830E-01	5.620E-01	2.090E-01	3.560E-01
B1L5B1 Soil	1.840E-01	1.260E+00	4.390E-01	3.040E-01	3.470E-01	2.160E-01	1.760E+00	2.090E-01	1.120E+01	1.790E-01	1.790E-01	3.270E-01	2.540E-01	6.730E-01	2.710E-01	4.430E-01
B1L5B3 Soil	2.890E-01	1.440E+00	4.780E-01	5.310E-01	3.340E-01	3.430E-01	3.400E+00	3.040E-01	1.080E+01	3.170E-01	3.180E-01	4.230E-01	3.640E-01	9.410E-01	3.900E-01	5.440E-01
B1L5B5 Soil	2.980E-01	1.480E+00	4.740E-01	4.700E-01	3.140E-01	2.870E-01	2.450E+00	2.940E-01	9.830E+00	2.790E-01	2.800E-01	4.300E-01	2.920E-01	9.240E-01	3.410E-01	5.770E-01
B1L5B7 Soil	3.120E-01	1.540E+00	5.200E-01	5.840E-01	3.600E-01	3.730E-01	3.830E+00	3.340E-01	1.130E+01	3.360E-01	3.360E-01	4.820E-01	4.000E-01	1.010E+00	4.380E-01	6.110E-01
B1L5CO Soil	1.280E-01	8.950E-01	3.290E-01	2.150E-01	2.560E-01	1.570E-01	1.310E+00	1.410E-01	8.370E+00	1.270E-01	1.270E-01	2.450E-01	1.850E-01	5.030E-01	2.010E-01	3.180E-01
B1L5C4 Soil	1.770E-01	9.400E-01	3.170E-01	3.260E-01	2.040E-01	1.810E-01	1.810E+00	1.890E-01	6.220E+00	1.850E-01	1.850E-01	2.680E-01	1.960E-01	5.630E-01	2.260E-01	3.610E-01

Gamma Energy Analysis Isotopic repc
Data report by: Igor Kuntyakov
Data reviewed by: Robert Orr
Procedure: AGG-RLL-002

MDA	CS-134	CS-137	CE-139	CE-144	EU-152	GD-153	EU-154	EU-155	HG-203	TL-208	BI-210	PD-210	BI-211	PB-211	PB-212	BI-214
E-102																
B1LUL1-Soil	2.370E-01	1.760E-01	2.880E-01	2.100E+00	8.740E-01	9.210E-01	5.930E-01	9.620E-01	2.860E-01	2.180E-01	4.500E-01	9.330E+01	5.230E+00	7.070E+00	4.900E-01	3.890E-01
A-4																
B1L4Y7 Soil Elmo	2.360E-01	2.290E-01	3.380E-01	2.360E+00	1.020E+00	9.170E-01	6.160E-01	9.570E-01	3.480E-01	2.770E-01	5.490E-01	1.160E+02	6.490E+00	8.070E+00	6.560E-01	6.720E-01
B1L4Y7_Re2 Thelma	3.080E-01	3.770E-01	4.010E-01	2.900E+00	1.260E+00	1.140E+00	7.680E-01	1.240E+00	4.340E-01	4.180E-01	6.720E-01	5.760E+01	8.330E+00	1.000E+01	8.510E-01	8.380E-01
B1L500 Soil	2.710E-01	2.600E-01	3.070E-01	2.230E+00	1.060E+00	9.130E-01	5.950E-01	1.010E+00	3.230E-01	2.110E-01	5.020E-01	4.380E+01	5.490E+00	7.500E+00	5.970E-01	6.530E-01
B1L504 Soil	2.480E-01	2.640E-01	2.820E-01	2.050E+00	8.430E-01	7.820E-01	5.370E-01	8.330E-01	2.850E-01	2.040E-01	4.420E-01	1.030E+02	5.050E+00	6.910E+00	4.730E-01	5.840E-01
B1M5X1 Soil Thelma	3.460E-01	4.450E-01	5.110E-01	3.830E+00	1.160E+00	2.000E+00	8.590E-01	2.180E+00	4.960E-01	2.980E-01	7.780E-01	9.440E+01	8.820E+00	1.040E+01	1.010E+00	8.680E-01
B1M5X1 Re1 Bertha	2.200E-01	1.500E-01	4.320E-01	3.390E+00	8.320E-01	1.710E+00	5.560E-01	1.740E+00	4.110E-01	2.380E-01	6.490E-01	1.720E+02	5.780E+00	6.820E+00	5.290E-01	5.590E-01
B1L512 Soil	2.510E-01	2.950E-01	2.850E-01	2.040E+00	9.330E-01	8.550E-01	5.520E-01	9.300E-01	3.030E-01	2.040E-01	4.710E-01	4.130E+01	5.270E+00	7.200E+00	5.000E-01	6.010E-01
B1L517 Soil	1.920E-01	2.230E-01	2.400E-01	1.690E+00	7.480E-01	6.570E-01	4.550E-01	7.210E-01	2.360E-01	1.910E-01	3.700E-01	8.760E+01	4.380E+00	5.980E+00	3.540E-01	4.990E-01
B1L519 Soil	2.510E-01	2.400E-01	2.770E-01	1.940E+00	8.850E-01	8.060E-01	5.210E-01	8.760E-01	2.770E-01	1.850E-01	4.290E-01	3.980E+01	4.970E+00	6.800E+00	5.430E-01	5.800E-01
B1L524 Soil	2.080E-01	2.170E-01	2.460E-01	1.740E+00	7.270E-01	6.710E-01	4.730E-01	7.160E-01	2.530E-01	1.570E-01	3.850E-01	7.970E+01	4.390E+00	6.000E+00	3.560E-01	5.150E-01
B1L528 Soil	1.690E-01	1.540E-01	4.190E-01	2.590E+00	6.970E-01	1.110E+00	4.350E-01	1.010E+00	9.410E-01	1.980E-01	3.990E-01	9.550E+01	3.850E+00	4.690E+00	3.630E-01	3.290E-01
B1L531 Soil	2.610E-01	2.630E-01	2.850E-01	2.070E+00	9.520E-01	8.330E-01	5.500E-01	9.240E-01	2.900E-01	1.790E-01	4.420E-01	4.050E+01	5.290E+00	7.230E+00	5.100E-01	5.870E-01
B1L536 Soil	2.050E-01	1.900E-01	2.230E-01	1.590E+00	6.860E-01	6.230E-01	4.300E-01	6.900E-01	2.310E-01	1.810E-01	3.590E-01	7.580E+01	4.210E+00	5.760E+00	5.110E-01	4.640E-01
B1L540 Soil	1.590E-01	1.510E-01	4.020E-01	2.550E+00	6.150E-01	1.060E+00	3.890E-01	9.550E-01	9.040E-01	1.070E-01	3.910E-01	9.520E+01	3.670E+00	4.320E+00	3.750E-01	3.830E-01
B1L543 Soil	2.630E-01	2.670E-01	2.920E-01	2.180E+00	1.030E+00	8.800E-01	5.840E-01	9.680E-01	3.100E-01	2.220E-01	4.660E-01	4.240E+01	5.520E+00	7.540E+00	6.130E-01	6.090E-01
B1L547 Soil	2.270E-01	2.250E-01	2.540E-01	1.860E+00	7.730E-01	7.050E-01	4.860E-01	7.580E-01	2.480E-01	1.710E-01	3.970E-01	9.260E+01	4.870E+00	6.650E+00	4.400E-01	5.210E-01
B1L553 Soil	1.820E-01	1.720E-01	4.730E-01	2.960E+00	7.270E-01	1.220E+00	4.690E-01	1.100E+00	1.070E+00	1.980E-01	4.490E-01	1.090E+02	4.220E+00	4.970E+00	4.100E-01	3.660E-01
B1L557 Soil	2.490E-01	2.510E-01	2.600E-01	1.910E+00	9.080E-01	7.970E-01	5.160E-01	8.680E-01	2.800E-01	2.880E-01	4.350E-01	3.910E+01	4.740E+00	6.470E+00	4.590E-01	5.530E-01
B1L562 Soil	3.040E-01	2.960E-01	3.150E-01	2.280E+00	1.010E+00	9.200E-01	6.140E-01	1.030E+00	3.290E-01	3.430E-01	5.090E-01	4.710E+01	5.970E+00	8.160E+00	5.400E-01	6.530E-01
B1L568 Soil	1.940E-01	1.880E-01	2.170E-01	1.530E+00	6.580E-01	6.120E-01	4.140E-01	6.470E-01	2.280E-01	1.610E-01	3.420E-01	7.210E+01	4.070E+00	5.570E+00	4.260E-01	4.370E-01
B1L570 Soil	1.450E-01	1.500E-01	2.630E-01	2.030E+00	6.180E-01	8.440E-01	4.050E-01	9.540E-01	2.510E-01	1.450E-01	3.910E-01	9.360E+01	3.760E+00	4.430E+00	5.430E-01	3.830E-01
B1L577 Soil	2.230E-01	2.230E-01	2.500E-01	1.800E+00	8.260E-01	7.550E-01	4.840E-01	8.270E-01	2.690E-01	1.330E-01	3.980E-01	3.680E+01	4.750E+00	6.500E+00	4.130E-01	5.270E-01
B1L582 Soil	1.920E-01	1.980E-01	2.100E-01	1.540E+00	6.440E-01	5.980E-01	4.200E-01	6.440E-01	2.170E-01	1.380E-01	3.390E-01	7.460E+01	4.280E+00	5.750E+00	3.070E-01	4.450E-01
B1L587 Soil	1.480E-01	1.570E-01	2.740E-01	2.140E+00	6.360E-01	8.720E-01	4.330E-01	9.600E-01	2.660E-01	1.410E-01	4.070E-01	9.810E+01	3.750E+00	4.750E+00	3.740E-01	3.810E-01
B1L592 Soil	3.070E-01	2.750E-01	3.050E-01	2.230E+00	1.040E+00	9.240E-01	5.970E-01	1.020E+00	3.200E-01	3.310E-01	4.890E-01	4.610E+01	5.790E+00	7.910E+00	6.640E-01	6.560E-01
B1L596 Soil	1.930E-01	2.210E-01	2.320E-01	1.670E+00	7.280E-01	6.530E-01	4.420E-01	7.070E-01	2.490E-01	1.310E-01	3.570E-01	8.840E+01	4.250E+00	5.810E+00	4.660E-01	4.750E-01
B1L5B1 Soil	2.080E-01	1.990E-01	3.590E-01	2.830E+00	8.470E-01	1.120E+00	5.360E-01	1.300E+00	3.450E-01	1.360E-01	5.440E-01	1.330E+02	5.250E+00	6.270E+00	4.920E-01	3.850E-01
B1L5B3 Soil	3.260E-01	3.500E-01	3.790E-01	2.750E+00	1.300E+00	1.130E+00	7.140E-01	1.260E+00	3.890E-01	2.660E-01	6.010E-01	5.320E+01	6.750E+00	9.220E+00	6.870E-01	7.680E-01
B1L5B5 Soil	3.190E-01	3.090E-01	3.550E-01	2.550E+00	1.090E+00	1.010E+00	6.980E-01	1.090E+00	3.770E-01	2.400E-01	5.870E-01	1.290E+02	6.540E+00	8.940E+00	4.870E-01	7.690E-01
B1L5B7 Soil	3.760E-01	3.700E-01	4.000E-01	2.920E+00	1.400E+00	1.200E+00	7.760E-01	1.320E+00	4.330E-01	4.320E-01	6.760E-01	6.070E+01	7.490E+00	1.020E+01	8.890E-01	8.520E-01
B1L5C0 Soil	1.480E-01	1.400E-01	2.630E-01	2.120E+00	5.900E-01	8.430E-01	4.150E-01	9.610E-01	2.520E-01	1.030E-01	3.950E-01	9.530E+01	3.780E+00	4.700E+00	3.820E-01	3.340E-01
B1L5C4 Soil	2.100E-01	1.980E-01	2.370E-01	1.710E+00	7.080E-01	6.570E-01	4.510E-01	6.980E-01	2.310E-01	1.390E-01	3.750E-01	8.320E+01	4.300E+00	5.880E+00	5.210E-01	5.110E-01

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Gamma Energy Analysis Isotopic repc
Data report by: Igor Kuinyakov
Data reviewed by: Robert Orr
Procedure: AGG-RLL-002

MDA	PB-214	RN-219	RN-220	RN-221	FR-223	RA-223	RA-224	RA-226	TH-227	AC-228	TH-228	Th230	PA-231	TH-231	TH-232	Pa-233
E-102																
B1L1L1-Soil	7.070E-01	2.300E+00	1.820E+02	1.110E+00	7.730E+00	1.660E+00	6.800E+00	8.080E+00	2.360E+00	9.310E-01	8.330E+01	1.280E+02	9.190E+00	6.360E+01	3.550E+02	5.830E-01
A-4																
B1L4Y7 Soil Elmo	8.110E-01	2.820E+00	2.240E+02	1.290E+00	9.460E+00	2.060E+00	8.360E+00	7.850E+00	2.870E+00	1.080E+00	1.040E+02	1.280E+02	1.180E+01	6.290E+01	4.340E+02	7.250E-01
B1L4Y7_Re2 Thelma	9.660E-01	3.380E+00	3.060E+02	1.590E+00	1.070E+01	2.470E+00	9.350E+00	9.830E+00	3.250E+00	1.140E+00	1.250E+02	1.560E+02	1.470E+01	8.100E+01	4.130E+02	8.890E-01
B1L500 Soil	7.400E-01	2.550E+00	2.350E+02	1.200E+00	8.700E+00	1.850E+00	7.380E+00	7.410E+00	2.650E+00	1.080E+00	9.370E+01	1.260E+02	1.110E+01	6.470E+01	3.220E+02	6.420E-01
B1L504 Soil	5.310E-01	2.210E+00	1.940E+02	1.100E+00	8.260E+00	1.630E+00	7.330E+00	6.800E+00	2.570E+00	1.040E+00	8.430E+01	1.140E+02	9.440E+00	5.570E+01	3.700E+02	6.070E-01
B1M5X1 Soil Thelma	1.110E+00	3.950E+00	3.560E+02	2.200E+00	1.290E+01	2.870E+00	1.090E+01	1.180E+01	3.930E+00	1.310E+00	1.520E+02	3.070E+02	1.710E+01	1.390E+02	9.670E+02	1.080E+00
B1M5X1 Re1 Bertha	7.260E-01	3.270E+00	2.230E+02	1.870E+00	1.020E+01	2.390E+00	5.690E+00	9.310E+00	3.120E+00	8.490E-01	1.200E+02	2.780E+02	1.340E+01	9.950E+01	8.730E+02	8.360E-01
B1L512 Soil	6.760E-01	2.370E+00	2.260E+02	1.120E+00	8.120E+00	1.740E+00	6.960E+00	6.930E+00	2.470E+00	9.630E-01	8.710E+01	1.140E+02	1.040E+01	5.990E+01	2.970E+02	6.250E-01
B1L517 Soil	4.010E-01	1.940E+00	1.660E+02	9.320E-01	3.470E+00	1.390E+00	3.400E+00	5.760E+00	2.150E+00	8.890E-01	7.130E+01	9.770E+01	7.850E+00	4.700E+01	3.250E+02	4.920E-01
B1L519_Soil	6.420E-01	2.160E+00	2.080E+02	1.060E+00	7.570E+00	1.570E+00	6.440E+00	6.540E+00	2.300E+00	9.050E-01	8.250E+01	1.120E+02	9.860E+00	5.660E+01	2.930E+02	5.880E-01
B1L524_Soil	5.160E-01	1.960E+00	1.610E+02	9.440E-01	6.890E+00	1.410E+00	3.580E+00	5.800E+00	2.140E+00	9.340E-01	7.400E+01	9.650E+01	8.240E+00	4.860E+01	3.260E+02	4.940E-01
B1L528 Soil	5.180E-01	2.020E+00	1.250E+02	1.000E+26	1.000E+26	1.470E+00	1.290E+08	6.290E+00	2.130E+00	1.000E+26	7.440E+01	1.570E+02	8.430E+00	6.010E+01	4.870E+02	4.940E+00
B1L531 Soil	6.930E-01	2.230E+00	2.180E+02	1.080E+00	7.770E+00	1.610E+00	6.600E+00	6.690E+00	2.360E+00	9.830E-01	8.590E+01	1.170E+02	1.060E+01	5.920E+01	2.970E+02	6.170E-01
B1L536 Soil	3.710E-01	1.840E+00	1.530E+02	8.670E-01	6.290E+00	1.320E+00	5.660E+00	5.140E+00	1.940E+00	7.980E-01	6.620E+01	9.180E+01	7.180E+00	4.410E+01	2.880E+02	4.560E-01
B1L540 Soil	3.630E-01	1.960E+00	1.250E+02	1.000E+26	1.000E+26	1.430E+00	1.240E+08	6.060E+00	1.990E+00	1.000E+26	7.160E+01	1.510E+02	8.260E+00	5.700E+01	4.560E+02	4.870E+00
B1L543_Soil	7.080E-01	2.390E+00	2.370E+02	1.150E+00	8.270E+00	1.740E+00	7.010E+00	7.120E+00	2.510E+00	1.040E+00	9.030E+01	1.210E+02	1.100E+01	6.210E+01	3.120E+02	6.520E-01
B1L547 Soil	6.160E-01	1.990E+00	1.660E+02	9.930E-01	7.220E+00	1.440E+00	6.240E+00	6.130E+00	2.200E+00	8.710E-01	7.740E+01	1.010E+02	8.440E+00	4.910E+01	3.350E+02	5.390E-01
B1L553 Soil	5.090E-01	2.270E+00	1.410E+02	1.000E+26	1.000E+26	1.640E+00	1.450E+08	7.050E+00	2.250E+00	1.000E+26	8.350E+01	1.800E+02	9.440E+00	6.530E+01	5.360E+02	5.550E+00
B1L557 Soil	6.380E-01	2.190E+00	2.120E+02	1.030E+00	7.260E+00	1.590E+00	6.230E+00	6.340E+00	2.210E+00	9.510E-01	8.120E+01	1.070E+02	9.520E+00	5.620E+01	2.760E+02	5.580E-01
B1L562 Soil	7.650E-01	2.570E+00	2.420E+02	1.250E+00	8.660E+00	1.860E+00	7.340E+00	7.690E+00	2.640E+00	1.080E+00	9.650E+01	1.290E+02	1.160E+01	6.510E+01	3.270E+02	7.170E-01
B1L568 Soil	5.400E-01	1.740E+00	1.470E+02	8.330E-01	6.050E+00	1.260E+00	5.390E+00	5.140E+00	1.850E+00	7.790E-01	6.460E+01	8.770E+01	7.210E+00	4.240E+01	2.860E+02	4.560E-01
B1L570 Soil	4.290E-01	1.980E+00	1.270E+02	9.820E-01	6.540E+00	1.430E+00	5.680E+00	6.070E+00	2.000E+00	5.930E-01	7.260E+01	1.540E+02	8.270E+00	5.740E+01	4.770E+02	4.990E-01
B1L577 Soil	5.870E-01	2.070E+00	1.940E+02	9.750E-01	6.900E+00	1.490E+00	5.870E+00	6.010E+00	2.090E+00	8.410E-01	7.430E+01	1.010E+02	8.920E+00	5.320E+01	2.590E+02	5.410E-01
B1L582 Soil	4.320E-01	1.690E+00	1.490E+02	8.540E-01	6.220E+00	1.240E+00	3.090E+00	5.280E+00	1.910E+00	7.150E-01	6.620E+01	8.900E+01	7.250E+00	4.280E+01	2.820E+02	4.640E-01
B1L587 Soil	4.550E-01	2.100E+00	1.340E+02	1.010E+00	6.720E+00	1.520E+00	3.400E+00	6.260E+00	2.060E+00	6.090E-01	7.500E+01	1.610E+02	8.590E+00	5.930E+01	4.970E+02	5.220E-01
B1L592_Soil	7.320E-01	2.500E+00	2.380E+02	1.210E+00	8.450E+00	1.800E+00	7.200E+00	7.480E+00	2.560E+00	1.080E+00	9.270E+01	1.260E+02	1.120E+01	6.480E+01	3.250E+02	6.880E-01
B1L596 Soil	5.760E-01	1.860E+00	1.610E+02	9.080E-01	6.690E+00	1.330E+00	5.890E+00	5.600E+00	2.050E+00	8.010E-01	7.170E+01	9.260E+01	7.470E+00	4.580E+01	2.960E+02	4.670E-01
B1L5B1 Soil	6.120E-01	2.750E+00	1.740E+02	1.350E+00	9.100E+00	2.000E+00	4.570E+00	8.320E+00	2.820E+00	8.910E-01	1.000E+02	2.120E+02	1.140E+01	7.880E+01	6.560E+02	6.770E-01
B1L5B3 Soil	8.900E-01	3.010E+00	2.770E+02	1.470E+00	1.060E+01	2.200E+00	9.140E+00	9.040E+00	3.220E+00	1.370E+00	1.120E+02	1.560E+02	1.370E+01	7.750E+01	3.970E+02	8.100E-01
B1L5B5 Soil	7.180E-01	3.010E+00	2.590E+02	1.420E+00	1.080E+01	2.150E+00	5.210E+00	8.750E+00	3.310E+00	1.380E+00	1.100E+02	1.520E+02	1.230E+01	7.020E+01	4.700E+02	7.720E-01
B1L5B7 Soil	9.860E-01	3.410E+00	3.010E+02	1.560E+00	1.140E+01	2.490E+00	9.670E+00	9.600E+00	3.450E+00	1.440E+00	1.230E+02	1.650E+02	1.420E+01	8.470E+01	4.280E+02	8.580E-01
B1L5CO Soil	3.940E-01	2.010E+00	1.260E+02	9.910E-01	6.520E+00	1.450E+00	3.550E+00	6.110E+00	2.000E+00	5.930E-01	7.380E+01	1.560E+02	8.320E+00	5.770E+01	4.820E+02	5.090E-01
B1L5C4_Soil	5.720E-01	1.900E+00	1.600E+02	8.930E-01	6.820E+00	1.400E+00	6.050E+00	5.550E+00	2.100E+00	7.580E-01	7.350E+01	9.480E+01	7.830E+00	4.550E+01	3.080E+02	4.880E-01

Gamma Energy Analysis Isotopic repc
Data report by: Igor Kntnyakov
Data reviewed by: Robert Orr
Procedure: AGG-RLL-002

MDA	PA-234	PA-234m	TH-234	U-235	Np-237	Pu-238	U238	Pu-239	Pu-240	AM-241	AM-243	CM-243	CM-245
E-102													
B1L1L1-Soil	1.140E+00	2.710E+01	1.060E+01	2.180E+00	2.500E+00	3.660E+03	5.480E+00	3.740E+03	3.660E+03	1.860E+00	7.120E-01	1.120E+00	9.170E-01
A-4													
B1L4Y7 Soil Elmo	1.160E+00	2.810E+01	1.060E+01	2.410E+00	2.490E+00	3.670E+03	5.510E+00	4.120E+03	3.600E+03	2.120E+00	7.110E-01	1.100E+00	9.040E-01
B1L4Y7 Re2 Thelma	1.490E+00	3.330E+01	1.300E+01	2.970E+00	3.240E+00	4.670E+03	6.720E+00	4.980E+03	4.650E+03	2.110E+00	8.220E-01	1.420E+00	1.160E+00
B1L500 Soil	1.190E+00	2.750E+01	1.030E+01	2.310E+00	2.620E+00	3.750E+03	5.310E+00	3.870E+03	3.710E+03	1.650E+00	6.670E-01	1.140E+00	9.330E-01
B1L504_Soil	1.000E+00	2.620E+01	9.140E+00	2.110E+00	2.170E+00	3.170E+03	4.730E+00	3.560E+03	3.250E+03	1.840E+00	4.000E-01	9.920E-01	8.150E-01
B1M5X1_Soil Thelma	1.870E+00	4.610E+01	2.320E+01	3.900E+00	5.680E+00	8.080E+03	1.200E+01	6.580E+03	7.810E+03	5.060E+00	1.380E+00	2.410E+00	1.980E+00
B1M5X1_Re1 Bertha	1.170E+00	2.900E+01	2.040E+01	3.550E+00	4.540E+00	5.880E+03	1.050E+01	5.940E+03	5.740E+03	4.570E+00	1.210E+00	1.750E+00	1.440E+00
B1L512_Soil	1.100E+00	2.600E+01	9.680E+00	2.120E+00	2.420E+00	3.490E+03	5.010E+00	3.550E+03	3.430E+03	1.510E+00	6.140E-01	1.050E+00	8.670E-01
B1L517 Soil	8.350E-01	2.230E+01	7.880E+00	1.790E+00	1.880E+00	2.620E+03	4.080E+00	2.970E+03	2.740E+03	1.600E+00	5.320E-01	8.360E-01	6.870E-01
B1L519 Soil	1.040E+00	2.520E+01	9.050E+00	2.020E+00	2.280E+00	3.280E+03	4.660E+00	3.380E+03	3.250E+03	1.490E+00	5.890E-01	1.000E+00	8.210E-01
B1L524 Soil	8.550E-01	2.440E+01	7.980E+00	1.770E+00	1.870E+00	2.710E+03	4.130E+00	3.040E+03	2.800E+03	1.590E+00	3.500E-01	8.550E-01	7.030E-01
B1L528 Soil	8.510E-01	1.000E+26	1.040E+01	2.170E+00	2.530E+00	3.460E+03	5.190E+00	3.670E+03	3.460E+03	2.450E+00	7.880E-01	1.060E+00	8.680E-01
B1L531_Soil	1.080E+00	2.490E+01	9.560E+00	2.170E+00	2.400E+00	3.410E+03	4.930E+00	3.560E+03	3.420E+03	1.520E+00	6.230E-01	1.050E+00	8.580E-01
B1L536_Soil	7.990E-01	1.970E+01	7.480E+00	1.600E+00	1.800E+00	2.470E+03	3.870E+00	2.840E+03	2.560E+03	1.430E+00	2.890E-01	7.820E-01	6.430E-01
B1L540 Soil	8.020E-01	1.000E+26	9.950E+00	2.050E+00	1.540E+00	3.290E+03	4.950E+00	3.590E+03	3.310E+03	2.290E+00	7.520E-01	1.010E+00	8.260E-01
B1L543 Soil	1.150E+00	2.610E+01	1.000E+01	2.210E+00	2.520E+00	3.590E+03	5.170E+00	3.760E+03	3.580E+03	1.590E+00	6.440E-01	1.090E+00	8.970E-01
B1L547_Soil	8.920E-01	2.140E+01	8.420E+00	1.900E+00	1.970E+00	2.790E+03	4.360E+00	3.230E+03	2.830E+03	1.650E+00	5.600E-01	8.640E-01	7.090E-01
B1L553 Soil	9.370E-01	1.000E+26	1.160E+01	2.410E+00	2.770E+00	3.800E+03	5.760E+00	4.120E+03	3.770E+03	2.720E+00	8.950E-01	1.150E+00	9.430E-01
B1L557 Soil	1.030E+00	2.570E+01	9.070E+00	1.980E+00	2.260E+00	3.250E+03	4.670E+00	3.360E+03	3.220E+03	1.410E+00	5.740E-01	9.870E-01	8.110E-01
B1L562_Soil	1.200E+00	2.880E+01	1.050E+01	2.370E+00	2.670E+00	3.740E+03	5.420E+00	3.970E+03	3.740E+03	1.670E+00	6.870E-01	1.140E+00	9.370E-01
B1L568 Soil	7.810E-01	1.990E+01	7.260E+00	1.590E+00	1.680E+00	2.430E+03	3.760E+00	2.690E+03	2.470E+03	1.400E+00	4.690E-01	7.550E-01	6.200E-01
B1L570_Soil	8.410E-01	1.470E+01	9.890E+00	2.070E+00	2.480E+00	3.340E+03	5.120E+00	3.550E+03	3.320E+03	2.390E+00	7.730E-01	1.010E+00	8.330E-01
B1L577 Soil	9.750E-01	2.500E+01	8.590E+00	1.850E+00	2.150E+00	3.060E+03	4.440E+00	3.160E+03	3.030E+03	1.320E+00	5.420E-01	9.260E-01	7.610E-01
B1L582 Soil	7.670E-01	2.110E+01	7.160E+00	1.600E+00	1.680E+00	2.400E+03	3.710E+00	2.750E+03	2.550E+03	1.390E+00	4.750E-01	7.790E-01	6.400E-01
B1L587_Soil	8.430E-01	1.510E+01	1.010E+01	2.170E+00	2.500E+00	3.450E+03	5.220E+00	3.760E+03	3.410E+03	2.510E+00	8.110E-01	1.050E+00	8.590E-01
B1L592 Soil	1.200E+00	2.980E+01	1.060E+01	2.290E+00	2.660E+00	3.750E+03	5.490E+00	3.890E+03	3.710E+03	1.660E+00	6.750E-01	1.140E+00	9.340E-01
B1L596_Soil	8.250E-01	2.180E+01	7.890E+00	1.740E+00	1.840E+00	2.540E+03	4.090E+00	2.920E+03	2.660E+03	1.460E+00	3.190E-01	8.110E-01	6.660E-01
B1L5B1 Soil	1.070E+00	2.040E+01	1.330E+01	2.900E+00	3.380E+00	4.520E+03	6.880E+00	4.930E+03	4.540E+03	3.290E+00	1.070E+00	1.390E+00	1.140E+00
B1L5B3 Soil	1.460E+00	3.330E+01	1.290E+01	2.840E+00	3.280E+00	4.570E+03	6.660E+00	4.760E+03	4.440E+03	2.030E+00	8.350E-01	1.360E+00	1.120E+00
B1L5B5_Soil	1.280E+00	3.340E+01	1.230E+01	2.650E+00	2.840E+00	4.070E+03	6.380E+00	4.380E+03	4.080E+03	2.320E+00	4.520E-01	1.250E+00	1.020E+00
B1L5B7_Soil	1.560E+00	3.780E+01	1.370E+01	3.080E+00	3.440E+00	4.880E+03	7.060E+00	5.100E+03	4.810E+03	2.190E+00	8.690E-01	1.470E+00	1.210E+00
B1L5CO Soil	7.870E-01	1.520E+01	1.000E+01	2.160E+00	2.500E+00	3.350E+03	5.180E+00	3.730E+03	3.360E+03	2.440E+00	7.740E-01	1.020E+00	8.420E-01
B1L5C4 Soil	8.330E-01	1.960E+01	7.800E+00	1.690E+00	1.820E+00	2.640E+03	4.040E+00	2.920E+03	2.650E+03	1.520E+00	5.200E-01	8.100E-01	6.650E-01

Gamma Energy Analysis Isotopic report. 325 Counting room Lab 425
Data report by: Igor Kutnyakov 4/2/07
Data reviewed by: Robert Orr 4/4/2007
Procedure: AGG-RLL-002

Analyst name: Igor Kutnyakov
Peer reviewer name: Robert Orr
Project Manager acceptance date: 4/12/2007

Sample ID	Units	
E-102		
B1L1L1_WE	(pCi/ml)	No detectable radionuclides
A-4		
B1L4Y7_WE	(pCi/ml)	No detectable radionuclides
B1L500_WE	(pCi/ml)	No detectable radionuclides
B1L504_WE	(pCi/ml)	No detectable radionuclides
B1M5X1_WE	(pCi/ml)	No detectable radionuclides
B1L512_WE	(pCi/ml)	No detectable radionuclides
B1L517_WE	(pCi/ml)	No detectable radionuclides
B1L519-Soil	(pCi/ml)	No detectable radionuclides
B1L524-Soil	(pCi/ml)	No detectable radionuclides
B1L528-Soil	(pCi/ml)	No detectable radionuclides
B1L531_WE	(pCi/ml)	No detectable radionuclides
B1L531-Dup1_WE	(pCi/ml)	No detectable radionuclides
B1L536_WE	(pCi/ml)	No detectable radionuclides
B1L540_WE	(pCi/ml)	No detectable radionuclides
B1L543_WE	(pCi/ml)	No detectable radionuclides
B1L547_WE	(pCi/ml)	No detectable radionuclides
B1L553_WE	(pCi/ml)	No detectable radionuclides
B1L553_Dup2_WE	(pCi/ml)	No detectable radionuclides
B1L557_WE	(pCi/ml)	No detectable radionuclides
B1L562_WE	(pCi/ml)	No detectable radionuclides
B1L568_WE	(pCi/ml)	No detectable radionuclides
B1L570_WE	(pCi/ml)	No detectable radionuclides
B1L577_WE	(pCi/ml)	No detectable radionuclides
B1L582_WE	(pCi/ml)	No detectable radionuclides
B1L587_WE	(pCi/ml)	No detectable radionuclides
B1L592_WE	(pCi/ml)	No detectable radionuclides
B1L596_WE	(pCi/ml)	No detectable radionuclides
B1L5B1_WE	(pCi/ml)	No detectable radionuclides
B1L5B1_DupWE	(pCi/ml)	No detectable radionuclides
B1L5B3_WE	(pCi/ml)	No detectable radionuclides
B1L5B5_WE	(pCi/ml)	No detectable radionuclides
B1L5B7_WE	(pCi/ml)	No detectable radionuclides
B1L5CO_WE	(pCi/ml)	No detectable radionuclides
B1L5C4_WE	(pCi/ml)	No detectable radionuclides

Gamma Energy Analysis Isotopic report 325 Counting room Lab 425
Data report by. Igor Kutnyakov 4/2/07 Analyst name Igor Kutnyakov
Data reviewed by Robert Orr 4/4/2007 Peer reviewer name Robert Orr
Procedure AGG-RLL-002 Project Manager acceptance date 4/12/2007

MDA	Units	NA-22	K-40	CR-51	MN-54	CO-57	FE-59	CO-60	ZN-65	SR-75	RD-83	SR-85	RB-86	Y-88	NB-94
B-102															
B1L1L1 WE	(pCi/ml)	1.460E+00	1.420E+01	1.220E+01	1.450E+00	1.060E+00	2.290E+00	1.120E+00	2.430E+00	1.960E+00	3.360E+00	1.600E+00	1.570E+01	1.380E+00	1.320E+00
A-4															
B1L4Y7 WE	(pCi/ml)	1.330E+00	1.740E+01	1.010E+01	1.080E+00	1.090E+00	2.090E+00	1.160E+00	2.270E+00	1.800E+00	2.260E+00	1.550E+00	1.250E+01	1.150E+00	1.100E+00
B1L500 WE	(pCi/ml)	1.210E+00	2.170E+01	1.450E+01	1.150E+00	1.900E+00	2.090E+00	1.170E+00	2.610E+00	2.540E+00	2.590E+00	1.490E+00	1.340E+01	8.660E-01	1.130E+00
B1L504 WE	(pCi/ml)	1.410E+00	1.410E+01	1.160E+01	1.410E+00	1.090E+00	2.270E+00	1.410E+00	2.930E+00	1.930E+00	3.440E+00	1.610E+00	1.550E+01	1.250E+00	1.370E+00
B1M5X1 WE	(pCi/ml)	1.190E+00	1.640E+01	1.070E+01	1.130E+00	1.080E+00	2.010E+00	9.610E-01	2.450E+00	1.710E+00	2.270E+00	1.470E+00	1.260E+01	1.030E+00	1.090E+00
B1L512 WE	(pCi/ml)	1.040E+00	2.080E+01	1.450E+01	1.170E+00	1.870E+00	2.090E+00	1.090E+00	2.520E+00	2.570E+00	2.480E+00	1.470E+00	1.330E+01	9.310E-01	1.160E+00
B1L517 WE	(pCi/ml)	1.300E+00	1.520E+01	1.160E+01	1.280E+00	1.050E+00	2.270E+00	1.350E+00	2.590E+00	1.940E+00	3.340E+00	1.560E+00	1.620E+01	1.150E+00	1.240E+00
B1L519-Soil	(pCi/ml)	1.270E+00	1.650E+01	1.060E+01	1.250E+00	1.040E+00	1.840E+00	1.010E+00	2.540E+00	1.780E+00	2.280E+00	1.570E+00	1.300E+01	1.050E+00	1.070E+00
B1L524-Soil	(pCi/ml)	1.240E+00	2.070E+01	1.490E+01	1.160E+00	1.840E+00	2.150E+00	1.100E+00	2.630E+00	2.530E+00	2.540E+00	1.580E+00	1.370E+01	1.050E+00	1.150E+00
B1L528-Soil	(pCi/ml)	1.260E+00	1.400E+01	1.250E+01	1.440E+00	1.090E+00	2.260E+00	1.280E+00	2.680E+00	1.950E+00	3.460E+00	1.580E+00	1.560E+01	1.480E+00	1.290E+00
B1L531 WE	(pCi/ml)	1.220E+00	1.730E+01	1.040E+01	1.090E+00	1.060E+00	1.920E+00	1.180E+00	2.120E+00	1.700E+00	2.200E+00	1.520E+00	1.220E+01	1.220E+00	1.130E+00
B1L531-Dup1 WE	(pCi/ml)	1.120E+00	2.010E+01	1.440E+01	1.100E+00	1.870E+00	2.100E+00	1.050E+00	2.500E+00	2.560E+00	2.650E+00	8.510E-01	1.260E+01	9.620E-01	1.070E+00
B1L536 WE	(pCi/ml)	1.380E+00	1.410E+01	1.260E+01	1.440E+00	1.070E+00	2.270E+00	1.250E+00	2.490E+00	2.040E+00	3.430E+00	1.580E+00	1.700E+01	1.150E+00	1.260E+00
B1L540 WE	(pCi/ml)	1.350E+00	1.720E+01	1.110E+01	1.090E+00	1.110E+00	1.900E+00	1.060E+00	2.330E+00	1.730E+00	2.150E+00	1.470E+00	1.220E+01	9.470E-01	1.010E+00
B1L543 WE	(pCi/ml)	1.160E+00	2.030E+01	1.460E+01	1.120E+00	1.920E+00	2.040E+00	1.130E+00	2.610E+00	2.470E+00	2.650E+00	8.120E-01	1.150E+01	8.830E-01	1.080E+00
B1L547 WE	(pCi/ml)	1.380E+00	1.310E+01	1.250E+01	1.330E+00	1.060E+00	2.260E+00	1.330E+00	2.740E+00	1.920E+00	3.410E+00	1.570E+00	1.580E+01	1.190E+00	1.260E+00
B1L553 WE	(pCi/ml)	1.130E+00	1.640E+01	1.030E+01	1.100E+00	1.080E+00	1.980E+00	1.160E+00	2.370E+00	1.840E+00	2.180E+00	1.530E+00	1.410E+01	1.110E+00	1.040E+00
B1L553 Dup2 WE	(pCi/ml)	1.170E+00	1.650E+01	1.090E+01	1.140E+00	1.090E+00	2.370E+00	1.090E+00	2.490E+00	1.710E+00	2.220E+00	1.550E+00	1.280E+01	8.880E-01	1.060E+00
B1L557 WE	(pCi/ml)	1.150E+00	2.010E+01	1.420E+01	1.180E+00	1.880E+00	1.900E+00	1.080E+00	2.470E+00	2.600E+00	2.650E+00	1.560E+00	1.300E+01	1.040E+00	1.100E+00
B1L562 WE	(pCi/ml)	1.190E+00	1.590E+01	1.100E+01	1.160E+00	1.050E+00	2.160E+00	1.190E+00	2.410E+00	1.810E+00	2.250E+00	1.540E+00	1.440E+01	1.000E+00	1.150E+00
B1L568 WE	(pCi/ml)	1.360E+00	1.480E+01	1.140E+01	1.370E+00	1.070E+00	2.360E+00	1.330E+00	2.470E+00	1.950E+00	3.530E+00	1.610E+00	1.600E+01	1.170E+00	1.290E+00
B1L570 WE	(pCi/ml)	1.110E+00	1.580E+01	1.040E+01	1.090E+00	1.090E+00	2.050E+00	1.120E+00	2.490E+00	1.780E+00	2.160E+00	1.520E+00	1.280E+01	1.050E+00	1.130E+00
B1L577 WE	(pCi/ml)	1.210E+00	2.130E+01	1.450E+01	1.090E+00	1.870E+00	2.150E+00	1.070E+00	2.520E+00	2.540E+00	2.660E+00	8.260E-01	1.300E+01	9.550E-01	1.130E+00
B1L582 WE	(pCi/ml)	1.240E+00	1.440E+01	1.180E+01	1.400E+00	1.020E+00	2.140E+00	1.260E+00	2.430E+00	1.880E+00	3.490E+00	1.610E+00	1.570E+01	1.290E+00	1.270E+00
B1L587 WE	(pCi/ml)	1.320E+00	1.630E+01	1.010E+01	1.140E+00	1.050E+00	1.980E+00	1.190E+00	2.140E+00	1.620E+00	2.320E+00	1.530E+00	1.500E+01	7.540E-01	1.070E+00
B1L592 WE	(pCi/ml)	1.130E+00	2.100E+01	1.430E+01	1.170E+00	1.880E+00	2.170E+00	1.140E+00	2.540E+00	2.580E+00	2.650E+00	1.550E+00	1.310E+01	7.950E-01	1.110E+00
B1L596 WE	(pCi/ml)	1.460E+00	1.350E+01	1.200E+01	1.430E+00	1.050E+00	2.410E+00	1.200E+00	2.700E+00	1.940E+00	3.420E+00	1.560E+00	1.580E+01	1.250E+00	1.300E+00
B1L5B1 WE	(pCi/ml)	1.200E+00	1.530E+01	1.020E+01	1.190E+00	1.030E+00	2.050E+00	1.130E+00	2.330E+00	1.750E+00	2.450E+00	1.490E+00	1.260E+01	1.030E+00	1.010E+00
B1L5B1 DupWB	(pCi/ml)	1.200E+00	2.020E+01	1.440E+01	1.100E+00	1.890E+00	2.040E+00	1.090E+00	2.540E+00	2.520E+00	2.580E+00	1.560E+00	1.220E+01	8.990E-01	1.090E+00
B1L5B3 WE	(pCi/ml)	1.200E+00	2.000E+01	1.440E+01	1.170E+00	1.890E+00	1.960E+00	1.110E+00	2.510E+00	2.500E+00	2.740E+00	1.590E+00	1.240E+01	9.240E-01	1.120E+00
B1L5B5 WE	(pCi/ml)	1.310E+00	1.280E+01	1.220E+01	1.430E+00	1.060E+00	2.220E+00	1.300E+00	2.510E+00	1.960E+00	3.380E+00	1.600E+00	1.670E+01	1.290E+00	1.300E+00
B1L5B7 WE	(pCi/ml)	1.080E+00	2.050E+01	1.480E+01	1.140E+00	1.870E+00	2.020E+00	1.120E+00	2.360E+00	2.560E+00	2.580E+00	1.560E+00	1.280E+01	8.400E-01	1.050E+00
B1L5C0 WE	(pCi/ml)	1.330E+00	1.260E+01	1.210E+01	1.430E+00	1.040E+00	2.210E+00	1.280E+00	2.650E+00	1.930E+00	3.310E+00	1.590E+00	1.650E+01	1.050E+00	1.160E+00
B1L5C4 WE	(pCi/ml)	1.250E+00	1.590E+01	1.080E+01	1.140E+00	1.060E+00	2.010E+00	1.220E+00	2.500E+00	1.750E+00	2.160E+00	1.450E+00	1.530E+01	1.080E+00	1.040E+00

Gamma Energy Analysis Isotopic re
Data report by Igor Katnyakov
Data reviewed by Robert Orr
Procedure: AGG-RLL-002

MDA	NB-95	NB-95M	Tc-95m	ZR-95	TC-99M	RU-103	RU-106	AG-108m	CD-109	AG-110	AG-110M	SN-113	SB-124	SB-125	I-131	BA-133
E-102																
BIL1L1 WE	1.230E+00	4.760E+00	1.760E+00	2.140E+00	1.100E+00	1.540E+00	1.400E+01	1.300E+00	2.630E+01	1.380E+00	1.380E+00	1.820E+00	1.520E+00	4.050E+00	1.500E+00	2.050E+00
A-4																
BIL4Y7 WE	1.070E+00	4.440E+00	1.680E+00	1.810E+00	1.090E+00	1.180E+00	1.200E+01	1.200E+00	2.690E+01	1.320E+00	1.320E+00	1.650E+00	1.100E+00	3.660E+00	1.330E+00	1.790E+00
BIL500 WE	1.180E+00	6.010E+00	2.370E+00	2.000E+00	1.850E+00	1.380E+00	1.130E+01	1.300E+00	5.520E+01	1.200E+00	1.200E+00	2.060E+00	1.450E+00	4.160E+00	1.650E+00	2.340E+00
BIL504 WE	1.330E+00	4.710E+00	1.780E+00	2.430E+00	1.080E+00	1.540E+00	1.390E+01	1.270E+00	2.620E+01	1.360E+00	1.360E+00	1.790E+00	1.440E+00	3.890E+00	1.490E+00	2.060E+00
BIM5X1 WE	1.180E+00	4.450E+00	1.710E+00	2.060E+00	1.080E+00	1.200E+00	1.160E+01	1.140E+00	2.600E+01	1.170E+00	1.170E+00	1.620E+00	1.130E+00	3.420E+00	1.300E+00	1.940E+00
BIL512 WE	1.120E+00	6.080E+00	2.420E+00	2.000E+00	1.840E+00	1.300E+00	1.170E+01	1.250E+00	5.550E+01	1.150E+00	1.150E+00	2.000E+00	1.460E+00	4.210E+00	1.610E+00	2.340E+00
BIL517 WE	1.180E+00	4.810E+00	1.750E+00	2.070E+00	1.090E+00	1.560E+00	1.320E+01	1.310E+00	2.610E+01	1.350E+00	1.350E+00	1.720E+00	1.460E+00	4.030E+00	1.460E+00	2.010E+00
BIL519-Soil	1.020E+00	4.330E+00	1.720E+00	1.850E+00	1.070E+00	1.230E+00	1.130E+01	1.160E+00	2.660E+01	1.300E+00	1.300E+00	1.500E+00	1.200E+00	3.670E+00	1.310E+00	1.890E+00
BIL524-Soil	1.130E+00	6.040E+00	2.420E+00	1.960E+00	1.840E+00	1.330E+00	1.160E+01	1.360E+00	5.480E+01	1.200E+00	1.210E+00	2.050E+00	1.390E+00	4.110E+00	1.700E+00	2.330E+00
BIL528-Soil	1.300E+00	4.890E+00	1.800E+00	2.250E+00	1.130E+00	1.520E+00	1.380E+01	1.310E+00	2.640E+01	1.470E+00	1.470E+00	1.840E+00	1.460E+00	3.940E+00	1.500E+00	2.050E+00
BIL531 WE	1.130E+00	4.640E+00	1.660E+00	1.910E+00	1.070E+00	1.190E+00	1.170E+01	1.190E+00	2.630E+01	1.210E+00	1.210E+00	1.630E+00	1.050E+00	3.680E+00	1.310E+00	1.930E+00
BIL531-Dup1 WE	1.090E+00	6.010E+00	2.410E+00	1.950E+00	1.820E+00	1.330E+00	1.190E+01	1.270E+00	5.570E+01	1.270E+00	1.270E+00	1.990E+00	1.490E+00	4.150E+00	1.630E+00	2.380E+00
BIL536 WE	1.250E+00	4.630E+00	1.790E+00	2.220E+00	1.100E+00	1.530E+00	1.380E+01	1.300E+00	2.600E+01	1.410E+00	1.410E+00	1.780E+00	1.470E+00	3.920E+00	1.560E+00	2.070E+00
BIL540 WE	1.170E+00	4.510E+00	1.710E+00	2.060E+00	1.070E+00	1.200E+00	1.160E+01	1.190E+00	2.620E+01	1.290E+00	1.290E+00	1.560E+00	1.110E+00	3.670E+00	1.340E+00	1.970E+00
BIL543 WE	1.110E+00	6.010E+00	2.370E+00	1.970E+00	1.840E+00	1.340E+00	1.150E+01	1.280E+00	5.530E+01	1.190E+00	1.190E+00	2.060E+00	1.420E+00	4.300E+00	1.700E+00	2.310E+00
BIL547 WE	1.210E+00	4.960E+00	1.790E+00	2.210E+00	1.100E+00	1.590E+00	1.470E+01	1.320E+00	2.540E+01	1.370E+00	1.370E+00	1.850E+00	1.500E+00	4.070E+00	1.450E+00	1.940E+00
BIL553 WE	1.180E+00	4.500E+00	1.720E+00	2.150E+00	1.020E+00	1.210E+00	1.080E+01	1.140E+00	2.690E+01	1.250E+00	1.250E+00	1.600E+00	1.180E+00	3.670E+00	1.310E+00	1.940E+00
BIL553 Dup2 WE	1.130E+00	4.370E+00	1.700E+00	1.970E+00	1.080E+00	1.260E+00	1.140E+01	1.160E+00	2.590E+01	1.270E+00	1.270E+00	1.510E+00	1.140E+00	3.580E+00	1.320E+00	1.900E+00
BIL557 WE	1.160E+00	6.160E+00	2.390E+00	2.070E+00	1.850E+00	1.330E+00	1.090E+01	1.250E+00	5.480E+01	1.170E+00	1.180E+00	1.950E+00	1.430E+00	4.290E+00	1.660E+00	2.330E+00
BIL562 WE	1.200E+00	4.490E+00	1.720E+00	2.260E+00	1.090E+00	1.140E+00	1.190E+01	1.110E+00	2.640E+01	1.230E+00	1.230E+00	1.530E+00	1.090E+00	3.300E+00	1.280E+00	1.830E+00
BIL568 WE	1.240E+00	4.850E+00	1.760E+00	2.300E+00	1.100E+00	1.530E+00	1.380E+01	1.240E+00	2.600E+01	1.370E+00	1.370E+00	1.710E+00	1.440E+00	3.940E+00	1.490E+00	2.040E+00
BIL570 WE	1.050E+00	4.420E+00	1.690E+00	1.960E+00	1.080E+00	1.170E+00	1.210E+01	1.110E+00	2.640E+01	1.200E+00	1.210E+00	1.650E+00	1.070E+00	3.590E+00	1.350E+00	1.920E+00
BIL577 WE	1.170E+00	6.140E+00	2.380E+00	2.040E+00	1.860E+00	1.290E+00	1.160E+01	1.220E+00	5.450E+01	1.160E+00	1.160E+00	2.020E+00	1.420E+00	4.290E+00	1.590E+00	2.210E+00
BIL582 WE	1.300E+00	4.760E+00	1.750E+00	2.240E+00	1.040E+00	1.520E+00	1.360E+01	1.310E+00	2.610E+01	1.350E+00	1.360E+00	1.790E+00	1.480E+00	3.930E+00	1.480E+00	2.000E+00
BIL587 WE	1.110E+00	4.480E+00	1.680E+00	1.840E+00	1.030E+00	1.180E+00	1.090E+01	1.180E+00	2.600E+01	1.300E+00	1.300E+00	1.590E+00	1.140E+00	3.630E+00	1.320E+00	1.880E+00
BIL592 WE	1.050E+00	6.070E+00	2.360E+00	1.870E+00	1.850E+00	1.340E+00	1.140E+01	1.260E+00	3.390E+01	1.180E+00	1.180E+00	1.960E+00	1.410E+00	4.010E+00	1.690E+00	2.350E+00
BIL596 WE	1.270E+00	4.710E+00	1.790E+00	2.250E+00	1.100E+00	1.520E+00	1.340E+01	1.270E+00	2.550E+01	1.200E+00	1.200E+00	1.830E+00	1.430E+00	3.840E+00	1.470E+00	2.040E+00
BIL5B1 WE	1.100E+00	4.360E+00	1.660E+00	2.020E+00	1.090E+00	1.150E+00	1.040E+01	1.180E+00	2.600E+01	1.180E+00	1.180E+00	1.580E+00	1.070E+00	3.600E+00	1.270E+00	1.810E+00
BIL5B1 DupWE	1.090E+00	6.040E+00	2.400E+00	1.930E+00	1.820E+00	1.330E+00	1.150E+01	1.320E+00	5.380E+01	1.190E+00	1.200E+00	2.050E+00	1.490E+00	4.180E+00	1.680E+00	2.340E+00
BIL5B3 WE	1.130E+00	6.220E+00	2.370E+00	2.010E+00	1.850E+00	1.350E+00	1.170E+01	1.190E+00	5.470E+01	1.220E+00	1.220E+00	1.980E+00	1.390E+00	4.040E+00	1.580E+00	2.330E+00
BIL5B5 WE	1.270E+00	4.730E+00	1.780E+00	2.360E+00	1.080E+00	1.540E+00	1.380E+01	1.270E+00	2.650E+01	1.380E+00	1.390E+00	1.810E+00	1.440E+00	3.870E+00	1.540E+00	2.080E+00
BIL5B7 WE	1.120E+00	6.180E+00	2.430E+00	1.900E+00	1.900E+00	1.340E+00	1.170E+01	1.300E+00	5.490E+01	1.230E+00	1.230E+00	2.020E+00	1.440E+00	4.130E+00	1.620E+00	2.350E+00
BIL5C0 WE	1.270E+00	4.820E+00	1.740E+00	2.280E+00	1.060E+00	1.550E+00	1.410E+01	1.240E+00	2.570E+01	1.400E+00	1.400E+00	1.710E+00	1.440E+00	3.980E+00	1.440E+00	1.980E+00
BIL5C4 WE	1.110E+00	4.410E+00	1.690E+00	2.080E+00	1.080E+00	1.170E+00	1.130E+01	1.120E+00	2.660E+01	1.280E+00	1.280E+00	1.640E+00	1.170E+00	3.630E+00	1.260E+00	1.780E+00

Gamma Energy Analysis Isotopic re
Data report by: Igor Kabyakov
Data reviewed by: Robert Orr
Procedure. AGG-RLL-002

MDA	CS-134	CS-137	CE-139	CE-144	EU-152	GD-153	EU-154	EU-155	HG-203	TL-208	BI-210	PB-210	BI-211	PB-211	PB-212	BI-214
E-102																
B1L1L1 WE	1.550E+00	1.550E+00	1.280E+00	8.900E+00	4.820E+00	3.070E+00	2.260E+00	3.040E+00	1.490E+00	1.490E+00	2.310E+00	1.140E+02	2.860E+01	3.910E+01	2.790E+00	3.330E+00
A-4																
B1L4Y7 WE	1.130E+00	1.440E+00	1.260E+00	8.620E+00	4.070E+00	3.090E+00	2.300E+00	2.900E+00	1.360E+00	1.250E+00	2.130E+00	2.560E+02	2.580E+01	3.520E+01	2.570E+00	2.350E+00
B1L500 WE	1.290E+00	1.300E+00	1.970E+00	1.530E+01	5.330E+00	6.010E+00	3.520E+00	6.310E+00	1.920E+00	1.520E+00	3.050E+00	2.660E+02	3.150E+01	4.180E+01	3.470E+00	3.010E+00
B1L504 WE	1.460E+00	1.500E+00	1.330E+00	8.780E+00	4.650E+00	3.060E+00	2.300E+00	3.020E+00	1.560E+00	1.640E+00	2.320E+00	1.130E+02	2.990E+01	4.080E+01	2.740E+00	3.130E+00
B1M5X1 WE	1.260E+00	1.250E+00	1.270E+00	8.790E+00	4.280E+00	3.070E+00	2.290E+00	2.870E+00	1.340E+00	1.200E+00	2.050E+00	2.520E+02	2.630E+01	3.600E+01	2.630E+00	2.590E+00
B1L512 WE	1.440E+00	1.290E+00	1.970E+00	1.520E+01	5.320E+00	5.860E+00	3.020E+00	6.300E+00	1.960E+00	1.480E+00	3.060E+00	2.600E+02	3.100E+01	3.990E+01	3.540E+00	3.010E+00
B1L517 WE	1.470E+00	1.480E+00	1.330E+00	8.730E+00	4.450E+00	3.110E+00	2.240E+00	3.000E+00	1.560E+00	1.560E+00	2.360E+00	1.140E+02	2.750E+01	3.760E+01	2.760E+00	3.120E+00
B1L519-Soil	1.190E+00	1.450E+00	1.260E+00	8.470E+00	3.960E+00	3.100E+00	2.220E+00	2.940E+00	1.400E+00	1.320E+00	2.100E+00	2.610E+02	2.490E+01	3.410E+01	2.560E+00	2.410E+00
B1L524-Soil	1.360E+00	1.380E+00	2.000E+00	1.540E+01	5.300E+00	5.930E+00	3.590E+00	6.250E+00	1.920E+00	1.420E+00	3.040E+00	2.620E+02	3.110E+01	4.070E+01	3.520E+00	2.900E+00
B1L528-Soil	1.440E+00	1.630E+00	1.340E+00	9.220E+00	4.720E+00	3.090E+00	2.300E+00	3.040E+00	1.510E+00	1.610E+00	2.340E+00	1.160E+02	2.880E+01	3.930E+01	2.810E+00	3.090E+00
B1L531 WE	1.120E+00	1.350E+00	1.190E+00	8.710E+00	4.150E+00	2.960E+00	2.250E+00	2.940E+00	1.270E+00	1.250E+00	2.050E+00	2.590E+02	2.700E+01	3.690E+01	2.640E+00	2.500E+00
B1L531-Dup1 WE	1.310E+00	1.400E+00	1.970E+00	1.510E+01	5.410E+00	5.840E+00	3.240E+00	6.400E+00	1.970E+00	1.430E+00	3.060E+00	2.650E+02	3.110E+01	3.910E+01	3.540E+00	3.060E+00
B1L536 WE	1.490E+00	1.540E+00	1.300E+00	8.770E+00	4.810E+00	3.030E+00	2.260E+00	3.010E+00	1.550E+00	1.580E+00	2.450E+00	1.110E+02	2.760E+01	3.780E+01	2.680E+00	3.180E+00
B1L540 WE	1.140E+00	1.470E+00	1.270E+00	8.660E+00	3.860E+00	3.020E+00	2.330E+00	2.940E+00	1.310E+00	1.250E+00	2.080E+00	2.570E+02	2.590E+01	3.530E+01	2.680E+00	2.420E+00
B1L543 WE	1.310E+00	1.320E+00	1.970E+00	1.520E+01	5.350E+00	5.840E+00	3.360E+00	6.340E+00	1.950E+00	1.400E+00	2.950E+00	2.630E+02	3.070E+01	3.990E+01	3.470E+00	3.010E+00
B1L547 WE	1.520E+00	1.550E+00	1.320E+00	8.830E+00	4.530E+00	3.010E+00	2.230E+00	2.940E+00	1.500E+00	1.590E+00	2.280E+00	1.130E+02	2.860E+01	3.910E+01	2.870E+00	3.290E+00
B1L553 WE	1.190E+00	1.430E+00	1.260E+00	8.440E+00	4.000E+00	3.000E+00	2.310E+00	2.930E+00	1.360E+00	1.300E+00	2.240E+00	2.690E+02	2.510E+01	3.440E+01	2.600E+00	2.550E+00
B1L553 Dup2 WE	1.170E+00	1.430E+00	1.260E+00	8.720E+00	4.250E+00	3.120E+00	2.290E+00	2.860E+00	1.370E+00	1.290E+00	2.050E+00	2.530E+02	2.670E+01	3.640E+01	2.510E+00	2.520E+00
B1L557 WE	1.350E+00	1.340E+00	1.970E+00	1.530E+01	5.230E+00	5.920E+00	3.340E+00	6.310E+00	1.920E+00	1.390E+00	3.110E+00	2.660E+02	3.100E+01	4.120E+01	3.580E+00	2.920E+00
B1L562 WE	1.120E+00	1.290E+00	1.240E+00	8.580E+00	3.960E+00	3.080E+00	2.200E+00	2.940E+00	1.380E+00	1.150E+00	2.150E+00	2.440E+02	2.570E+01	3.510E+01	2.580E+00	2.420E+00
B1L568 WE	1.400E+00	1.570E+00	1.310E+00	8.910E+00	4.550E+00	3.010E+00	2.270E+00	2.990E+00	1.580E+00	1.620E+00	2.360E+00	1.130E+02	2.820E+01	3.850E+01	2.810E+00	3.130E+00
B1L570 WE	1.160E+00	1.280E+00	1.260E+00	8.890E+00	4.220E+00	3.030E+00	2.290E+00	2.880E+00	1.340E+00	1.200E+00	2.150E+00	2.580E+02	2.470E+01	3.380E+01	2.560E+00	2.520E+00
B1L577 WE	1.220E+00	1.290E+00	1.960E+00	1.550E+01	5.290E+00	5.870E+00	3.520E+00	6.240E+00	1.930E+00	1.440E+00	3.030E+00	2.570E+02	3.040E+01	3.880E+01	3.570E+00	2.920E+00
B1L582 WE	1.480E+00	1.440E+00	1.330E+00	8.280E+00	4.630E+00	3.070E+00	2.130E+00	3.020E+00	1.480E+00	1.600E+00	2.240E+00	1.130E+02	2.920E+01	3.990E+01	2.780E+00	3.090E+00
B1L587 WE	1.150E+00	1.370E+00	1.220E+00	8.540E+00	4.070E+00	3.020E+00	2.230E+00	2.920E+00	1.360E+00	1.340E+00	2.010E+00	2.550E+02	2.560E+01	3.500E+01	2.660E+00	2.410E+00
B1L592 WE	1.330E+00	1.270E+00	1.960E+00	1.540E+01	5.330E+00	5.810E+00	3.290E+00	6.240E+00	1.950E+00	1.460E+00	3.100E+00	2.610E+02	2.990E+01	4.090E+01	3.530E+00	2.890E+00
B1L596 WE	1.420E+00	1.340E+00	1.260E+00	8.740E+00	4.700E+00	2.990E+00	2.210E+00	2.940E+00	1.510E+00	1.550E+00	2.350E+00	1.220E+02	2.920E+01	3.990E+01	2.690E+00	3.100E+00
B1L5B1 WE	1.140E+00	1.300E+00	1.240E+00	8.580E+00	3.970E+00	3.010E+00	2.210E+00	2.920E+00	1.300E+00	1.350E+00	2.080E+00	2.560E+02	2.500E+01	3.410E+01	2.580E+00	2.450E+00
B1L5B1 DupWE	1.280E+00	1.360E+00	1.950E+00	1.480E+01	5.260E+00	5.820E+00	3.480E+00	6.190E+00	1.960E+00	1.460E+00	3.000E+00	2.570E+02	3.070E+01	3.830E+01	3.490E+00	3.080E+00
B1L5B3 WE	1.250E+00	1.370E+00	1.950E+00	1.530E+01	5.310E+00	5.800E+00	3.480E+00	6.270E+00	1.900E+00	1.430E+00	2.980E+00	2.600E+02	3.130E+01	4.040E+01	3.560E+00	2.900E+00
B1L5B5 WE	1.470E+00	1.530E+00	1.300E+00	8.550E+00	4.800E+00	3.000E+00	2.240E+00	3.060E+00	1.480E+00	1.580E+00	2.330E+00	1.140E+02	2.890E+01	3.950E+01	2.770E+00	3.130E+00
B1L5B7 WE	1.280E+00	1.340E+00	1.910E+00	1.540E+01	5.430E+00	5.850E+00	3.140E+00	6.290E+00	1.930E+00	1.460E+00	3.060E+00	2.640E+02	3.110E+01	4.020E+01	3.580E+00	2.920E+00
B1L5C0 WE	1.460E+00	1.590E+00	1.290E+00	8.650E+00	4.740E+00	3.090E+00	2.210E+00	2.940E+00	1.430E+00	1.460E+00	2.320E+00	1.120E+02	2.760E+01	3.770E+01	2.830E+00	3.100E+00
B1L5C4 WE	1.190E+00	1.490E+00	1.260E+00	8.470E+00	4.090E+00	2.970E+00	2.230E+00	2.920E+00	1.320E+00	1.200E+00	2.080E+00	2.580E+02	2.470E+01	3.380E+01	2.500E+00	2.610E+00

Gamma Energy Analysis Isotopic re
Data report by: Igor Kutnyakov
Data reviewed by: Robert Orr
Procedure: AGG-RLL-002

MDA	PB-214	RN-219	RN-220	RN-221	FR-223	RA-223	RA-224	RA-226	TH-227	AC-228	TH-228	Th230	PA-231	TH-231	TH-232	Pa-233
E-102																
B1L1L1 WE	3.290E+00	1.160E+01	1.250E+03	5.290E+00	3.470E+01	8.520E+00	3.040E+01	3.260E+01	1.060E+01	5.040E+00	4.090E+02	3.440E+02	5.050E+01	2.250E+02	8.910E+02	3.240E+00
A-4																
B1L4Y7 WE	2.870E+00	1.110E+01	9.860E+02	4.780E+00	3.220E+01	8.080E+00	2.790E+01	2.950E+01	9.910E+00	4.640E+00	3.870E+02	3.530E+02	4.540E+01	2.170E+02	9.740E+02	3.030E+00
B1L500 WE	3.790E+00	1.530E+01	1.120E+03	7.420E+00	4.450E+01	1.120E+01	3.720E+01	4.570E+01	1.340E+01	4.660E+00	5.410E+02	8.900E+02	6.480E+01	4.210E+02	2.250E+03	4.090E+00
B1L504 WE	3.350E+00	1.180E+01	1.330E+03	5.430E+00	3.460E+01	8.530E+00	2.970E+01	3.350E+01	1.050E+01	4.930E+00	4.060E+02	3.350E+02	5.170E+01	2.240E+02	8.600E+02	3.220E+00
B1M5X1 WE	3.190E+00	1.010E+01	1.030E+03	4.910E+00	3.220E+01	7.410E+00	2.920E+01	3.060E+01	9.940E+00	4.560E+00	3.930E+02	3.410E+02	4.450E+01	2.180E+02	9.760E+02	2.870E+00
B1L512 WE	3.710E+00	1.540E+01	1.120E+03	7.340E+00	4.470E+01	1.120E+01	3.860E+01	4.550E+01	1.360E+01	4.310E+00	5.440E+02	8.970E+02	6.480E+01	4.160E+02	2.260E+03	3.890E+00
B1L517 WE	3.190E+00	1.210E+01	1.330E+03	5.210E+00	3.530E+01	8.780E+00	3.010E+01	3.210E+01	1.070E+01	5.000E+00	4.160E+02	3.340E+02	5.050E+01	2.290E+02	8.650E+02	3.150E+00
B1L519-Soil	2.970E+00	1.080E+01	1.000E+03	4.860E+00	3.150E+01	7.860E+00	2.850E+01	3.000E+01	9.680E+00	4.890E+00	3.930E+02	3.480E+02	4.470E+01	2.110E+02	1.010E+03	3.010E+00
B1L524-Soil	3.700E+00	1.500E+01	1.120E+03	7.380E+00	4.490E+01	1.100E+01	3.840E+01	4.540E+01	1.350E+01	4.790E+00	5.410E+02	8.930E+02	6.230E+01	4.130E+02	2.260E+03	3.980E+00
B1L528-Soil	3.180E+00	1.160E+01	1.310E+03	5.400E+00	3.610E+01	8.530E+00	3.050E+01	3.330E+01	1.090E+01	5.480E+00	4.360E+02	3.400E+02	5.170E+01	2.230E+02	9.020E+02	3.360E+00
B1L531 WE	3.090E+00	1.010E+01	1.050E+03	4.830E+00	3.400E+01	7.250E+00	2.800E+01	2.990E+01	1.040E+01	4.280E+00	3.980E+02	3.430E+02	4.450E+01	2.210E+02	9.940E+02	2.820E+00
B1L531-Dup1 WE	3.840E+00	1.540E+01	1.090E+03	7.350E+00	4.400E+01	1.120E+01	3.820E+01	4.540E+01	1.340E+01	4.670E+00	5.460E+02	8.910E+02	6.550E+01	4.170E+02	2.270E+03	4.160E+00
B1L536 WE	3.310E+00	1.230E+01	1.200E+03	5.310E+00	3.430E+01	8.980E+00	2.920E+01	3.270E+01	1.030E+01	5.000E+00	4.230E+02	3.350E+02	5.310E+01	2.200E+02	8.880E+02	3.430E+00
B1L540 WE	3.060E+00	1.080E+01	9.900E+02	4.870E+00	3.250E+01	7.900E+00	2.930E+01	2.980E+01	1.010E+01	4.580E+00	3.790E+02	3.430E+02	4.430E+01	2.160E+02	1.030E+03	3.040E+00
B1L543 WE	3.720E+00	1.530E+01	1.070E+03	7.260E+00	4.400E+01	1.110E+01	3.810E+01	4.480E+01	1.340E+01	4.940E+00	5.400E+02	8.680E+02	6.550E+01	4.120E+02	2.270E+03	3.950E+00
B1L547 WE	3.100E+00	1.160E+01	1.220E+03	5.350E+00	3.620E+01	8.530E+00	3.090E+01	3.300E+01	1.110E+01	5.070E+00	4.280E+02	3.340E+02	5.080E+01	2.220E+02	8.770E+02	3.300E+00
B1L553 WE	3.120E+00	1.110E+01	1.050E+03	4.900E+00	3.300E+01	8.150E+00	2.750E+01	3.040E+01	1.010E+01	4.310E+00	3.890E+02	3.450E+02	4.570E+01	2.210E+02	9.790E+02	2.920E+00
B1L553 Dup2 WE	3.000E+00	1.000E+01	1.090E+03	4.770E+00	3.190E+01	7.450E+00	2.770E+01	2.900E+01	9.760E+00	4.370E+00	3.900E+02	3.550E+02	4.520E+01	2.260E+02	1.000E+03	2.880E+00
B1L557 WE	3.670E+00	1.550E+01	1.090E+03	7.350E+00	4.540E+01	1.130E+01	3.870E+01	4.550E+01	1.380E+01	4.360E+00	5.400E+02	8.810E+02	6.450E+01	4.160E+02	2.290E+03	3.980E+00
B1L562 WE	2.960E+00	1.080E+01	9.860E+02	4.940E+00	3.260E+01	7.900E+00	2.860E+01	3.040E+01	1.000E+01	4.280E+00	3.880E+02	3.420E+02	4.620E+01	2.180E+02	9.720E+02	2.950E+00
B1L568 WE	3.290E+00	1.210E+01	1.300E+03	5.240E+00	3.580E+01	8.790E+00	3.060E+01	3.230E+01	1.080E+01	5.370E+00	4.220E+02	3.400E+02	5.090E+01	2.240E+02	8.980E+02	3.100E+00
B1L570 WE	3.060E+00	1.070E+01	1.090E+03	5.010E+00	3.280E+01	7.720E+00	2.800E+01	3.110E+01	9.870E+00	4.640E+00	3.820E+02	3.380E+02	4.530E+01	2.200E+02	9.670E+02	2.890E+00
B1L577 WE	3.600E+00	1.510E+01	1.090E+03	7.200E+00	4.490E+01	1.100E+01	3.840E+01	4.450E+01	1.370E+01	4.420E+00	5.520E+02	8.920E+02	6.360E+01	4.200E+02	2.280E+03	4.010E+00
B1L582 WE	3.130E+00	1.160E+01	1.190E+03	5.280E+00	3.500E+01	8.420E+00	2.990E+01	3.260E+01	1.060E+01	5.350E+00	4.090E+02	3.370E+02	5.200E+01	2.190E+02	8.650E+02	3.150E+00
B1L587 WE	2.990E+00	1.020E+01	1.070E+03	4.870E+00	3.290E+01	7.400E+00	2.890E+01	2.990E+01	1.000E+01	4.610E+00	3.790E+02	3.430E+02	4.480E+01	2.210E+02	1.010E+03	2.840E+00
B1L592 WE	3.760E+00	1.540E+01	1.040E+03	7.380E+00	4.420E+01	1.120E+01	3.850E+01	4.570E+01	1.360E+01	4.600E+00	5.560E+02	8.670E+02	6.470E+01	4.120E+02	2.280E+03	3.900E+00
B1L596 WE	3.260E+00	1.180E+01	1.280E+03	5.240E+00	3.470E+01	8.660E+00	2.930E+01	3.230E+01	1.050E+01	4.760E+00	4.210E+02	3.360E+02	5.170E+01	2.200E+02	8.890E+02	3.290E+00
B1L5B1 WE	2.910E+00	1.050E+01	1.010E+03	4.870E+00	3.200E+01	7.630E+00	2.840E+01	3.000E+01	9.740E+00	4.420E+00	3.860E+02	3.310E+02	4.450E+01	2.170E+02	9.660E+02	2.750E+00
B1L5B1 DupWE	3.740E+00	1.520E+01	1.090E+03	7.300E+00	4.420E+01	1.110E+01	3.780E+01	4.510E+01	1.350E+01	4.620E+00	5.470E+02	8.750E+02	6.350E+01	4.190E+02	2.250E+03	3.900E+00
B1L5B3 WE	3.770E+00	1.490E+01	1.080E+03	7.280E+00	4.560E+01	1.090E+01	3.870E+01	4.510E+01	1.390E+01	4.650E+00	5.530E+02	8.790E+02	6.480E+01	4.080E+02	2.270E+03	4.000E+00
B1L5B5 WE	3.330E+00	1.170E+01	1.290E+03	5.200E+00	3.470E+01	8.470E+00	3.030E+01	3.210E+01	1.060E+01	4.670E+00	4.170E+02	3.290E+02	5.470E+01	2.200E+02	8.690E+02	3.400E+00
B1L5B7 WE	3.830E+00	1.530E+01	1.080E+03	7.310E+00	4.550E+01	1.120E+01	3.880E+01	4.520E+01	1.380E+01	4.740E+00	5.490E+02	8.840E+02	6.270E+01	4.120E+02	2.280E+03	3.970E+00
B1L5C0 WE	3.200E+00	1.150E+01	1.300E+03	5.110E+00	3.540E+01	8.360E+00	3.060E+01	3.150E+01	1.080E+01	5.020E+00	4.170E+02	3.190E+02	5.030E+01	2.230E+02	8.240E+02	3.250E+00
B1L5C4 WE	2.760E+00	1.040E+01	9.740E+02	4.900E+00	3.250E+01	7.560E+00	2.700E+01	3.030E+01	9.860E+00	4.370E+00	3.830E+02	3.580E+02	4.450E+01	2.100E+02	9.790E+02	2.830E+00

Gamma Energy Analysis Isotopic re
Data report by: Igor Katsyakov
Data reviewed by: Robert Orr
Procedure: AGG-RLL-002

MDA	PA-234	PA-234m	TH-234	U-235	Np-237	Pu-238	U238	Pu-239	Pu-240	AM-241	AM-243	CM-243	CM-245
B-102													
B1L1L1 WE	4.030E+00	1.650E+02	3.100E+01	9.420E+00	7.910E+00	1.280E+04	1.730E+01	1.200E+04	1.300E+04	4.550E+00	1.920E+00	3.980E+00	3.270E+00
A-4													
B1L4Y7 WE	3.990E+00	1.520E+02	3.240E+01	9.020E+00	7.540E+00	1.260E+04	1.880E+01	1.510E+04	1.300E+04	4.930E+00	1.850E+00	3.950E+00	3.250E+00
B1L500 WE	7.030E+00	1.300E+02	6.740E+01	1.570E+01	1.640E+01	2.440E+04	3.490E+01	2.670E+04	2.440E+04	1.150E+01	4.710E+00	7.460E+00	6.120E+00
B1L504 WE	4.020E+00	1.590E+02	2.990E+01	9.200E+00	7.850E+00	1.260E+04	1.750E+01	1.180E+04	1.300E+04	4.380E+00	1.860E+00	3.970E+00	3.260E+00
B1M5X1 WE	3.890E+00	1.420E+02	3.190E+01	9.000E+00	7.480E+00	1.250E+04	1.790E+01	1.550E+04	1.250E+04	4.920E+00	1.850E+00	3.830E+00	3.140E+00
B1L512 WE	7.440E+00	1.430E+02	6.660E+01	1.580E+01	1.640E+01	2.360E+04	3.450E+01	2.660E+04	2.410E+04	1.160E+01	4.720E+00	7.340E+00	6.030E+00
B1L517 WE	4.090E+00	1.420E+02	2.980E+01	9.380E+00	7.820E+00	1.290E+04	1.750E+01	1.150E+04	1.320E+04	4.400E+00	1.850E+00	4.070E+00	3.340E+00
B1L519-Soil	3.940E+00	1.570E+02	3.160E+01	9.110E+00	7.670E+00	1.240E+04	1.850E+01	1.520E+04	1.230E+04	5.050E+00	1.770E+00	3.760E+00	3.090E+00
B1L524-Soil	7.300E+00	1.350E+02	6.690E+01	1.580E+01	1.630E+01	2.390E+04	3.460E+01	2.690E+04	2.400E+04	1.160E+01	4.740E+00	7.320E+00	6.020E+00
B1L528-Soil	4.030E+00	1.500E+02	3.090E+01	9.710E+00	7.930E+00	1.280E+04	1.750E+01	1.250E+04	1.280E+04	4.600E+00	1.850E+00	3.950E+00	3.240E+00
B1L531 WE	3.830E+00	1.400E+02	3.020E+01	9.100E+00	7.670E+00	1.230E+04	1.730E+01	1.500E+04	1.300E+04	4.840E+00	1.810E+00	3.970E+00	3.260E+00
B1L531-Dup1 WE	7.500E+00	1.450E+02	6.740E+01	1.530E+01	1.670E+01	2.400E+04	3.490E+01	2.640E+04	2.410E+04	1.150E+01	4.770E+00	7.360E+00	6.050E+00
B1L536 WE	3.980E+00	1.520E+02	3.060E+01	9.340E+00	7.830E+00	1.260E+04	1.710E+01	1.210E+04	1.290E+04	4.550E+00	1.870E+00	3.930E+00	3.230E+00
B1L540 WE	3.910E+00	1.440E+02	3.250E+01	8.870E+00	7.640E+00	1.210E+04	1.810E+01	1.510E+04	1.270E+04	5.080E+00	1.830E+00	3.880E+00	3.190E+00
B1L543 WE	7.300E+00	1.380E+02	6.720E+01	1.550E+01	1.650E+01	2.370E+04	3.480E+01	2.700E+04	2.370E+04	1.150E+01	4.710E+00	7.230E+00	5.940E+00
B1L547 WE	3.970E+00	1.620E+02	3.040E+01	9.370E+00	7.650E+00	1.260E+04	1.700E+01	1.210E+04	1.300E+04	4.500E+00	1.870E+00	3.960E+00	3.250E+00
B1L553 WE	3.890E+00	1.500E+02	3.150E+01	8.650E+00	7.630E+00	1.240E+04	1.790E+01	1.520E+04	1.280E+04	4.880E+00	1.790E+00	3.900E+00	3.200E+00
B1L553 Dup2 WE	4.050E+00	1.500E+02	3.170E+01	9.060E+00	7.440E+00	1.280E+04	1.780E+01	1.490E+04	1.320E+04	4.970E+00	1.820E+00	4.010E+00	3.290E+00
B1L557 WE	7.400E+00	1.400E+02	6.730E+01	1.560E+01	1.640E+01	2.380E+04	3.480E+01	2.680E+04	2.390E+04	1.160E+01	4.740E+00	7.330E+00	6.020E+00
B1L562 WE	3.930E+00	1.320E+02	3.050E+01	9.270E+00	7.660E+00	1.250E+04	1.810E+01	1.480E+04	1.280E+04	4.820E+00	1.820E+00	3.910E+00	3.210E+00
B1L568 WE	3.930E+00	1.480E+02	3.040E+01	9.450E+00	7.780E+00	1.260E+04	1.720E+01	1.240E+04	1.310E+04	4.560E+00	1.850E+00	3.980E+00	3.270E+00
B1L570 WE	3.870E+00	1.430E+02	3.040E+01	8.830E+00	7.500E+00	1.240E+04	1.800E+01	1.500E+04	1.290E+04	4.740E+00	1.830E+00	3.930E+00	3.230E+00
B1L577 WE	7.100E+00	1.330E+02	6.650E+01	1.560E+01	1.630E+01	2.400E+04	3.450E+01	2.690E+04	2.430E+04	1.160E+01	4.740E+00	7.440E+00	6.110E+00
B1L582 WE	4.020E+00	1.610E+02	3.010E+01	8.880E+00	7.860E+00	1.260E+04	1.720E+01	1.180E+04	1.250E+04	4.410E+00	1.820E+00	3.870E+00	3.180E+00
B1L587 WE	3.850E+00	1.430E+02	3.250E+01	8.920E+00	7.600E+00	1.240E+04	1.770E+01	1.490E+04	1.280E+04	5.050E+00	1.770E+00	3.900E+00	3.200E+00
B1L592 WE	7.010E+00	1.400E+02	6.630E+01	1.550E+01	9.990E+00	2.360E+04	3.430E+01	2.700E+04	2.420E+04	1.170E+01	4.660E+00	7.340E+00	6.030E+00
B1L596 WE	3.920E+00	1.520E+02	3.030E+01	9.420E+00	7.660E+00	1.250E+04	1.690E+01	1.240E+04	1.280E+04	4.570E+00	1.840E+00	3.910E+00	3.210E+00
B1L5B1 WE	3.800E+00	1.360E+02	3.040E+01	9.250E+00	7.600E+00	1.210E+04	1.760E+01	1.450E+04	1.250E+04	4.770E+00	1.780E+00	3.830E+00	3.140E+00
B1L5B1 DupWE	7.100E+00	1.340E+02	6.570E+01	1.550E+01	1.610E+01	2.380E+04	3.400E+01	2.590E+04	2.420E+04	1.150E+01	4.750E+00	7.430E+00	6.100E+00
B1L5B3 WE	7.190E+00	1.350E+02	6.620E+01	1.540E+01	1.630E+01	2.350E+04	3.430E+01	2.710E+04	2.380E+04	1.150E+01	4.760E+00	7.280E+00	5.980E+00
B1L5B5 WE	3.940E+00	1.480E+02	2.980E+01	9.170E+00	7.970E+00	1.250E+04	1.720E+01	1.210E+04	1.280E+04	4.440E+00	1.830E+00	3.920E+00	3.220E+00
B1L5B7 WE	7.300E+00	1.380E+02	6.590E+01	1.580E+01	1.640E+01	2.360E+04	3.410E+01	2.650E+04	2.390E+04	1.160E+01	4.710E+00	7.310E+00	6.010E+00
B1L5C0 WE	4.060E+00	1.410E+02	2.880E+01	9.130E+00	7.650E+00	1.280E+04	1.710E+01	1.130E+04	1.290E+04	4.200E+00	1.760E+00	3.940E+00	3.240E+00
B1L5C4 WE	3.790E+00	1.410E+02	3.240E+01	9.170E+00	7.590E+00	1.190E+04	1.790E+01	1.430E+04	1.240E+04	4.910E+00	1.850E+00	3.770E+00	3.090E+00

Gamma Energy Analysis Isotopic report. 325 Counting room Lab 425

Data report by: Igor Kutnyakov 4/4/07 Analyst name: Igor Kutnyakov

Data reviewed by: Robert Orr 4/4/2007 Peer reviewer name: Robert Orr

Procedure: AGG-RLL-002 Project Manager acceptance date: 4/12/2007

Sample ID	Units	acid:soil ratio (r	K-40	Error	CS-137	Error
E-102						
B1L1L1_AE	pCi/g	4.60	5.271E+01	1.111E+01	ND	ND
A-4						
B1L4Y7_AE	pCi/g	5.36	6.549E+01	1.084E+01	ND	ND
B1L500_AE	pCi/g	5.16	5.936E+01	1.238E+01	ND	ND
B1L504_AE	pCi/g	5.49	6.163E+01	1.216E+01	ND	ND
B1M5X1_AE	pCi/g	5.30	6.186E+01	8.735E+00	6.318E+00	9.652E-01
B1L512_AE	pCi/g	5.21	6.056E+01	1.102E+01	ND	ND
B1L517_AE	pCi/g	5.62	7.303E+01	1.172E+01	ND	ND
B1L519_AE	pCi/g	5.28	6.949E+01	9.893E+00	ND	ND
B1L524_AE	pCi/g	5.17	5.659E+01	1.144E+01	ND	ND
B1L528_AE	pCi/g	5.23	ND	ND	ND	ND
B1L531_AE	pCi/g	5.32	ND	ND	ND	ND
B1L531_Dup1_AE	pCi/g	5.54	ND	ND	ND	ND
B1L536_AE	pCi/g	5.37	6.483E+01	1.136E+01	ND	ND
B1L540_AE	pCi/g	5.44	8.399E+01	1.016E+01	ND	ND
B1L543_AE	pCi/g	5.27	3.192E+01	1.154E+01	ND	ND
B1L547_AE	pCi/g	5.21	5.156E+01	1.073E+01	ND	ND
B1L553_AE	pCi/g	5.27	ND	ND	ND	ND
B1L553_Dup2_AE	pCi/g	5.93	ND	ND	ND	ND
B1L557_AE	pCi/g	5.38	6.737E+01	1.222E+01	ND	ND
B1L562_AE	pCi/g	7.00	ND	ND	ND	ND
B1L568_AE	pCi/g	5.28	ND	ND	ND	ND
B1L570_AE	pCi/g	5.31	6.637E+01	1.136E+01	ND	ND
B1L577_AE	pCi/g	5.39	ND	ND	ND	ND
B1L582_AE	pCi/g	5.29	ND	ND	ND	ND
B1L587_AE	pCi/g	5.31	ND	ND	ND	ND
B1L592_AE	pCi/g	5.36	ND	ND	ND	ND
B1L596_AE	pCi/g	5.22	ND	ND	ND	ND
B1L5B1_AE	pCi/g	5.18	ND	ND	ND	ND
B1L5B1-Dup3_AE	pCi/g	6.19	ND	ND	ND	ND
B1L5B3_AE	pCi/g	5.41	ND	ND	ND	ND
B1L5B5_AE	pCi/g	5.52	ND	ND	ND	ND
B1L5B7_AE	pCi/g	5.30	ND	ND	ND	ND
B1L5C0_AE	pCi/g	4.91	ND	ND	ND	ND
B1L5C4_AE	pCi/g	5.01	ND	ND	ND	ND

Gamma Energy Analysis Isotopic report. 325 Counting room Lab 425
Data report by. Igor Kutnyakov 4/4/07
Data reviewed by Robert Orr 4/4/2007
Procedure AGG-RLL-002

Analyst name Igor Kutnyakov
Peer reviewer name: Robert Orr
Project Manager acceptance date 4/12/2007

MDA	Units	NA-22	K-40	CR-51	MN-54	CO-57	FE-59	CO-60	ZN-65	SB-75	RB-83	SR-85	RB-86	Y-88	NB-94
E-102															
B1L1L1 AE	pCi/g	8.900E-01	9.580E+00	7.090E+00	7.420E-01	7.300E-01	1.340E+00	7.660E-01	1.680E+00	1.130E+00	1.400E+00	9.770E-01	7.590E+00	6.920E-01	7.400E-01
A-4															
B1L4Y7 AE	pCi/g	8.970E-01	7.190E+00	7.490E+00	8.910E-01	7.430E-01	1.440E+00	8.000E-01	1.700E+00	1.210E+00	2.080E+00	9.610E-01	1.070E+01	7.970E-01	8.180E-01
B1L500 AE	pCi/g	8.340E-01	9.480E+00	6.960E+00	6.900E-01	7.560E-01	1.450E+00	7.670E-01	1.730E+00	1.130E+00	1.450E+00	9.760E-01	8.740E+00	6.600E-01	7.030E-01
B1L504 AE	pCi/g	6.070E-01	9.490E+00	7.680E+00	6.150E-01	1.050E+00	1.140E+00	5.850E-01	1.310E+00	1.340E+00	1.340E+00	4.530E-01	7.330E+00	5.120E-01	5.800E-01
B1M5X1_AE	pCi/g	8.550E-01	4.670E+00	7.960E+00	9.460E-01	7.680E-01	1.520E+00	8.250E-01	1.670E+00	1.300E+00	2.140E+00	9.900E-01	1.040E+01	6.840E-01	8.580E-01
B1L512_AE	pCi/g	7.730E-01	7.770E+00	6.630E+00	8.020E-01	7.870E-01	1.420E+00	7.810E-01	1.840E+00	1.160E+00	1.440E+00	1.030E+00	8.150E+00	5.890E-01	7.070E-01
B1L517_AE	pCi/g	6.230E-01	8.620E+00	7.550E+00	6.160E-01	1.060E+00	1.080E+00	5.620E-01	1.360E+00	1.340E+00	1.380E+00	4.290E-01	7.090E+00	5.160E-01	5.660E-01
B1L519 AE	pCi/g	7.700E-01	5.900E+00	7.790E+00	8.880E-01	7.490E-01	1.530E+00	7.300E-01	1.770E+00	1.300E+00	2.030E+00	9.660E-01	1.050E+01	7.970E-01	7.930E-01
B1L524 AE	pCi/g	8.040E-01	8.520E+00	7.090E+00	7.420E-01	7.540E-01	1.270E+00	8.160E-01	1.840E+00	1.160E+00	1.480E+00	1.010E+00	8.600E+00	6.760E-01	7.490E-01
B1L528_AE	pCi/g	6.030E-01	1.090E+01	7.630E+00	6.320E-01	1.070E+00	1.060E+00	5.710E-01	1.370E+00	1.340E+00	1.320E+00	8.030E-01	6.050E+00	4.970E-01	5.720E-01
B1L531_AE	pCi/g	8.670E-01	1.100E+01	7.800E+00	8.610E-01	7.300E-01	1.540E+00	8.280E-01	1.860E+00	1.210E+00	2.120E+00	9.720E-01	9.910E+00	7.620E-01	7.380E-01
B1L531_Dup1_AE	pCi/g	9.680E-01	1.110E+01	6.720E+00	7.200E-01	7.840E-01	1.280E+00	7.460E-01	1.440E+00	1.180E+00	1.420E+00	9.990E-01	7.670E+00	6.760E-01	7.710E-01
B1L536 AE	pCi/g	6.880E-01	8.880E+00	7.650E+00	6.200E-01	1.050E+00	1.140E+00	5.910E-01	1.360E+00	1.340E+00	1.350E+00	7.960E-01	6.800E+00	4.850E-01	5.930E-01
B1L540 AE	pCi/g	9.430E-01	5.040E+00	7.400E+00	8.700E-01	7.180E-01	1.460E+00	8.220E-01	1.720E+00	1.270E+00	2.210E+00	1.020E+00	8.890E+00	8.430E-01	7.880E-01
B1L543 AE	pCi/g	9.100E-01	9.480E+00	6.710E+00	7.330E-01	7.680E-01	1.310E+00	8.010E-01	1.600E+00	1.120E+00	1.430E+00	1.020E+00	9.430E+00	7.610E-01	7.680E-01
B1L547_AE	pCi/g	6.210E-01	8.830E+00	7.560E+00	6.150E-01	1.050E+00	1.100E+00	5.960E-01	1.320E+00	1.320E+00	1.400E+00	4.350E-01	6.950E+00	5.050E-01	6.070E-01
B1L553_AE	pCi/g	9.140E-01	8.300E+00	7.500E+00	9.120E-01	7.610E-01	1.500E+00	7.610E-01	1.630E+00	1.250E+00	2.130E+00	9.650E-01	1.040E+01	7.740E-01	8.350E-01
B1L553_Dup2_AE	pCi/g	8.340E-01	1.000E+01	6.960E+00	7.290E-01	7.430E-01	1.390E+00	6.450E-01	1.610E+00	1.140E+00	1.490E+00	9.400E-01	9.160E+00	6.760E-01	7.080E-01
B1L557_AE	pCi/g	6.290E-01	9.650E+00	7.460E+00	6.100E-01	1.040E+00	1.080E+00	5.710E-01	1.370E+00	1.340E+00	1.350E+00	8.110E-01	6.680E+00	5.190E-01	5.800E-01
B1L562_AE	pCi/g	7.400E-01	1.120E+01	7.040E+00	7.820E-01	7.680E-01	1.410E+00	7.220E-01	1.660E+00	1.180E+00	1.480E+00	9.820E-01	8.600E+00	7.060E-01	7.490E-01
B1L568_AE	pCi/g	8.970E-01	1.260E+01	7.510E+00	8.970E-01	7.460E-01	1.520E+00	8.170E-01	1.650E+00	1.220E+00	2.070E+00	9.610E-01	1.080E+01	7.970E-01	8.330E-01
B1L570_AE	pCi/g	6.570E-01	8.950E+00	7.710E+00	6.010E-01	1.050E+00	1.020E+00	5.800E-01	1.380E+00	1.360E+00	1.350E+00	8.080E-01	6.720E+00	4.570E-01	5.740E-01
B1L577_AE	pCi/g	8.100E-01	9.150E+00	7.520E+00	9.400E-01	7.400E-01	1.440E+00	8.520E-01	1.590E+00	1.220E+00	2.140E+00	1.000E+00	1.050E+01	7.490E-01	8.210E-01
B1L582 AE	pCi/g	8.260E-01	1.210E+01	6.900E+00	7.940E-01	7.410E-01	1.430E+00	6.650E-01	1.650E+00	1.110E+00	1.440E+00	9.700E-01	8.740E+00	6.760E-01	6.790E-01
B1L587 AE	pCi/g	5.730E-01	1.040E+01	7.570E+00	6.360E-01	1.050E+00	1.060E+00	5.690E-01	1.310E+00	1.360E+00	1.330E+00	4.550E-01	6.720E+00	5.580E-01	5.930E-01
B1L592 AE	pCi/g	8.490E-01	8.570E+00	7.520E+00	9.030E-01	7.450E-01	1.350E+00	7.760E-01	1.750E+00	1.230E+00	2.120E+00	1.010E+00	1.020E+01	7.370E-01	8.380E-01
B1L596 AE	pCi/g	8.550E-01	1.070E+01	6.940E+00	7.030E-01	7.650E-01	1.270E+00	7.240E-01	1.550E+00	1.190E+00	1.510E+00	1.010E+00	8.450E+00	7.230E-01	7.550E-01
B1L5B1 AE	pCi/g	5.970E-01	1.080E+01	7.650E+00	6.040E-01	1.060E+00	1.060E+00	5.820E-01	1.340E+00	1.340E+00	1.380E+00	7.800E-01	6.580E+00	4.970E-01	5.840E-01
B1L5B1-Dup3_AE	pCi/g	8.610E-01	8.970E+00	7.480E+00	9.140E-01	7.290E-01	1.420E+00	8.250E-01	1.690E+00	1.210E+00	2.110E+00	9.650E-01	9.750E+00	7.860E-01	7.900E-01
B1L5B3 AE	pCi/g	7.960E-01	1.060E+01	6.590E+00	7.740E-01	7.620E-01	1.450E+00	6.930E-01	1.720E+00	1.170E+00	1.510E+00	9.980E-01	8.670E+00	7.230E-01	7.530E-01
B1L5B5 AE	pCi/g	6.150E-01	1.040E+01	7.340E+00	6.010E-01	1.060E+00	1.070E+00	5.860E-01	1.370E+00	1.350E+00	1.330E+00	8.010E-01	6.950E+00	5.080E-01	5.670E-01
B1L5B7 AE	pCi/g	8.850E-01	8.020E+00	7.630E+00	8.910E-01	7.640E-01	1.340E+00	7.610E-01	1.490E+00	1.270E+00	2.030E+00	9.680E-01	1.030E+01	8.540E-01	7.790E-01
B1L5C0 AE	pCi/g	7.320E-01	1.060E+01	6.800E+00	6.990E-01	7.650E-01	1.340E+00	7.130E-01	1.710E+00	1.140E+00	1.530E+00	9.940E-01	7.750E+00	7.230E-01	7.450E-01
B1L5C4 AE	pCi/g	5.840E-01	1.070E+01	7.400E+00	6.140E-01	1.060E+00	1.040E+00	5.520E-01	1.330E+00	1.330E+00	1.370E+00	8.180E-01	6.660E+00	4.970E-01	5.930E-01

Gamma Energy Analysis Isotopic p
Data report by: Igor Kutnyakov
Data reviewed by: Robert On
Procedure: AGG-RLL-002

MDA	NB-95	NB-95M	Tc-95m	ZR-95	TC-99M	RU-103	RU-106	AG-108m	CD-109	AG-110	AG-110M	SN-113	SB-124	SB-125	I-131	BA-133
B-102																
B1L1LJ_AE	7.860E-01	3.020E+00	1.110E+00	1.250E+00	7.320E-01	7.960E-01	7.460E+00	7.490E-01	1.990E+01	7.980E-01	8.000E-01	1.020E+00	7.210E-01	2.290E+00	8.370E-01	1.300E+00
A-4																
B1L4Y7_AE	7.270E-01	3.210E+00	1.120E+00	1.350E+00	7.370E-01	1.010E+00	9.350E+00	8.970E-01	1.900E+01	1.030E+00	1.030E+00	1.140E+00	9.600E-01	2.720E+00	9.930E-01	1.380E+00
B1L500_AE	7.790E-01	2.970E+00	1.120E+00	1.410E+00	7.470E-01	8.090E-01	7.290E+00	7.910E-01	1.950E+01	8.040E-01	8.060E-01	1.080E+00	7.650E-01	2.470E+00	8.560E-01	1.360E+00
B1L504_AE	5.820E-01	3.250E+00	1.290E+00	1.100E+00	1.020E+00	7.250E-01	6.250E+00	6.490E-01	3.360E+01	6.000E-01	6.020E-01	1.040E+00	7.930E-01	2.210E+00	8.330E-01	1.260E+00
B1M5X1_AE	8.500E-01	3.230E+00	1.200E+00	1.490E+00	7.820E-01	1.010E+00	9.370E+00	7.950E-01	2.120E+01	1.120E+00	1.130E+00	1.180E+00	9.550E-01	2.530E+00	1.000E+00	1.400E+00
B1L512_AE	7.860E-01	3.020E+00	1.170E+00	1.260E+00	7.540E-01	7.980E-01	7.040E+00	7.560E-01	1.930E+01	7.950E-01	7.970E-01	1.020E+00	7.630E-01	2.290E+00	8.050E-01	1.300E+00
B1L517_AE	5.920E-01	3.230E+00	1.290E+00	1.040E+00	1.040E+00	6.950E-01	6.120E+00	6.420E-01	3.330E+01	6.090E-01	6.100E-01	1.010E+00	7.760E-01	2.230E+00	8.550E-01	1.260E+00
B1L519_AE	7.770E-01	3.130E+00	1.170E+00	1.500E+00	7.510E-01	9.330E-01	9.820E+00	8.460E-01	1.970E+01	8.390E-01	8.410E-01	1.170E+00	9.850E-01	2.570E+00	9.680E-01	1.360E+00
B1L524_AE	7.210E-01	3.110E+00	1.160E+00	1.190E+00	7.540E-01	8.050E-01	7.070E+00	7.720E-01	2.000E+01	7.920E-01	7.940E-01	1.040E+00	7.730E-01	2.350E+00	8.460E-01	1.310E+00
B1L528_AE	5.780E-01	3.240E+00	1.260E+00	1.030E+00	1.010E+00	6.970E-01	6.080E+00	6.600E-01	3.320E+01	6.060E-01	6.070E-01	1.060E+00	7.540E-01	2.220E+00	8.520E-01	1.270E+00
B1L531_AE	7.910E-01	3.050E+00	1.160E+00	1.430E+00	7.570E-01	9.490E-01	8.970E+00	8.300E-01	1.950E+01	8.490E-01	8.500E-01	1.130E+00	9.870E-01	2.520E+00	9.350E-01	1.270E+00
B1L531_Dup1_AE	7.320E-01	3.070E+00	1.140E+00	1.220E+00	7.530E-01	8.110E-01	7.460E+00	8.040E-01	1.880E+01	7.620E-01	7.630E-01	1.060E+00	8.160E-01	2.480E+00	8.680E-01	1.260E+00
B1L536_AE	5.720E-01	3.280E+00	1.280E+00	1.050E+00	1.030E+00	7.250E-01	5.940E+00	6.750E-01	3.330E+01	6.510E-01	6.530E-01	1.040E+00	7.530E-01	2.210E+00	8.500E-01	1.270E+00
B1L540_AE	8.230E-01	3.210E+00	1.190E+00	1.450E+00	7.340E-01	9.970E-01	9.030E+00	8.060E-01	1.920E+01	8.420E-01	8.430E-01	1.130E+00	9.120E-01	2.480E+00	9.630E-01	1.280E+00
B1L543_AE	7.130E-01	3.030E+00	1.120E+00	1.360E+00	7.650E-01	7.940E-01	7.070E+00	7.210E-01	2.000E+01	8.070E-01	8.090E-01	1.080E+00	7.130E-01	2.360E+00	9.000E-01	1.260E+00
B1L547_AE	5.800E-01	3.220E+00	1.250E+00	1.030E+00	1.030E+00	6.970E-01	5.940E+00	6.510E-01	3.330E+01	6.250E-01	6.260E-01	1.030E+00	7.780E-01	2.120E+00	8.690E-01	1.240E+00
B1L553_AE	8.200E-01	3.190E+00	1.160E+00	1.540E+00	7.650E-01	9.580E-01	8.780E+00	8.300E-01	1.960E+01	8.680E-01	8.690E-01	1.190E+00	9.300E-01	2.510E+00	9.420E-01	1.280E+00
B1L553_Dup2_AE	7.250E-01	2.970E+00	1.190E+00	1.270E+00	7.360E-01	7.810E-01	6.980E+00	7.360E-01	2.000E+01	8.100E-01	8.120E-01	1.070E+00	7.240E-01	2.190E+00	8.760E-01	1.280E+00
B1L557_AE	6.100E-01	3.160E+00	1.280E+00	1.060E+00	1.010E+00	6.910E-01	5.800E+00	6.350E-01	3.300E+01	6.050E-01	6.060E-01	1.010E+00	7.620E-01	2.120E+00	8.200E-01	1.230E+00
B1L562_AE	7.750E-01	3.080E+00	1.140E+00	1.220E+00	7.670E-01	8.030E-01	7.350E+00	7.720E-01	1.980E+01	7.890E-01	7.910E-01	1.110E+00	7.950E-01	2.410E+00	8.490E-01	1.250E+00
B1L568_AE	7.970E-01	3.110E+00	1.190E+00	1.440E+00	7.490E-01	9.560E-01	8.680E+00	8.100E-01	1.910E+01	8.580E-01	8.600E-01	1.110E+00	9.140E-01	2.470E+00	9.560E-01	1.350E+00
B1L570_AE	5.710E-01	3.230E+00	1.260E+00	1.000E+00	1.010E+00	6.870E-01	6.210E+00	6.660E-01	3.310E+01	6.260E-01	6.270E-01	9.980E-01	7.760E-01	2.200E+00	8.720E-01	1.240E+00
B1L577_AE	8.110E-01	3.220E+00	1.190E+00	1.430E+00	7.640E-01	9.820E-01	9.260E+00	7.890E-01	1.940E+01	8.390E-01	8.410E-01	1.180E+00	1.010E+00	2.480E+00	9.630E-01	1.370E+00
B1L582_AE	7.790E-01	3.090E+00	1.120E+00	1.240E+00	7.610E-01	8.110E-01	7.490E+00	7.700E-01	1.960E+01	7.650E-01	7.670E-01	1.080E+00	7.370E-01	2.450E+00	8.350E-01	1.270E+00
B1L587_AE	5.860E-01	3.290E+00	1.270E+00	1.050E+00	1.030E+00	7.090E-01	5.940E+00	6.370E-01	3.370E+01	6.180E-01	6.200E-01	1.020E+00	7.430E-01	2.140E+00	8.630E-01	1.260E+00
B1L592_AE	7.850E-01	3.090E+00	1.140E+00	1.330E+00	7.530E-01	9.810E-01	8.880E+00	7.950E-01	1.960E+01	8.370E-01	8.380E-01	1.170E+00	9.230E-01	2.370E+00	9.670E-01	1.310E+00
B1L596_AE	7.130E-01	3.010E+00	1.130E+00	1.280E+00	7.550E-01	7.870E-01	7.210E+00	7.380E-01	1.990E+01	8.360E-01	8.380E-01	1.060E+00	7.370E-01	2.240E+00	9.080E-01	1.310E+00
B1L5B1_AE	5.980E-01	3.320E+00	1.280E+00	1.040E+00	1.010E+00	6.720E-01	6.050E+00	6.690E-01	3.340E+01	6.070E-01	6.080E-01	1.040E+00	7.320E-01	2.200E+00	8.650E-01	1.250E+00
B1L5B1-Dup3_AE	8.090E-01	3.130E+00	1.170E+00	1.460E+00	7.370E-01	9.750E-01	9.010E+00	8.650E-01	1.960E+01	8.950E-01	8.970E-01	1.140E+00	9.410E-01	2.670E+00	9.370E-01	1.320E+00
B1L5B3_AE	7.020E-01	3.090E+00	1.120E+00	1.300E+00	7.350E-01	7.870E-01	7.460E+00	7.860E-01	2.010E+01	7.490E-01	7.510E-01	1.040E+00	7.210E-01	2.390E+00	8.150E-01	1.310E+00
B1L5B5_AE	6.290E-01	3.270E+00	1.290E+00	1.060E+00	1.010E+00	7.110E-01	6.020E+00	6.710E-01	3.360E+01	6.260E-01	6.280E-01	1.020E+00	7.720E-01	2.200E+00	8.460E-01	1.240E+00
B1L5B7_AE	7.910E-01	3.160E+00	1.160E+00	1.440E+00	7.630E-01	9.760E-01	9.350E+00	7.890E-01	1.960E+01	8.750E-01	8.760E-01	1.120E+00	9.800E-01	2.410E+00	1.010E+00	1.410E+00
B1L5C0_AE	7.680E-01	3.060E+00	1.070E+00	1.280E+00	7.400E-01	8.110E-01	7.290E+00	7.510E-01	1.980E+01	8.440E-01	8.460E-01	1.060E+00	7.800E-01	2.350E+00	8.020E-01	1.230E+00
B1L5C4_AE	6.020E-01	3.320E+00	1.270E+00	9.960E-01	1.020E+00	6.990E-01	6.080E+00	6.720E-01	3.310E+01	6.170E-01	6.190E-01	1.020E+00	7.780E-01	2.250E+00	8.650E-01	1.230E+00

Gamma Energy Analysis Isotopic n
Data report by: Igor Kuntyskov
Data reviewed by: Robert Orr
Procedure: AGG-RLL-002

MDA	CS-134	CS-137	CE-139	CE-144	EU-152	GD-153	EU-154	EU-155	HG-203	TL-208	BI-210	PB-210	BI-211	PB-211	PB-212	BI-214
B-102																
B1L1L1 AE	8.460E-01	9.010E-01	8.700E-01	5.920E+00	2.700E+00	2.250E+00	1.560E+00	2.190E+00	8.890E-01	8.440E-01	1.350E+00	1.790E+02	1.670E+01	2.280E+01	1.760E+00	1.820E+00
A-4																
B1L4Y7 AE	9.610E-01	1.150E+00	8.690E-01	6.040E+00	2.940E+00	2.180E+00	1.580E+00	2.180E+00	9.700E-01	1.020E+00	1.440E+00	7.300E+01	1.740E+01	2.370E+01	1.850E+00	2.100E+00
B1L500 AE	8.460E-01	9.170E-01	8.500E-01	5.840E+00	2.740E+00	2.190E+00	1.610E+00	2.130E+00	9.070E-01	9.000E-01	1.370E+00	1.810E+02	1.780E+01	2.410E+01	1.740E+00	1.840E+00
B1L504 AE	6.880E-01	6.790E-01	1.070E+00	8.500E+00	2.710E+00	3.440E+00	1.760E+00	3.840E+00	1.040E+00	7.840E-01	1.610E+00	2.040E+02	1.600E+01	2.160E+01	1.910E+00	1.650E+00
B1M5X1 AE	9.560E-01	6.900E-01	9.270E-01	6.270E+00	3.180E+00	2.410E+00	1.620E+00	2.440E+00	1.000E+00	1.020E+00	1.560E+00	7.830E+01	1.860E+01	2.540E+01	1.870E+00	2.010E+00
B1L512 AE	8.730E-01	9.240E-01	8.680E-01	6.050E+00	2.760E+00	2.280E+00	1.660E+00	2.140E+00	8.710E-01	8.750E-01	1.380E+00	1.790E+02	1.700E+01	2.330E+01	1.780E+00	1.920E+00
B1L517 AE	6.710E-01	6.930E-01	1.080E+00	8.550E+00	2.610E+00	3.460E+00	1.810E+00	3.820E+00	1.030E+00	7.620E-01	1.600E+00	2.050E+02	1.600E+01	2.160E+01	1.890E+00	1.570E+00
B1L519 AE	8.990E-01	9.210E-01	8.860E-01	6.170E+00	3.240E+00	2.250E+00	1.590E+00	2.260E+00	9.920E-01	9.870E-01	1.560E+00	7.010E+01	1.800E+01	2.460E+01	1.810E+00	2.150E+00
B1L524 AE	8.360E-01	8.850E-01	8.690E-01	6.120E+00	2.680E+00	2.290E+00	1.600E+00	2.150E+00	8.930E-01	8.350E-01	1.390E+00	1.610E+02	1.720E+01	2.350E+01	1.750E+00	1.810E+00
B1L528 AE	6.670E-01	6.690E-01	1.080E+00	8.430E+00	2.850E+00	3.510E+00	1.750E+00	3.840E+00	1.010E+00	7.560E-01	1.600E+00	2.020E+02	1.610E+01	2.200E+01	1.890E+00	1.550E+00
B1L531 AE	9.430E-01	9.340E-01	8.610E-01	6.070E+00	2.900E+00	2.210E+00	1.540E+00	2.270E+00	9.550E-01	1.020E+00	1.460E+00	7.180E+01	1.810E+01	2.480E+01	1.790E+00	2.080E+00
B1L531_Dup1_AE	8.800E-01	8.260E-01	8.580E-01	6.110E+00	2.740E+00	2.350E+00	1.660E+00	2.110E+00	8.790E-01	9.080E-01	1.410E+00	1.800E+02	1.720E+01	2.350E+01	1.790E+00	1.850E+00
B1L536_AE	6.590E-01	7.200E-01	1.070E+00	8.610E+00	2.780E+00	3.450E+00	2.000E+00	3.840E+00	1.010E+00	7.290E-01	1.610E+00	1.970E+02	1.590E+01	2.150E+01	1.910E+00	1.550E+00
B1L540 AE	9.320E-01	9.500E-01	8.390E-01	6.010E+00	2.970E+00	2.220E+00	1.530E+00	2.210E+00	9.740E-01	9.660E-01	1.510E+00	6.960E+01	1.810E+01	2.480E+01	1.870E+00	2.010E+00
B1L543 AE	8.330E-01	8.400E-01	8.910E-01	6.050E+00	2.680E+00	2.270E+00	1.620E+00	2.180E+00	8.780E-01	8.080E-01	1.330E+00	1.790E+02	1.640E+01	2.240E+01	1.770E+00	1.730E+00
B1L547 AE	6.590E-01	7.260E-01	1.030E+00	8.500E+00	2.810E+00	3.410E+00	1.810E+00	3.860E+00	9.870E-01	7.630E-01	1.580E+00	2.010E+02	1.550E+01	2.120E+01	1.870E+00	1.590E+00
B1L553 AE	9.350E-01	9.740E-01	8.950E-01	6.280E+00	2.980E+00	2.180E+00	1.610E+00	2.260E+00	1.010E+00	9.890E-01	1.500E+00	7.050E+01	1.880E+01	2.570E+01	1.830E+00	2.060E+00
B1L553 Dup2_AE	7.940E-01	9.300E-01	8.680E-01	6.040E+00	2.800E+00	2.190E+00	1.560E+00	2.210E+00	8.640E-01	8.580E-01	1.360E+00	1.790E+02	1.650E+01	2.250E+01	1.750E+00	1.670E+00
B1L557 AE	6.490E-01	6.920E-01	1.060E+00	8.360E+00	2.680E+00	3.440E+00	1.830E+00	3.800E+00	1.010E+00	7.530E-01	1.600E+00	2.020E+02	1.620E+01	2.130E+01	1.850E+00	1.590E+00
B1L562 AE	8.580E-01	8.400E-01	8.640E-01	6.060E+00	2.780E+00	2.320E+00	1.640E+00	2.190E+00	8.800E-01	8.980E-01	1.410E+00	1.800E+02	1.650E+01	2.260E+01	1.790E+00	1.800E+00
B1L568 AE	9.300E-01	9.420E-01	8.670E-01	6.070E+00	3.090E+00	2.210E+00	1.600E+00	2.200E+00	9.270E-01	1.030E+00	1.460E+00	7.140E+01	1.770E+01	2.410E+01	1.800E+00	1.930E+00
B1L570 AE	6.570E-01	6.990E-01	1.040E+00	8.500E+00	2.760E+00	3.480E+00	1.910E+00	3.840E+00	1.020E+00	7.650E-01	1.620E+00	2.010E+02	1.630E+01	2.080E+01	1.880E+00	1.640E+00
B1L577 AE	9.140E-01	9.550E-01	8.820E-01	6.250E+00	3.150E+00	2.210E+00	1.570E+00	2.260E+00	9.420E-01	1.060E+00	1.440E+00	7.220E+01	1.830E+01	2.500E+01	1.870E+00	2.170E+00
B1L582 AE	8.220E-01	8.290E-01	8.640E-01	6.290E+00	2.620E+00	2.190E+00	1.580E+00	2.170E+00	8.470E-01	8.980E-01	1.340E+00	1.790E+02	1.680E+01	2.300E+01	1.820E+00	1.860E+00
B1L587 AE	6.800E-01	6.990E-01	1.070E+00	8.400E+00	2.830E+00	3.420E+00	1.660E+00	3.860E+00	1.030E+00	7.720E-01	1.630E+00	1.990E+02	1.610E+01	2.190E+01	1.880E+00	1.560E+00
B1L592 AE	9.350E-01	9.230E-01	8.680E-01	6.080E+00	3.040E+00	2.220E+00	1.570E+00	2.250E+00	9.970E-01	1.000E+00	1.470E+00	7.040E+01	1.860E+01	2.540E+01	1.810E+00	2.010E+00
B1L596 AE	8.530E-01	9.460E-01	8.680E-01	6.060E+00	2.820E+00	2.260E+00	1.630E+00	2.130E+00	9.030E-01	8.560E-01	1.440E+00	1.770E+02	1.750E+01	2.390E+01	1.780E+00	1.860E+00
B1L5B1_AE	6.770E-01	6.770E-01	1.070E+00	8.370E+00	2.810E+00	3.450E+00	1.730E+00	3.820E+00	1.030E+00	7.610E-01	1.600E+00	2.070E+02	1.630E+01	2.130E+01	1.930E+00	1.590E+00
B1L5B1-Dup3 AE	9.600E-01	9.920E-01	8.790E-01	6.070E+00	3.020E+00	2.210E+00	1.550E+00	2.270E+00	9.220E-01	9.660E-01	1.450E+00	7.190E+01	1.880E+01	2.570E+01	1.830E+00	2.040E+00
B1L5B3_AE	8.350E-01	8.470E-01	8.530E-01	6.220E+00	2.660E+00	2.220E+00	1.600E+00	2.220E+00	8.860E-01	8.750E-01	1.430E+00	1.780E+02	1.800E+01	2.460E+01	1.780E+00	1.780E+00
B1L5B5 AE	6.670E-01	7.020E-01	1.080E+00	8.340E+00	2.760E+00	3.420E+00	1.790E+00	3.870E+00	1.030E+00	7.750E-01	1.620E+00	1.980E+02	1.600E+01	2.170E+01	1.890E+00	1.580E+00
B1L5B7 AE	9.140E-01	9.450E-01	8.700E-01	6.220E+00	3.170E+00	2.220E+00	1.620E+00	2.250E+00	9.670E-01	1.020E+00	1.520E+00	6.890E+01	1.820E+01	2.480E+01	1.860E+00	2.100E+00
B1L5C0 AE	7.780E-01	9.270E-01	9.000E-01	5.960E+00	2.840E+00	2.210E+00	1.640E+00	2.210E+00	8.800E-01	8.780E-01	1.360E+00	1.800E+02	1.770E+01	2.410E+01	1.790E+00	1.770E+00
B1L5C4 AE	6.850E-01	6.830E-01	1.070E+00	8.400E+00	2.830E+00	3.510E+00	1.700E+00	3.840E+00	1.010E+00	7.880E-01	1.600E+00	2.040E+02	1.490E+01	2.040E+01	1.910E+00	1.640E+00

Gamma Energy Analysis Isotopic r
Data report by: Igor Kuinyakov
Data reviewed by: Robert Orr
Procedure: AGG-RLL-002

MDA	PB-214	RN-219	RN-220	RN-221	FR-223	RA-223	RA-224	RA-226	TH-227	AC-228	TH-228	Th230	PA-231	TH-231	TH-232	Pa-233
B-102																
B1L1L1_AE	2.130E+00	6.850E+00	7.360E+02	3.150E+00	2.190E+01	5.000E+00	1.910E+01	1.940E+01	6.750E+00	2.930E+00	2.590E+02	2.570E+02	3.040E+01	1.620E+02	7.380E+02	1.890E+00
A-4																
B1L4Y7_AE	2.150E+00	7.440E+00	7.870E+02	3.460E+00	2.370E+01	5.330E+00	1.980E+01	2.140E+01	7.180E+00	3.150E+00	2.690E+02	2.560E+02	3.210E+01	1.580E+02	6.450E+02	2.040E+00
B1L500_AE	2.110E+00	7.140E+00	6.790E+02	3.330E+00	2.190E+01	5.110E+00	1.890E+01	2.050E+01	6.640E+00	3.290E+00	2.640E+02	2.630E+02	2.980E+01	1.550E+02	7.230E+02	1.900E+00
B1L504_AE	2.010E+00	8.090E+00	5.590E+02	3.880E+00	2.380E+01	5.830E+00	2.050E+01	2.390E+01	7.260E+00	2.440E+00	2.890E+02	5.760E+02	3.280E+01	2.430E+02	1.580E+03	2.120E+00
B1M5X1_AE	2.240E+00	7.840E+00	7.800E+02	3.760E+00	2.390E+01	5.700E+00	2.030E+01	2.320E+01	7.220E+00	3.090E+00	2.780E+02	2.960E+02	3.430E+01	1.720E+02	7.590E+02	2.150E+00
B1L512_AE	2.130E+00	6.900E+00	6.770E+02	3.260E+00	2.190E+01	5.120E+00	1.940E+01	2.020E+01	6.740E+00	2.970E+00	2.610E+02	2.600E+02	2.920E+01	1.630E+02	7.330E+02	1.900E+00
B1L517_AE	2.070E+00	8.030E+00	5.780E+02	4.010E+00	2.360E+01	5.860E+00	2.050E+01	2.480E+01	7.220E+00	2.500E+00	2.930E+02	5.780E+02	3.400E+01	2.380E+02	1.600E+03	2.090E+00
B1L519_AE	2.200E+00	7.830E+00	8.080E+02	3.550E+00	2.290E+01	5.750E+00	1.980E+01	2.190E+01	6.990E+00	2.840E+00	2.720E+02	2.490E+02	3.370E+01	1.600E+02	6.170E+02	2.090E+00
B1L524_AE	2.120E+00	7.000E+00	7.180E+02	3.350E+00	2.240E+01	5.120E+00	1.890E+01	2.070E+01	6.960E+00	3.240E+00	2.580E+02	2.550E+02	3.050E+01	1.630E+02	7.080E+02	1.840E+00
B1L528_AE	2.070E+00	8.070E+00	5.860E+02	3.850E+00	2.380E+01	5.890E+00	2.060E+01	2.380E+01	7.230E+00	2.430E+00	2.860E+02	5.840E+02	3.350E+01	2.430E+02	1.560E+03	2.100E+00
B1L531_AE	2.090E+00	7.500E+00	7.350E+02	3.350E+00	2.250E+01	5.440E+00	1.940E+01	2.070E+01	6.820E+00	3.430E+00	2.700E+02	2.570E+02	3.360E+01	1.600E+02	6.430E+02	2.150E+00
B1L531_Dup1_AE	2.020E+00	6.970E+00	6.860E+02	3.280E+00	2.270E+01	5.090E+00	1.930E+01	2.030E+01	6.850E+00	2.850E+00	2.650E+02	2.610E+02	2.990E+01	1.620E+02	7.280E+02	1.850E+00
B1L536_AE	2.060E+00	8.010E+00	5.710E+02	3.880E+00	2.410E+01	5.770E+00	2.080E+01	2.400E+01	7.320E+00	2.530E+00	2.900E+02	5.770E+02	3.290E+01	2.390E+02	1.530E+03	2.090E+00
B1L540_AE	2.090E+00	7.740E+00	7.930E+02	3.510E+00	2.360E+01	5.650E+00	2.020E+01	2.170E+01	7.160E+00	2.830E+00	2.750E+02	2.500E+02	3.280E+01	1.600E+02	6.250E+02	1.990E+00
B1L543_AE	2.020E+00	6.860E+00	6.620E+02	3.360E+00	2.220E+01	4.970E+00	1.930E+01	1.960E+01	6.760E+00	2.760E+00	2.600E+02	2.570E+02	3.080E+01	1.610E+02	7.300E+02	1.890E+00
B1L547_AE	2.010E+00	7.980E+00	5.900E+02	3.910E+00	2.370E+01	5.790E+00	2.030E+01	2.410E+01	7.190E+00	2.660E+00	2.860E+02	5.890E+02	3.320E+01	2.420E+02	1.580E+03	2.040E+00
B1L553_AE	2.090E+00	7.660E+00	8.220E+02	3.450E+00	2.350E+01	5.650E+00	1.980E+01	2.130E+01	7.130E+00	3.080E+00	2.770E+02	2.550E+02	3.390E+01	1.590E+02	6.360E+02	2.060E+00
B1L553_Dup2_AE	2.070E+00	6.650E+00	7.000E+02	3.360E+00	2.180E+01	4.850E+00	1.900E+01	2.080E+01	6.630E+00	3.240E+00	2.630E+02	2.650E+02	2.960E+01	1.550E+02	7.270E+02	1.890E+00
B1L557_AE	1.940E+00	8.010E+00	5.560E+02	3.840E+00	2.290E+01	5.830E+00	2.000E+01	2.380E+01	7.050E+00	2.400E+00	2.900E+02	5.760E+02	3.310E+01	2.410E+02	1.540E+03	2.040E+00
B1L562_AE	2.040E+00	6.810E+00	6.790E+02	3.370E+00	2.270E+01	5.100E+00	1.930E+01	2.090E+01	6.880E+00	2.590E+00	2.570E+02	2.550E+02	3.050E+01	1.630E+02	7.160E+02	1.880E+00
B1L568_AE	2.140E+00	7.410E+00	7.860E+02	3.440E+00	2.290E+01	5.410E+00	1.950E+01	2.120E+01	6.950E+00	3.280E+00	2.780E+02	2.460E+02	3.220E+01	1.610E+02	6.270E+02	2.020E+00
B1L570_AE	2.000E+00	8.130E+00	5.830E+02	3.890E+00	2.380E+01	5.900E+00	2.040E+01	2.410E+01	7.220E+00	2.540E+00	2.810E+02	5.890E+02	3.360E+01	2.400E+02	1.570E+03	2.070E+00
B1L577_AE	2.190E+00	7.380E+00	7.300E+02	3.550E+00	2.370E+01	5.320E+00	2.020E+01	2.190E+01	7.200E+00	3.160E+00	2.770E+02	2.590E+02	3.340E+01	1.580E+02	6.410E+02	2.080E+00
B1L582_AE	2.000E+00	6.890E+00	6.530E+02	3.340E+00	2.260E+01	5.020E+00	1.940E+01	2.040E+01	6.900E+00	2.930E+00	2.540E+02	2.690E+02	2.980E+01	1.570E+02	7.400E+02	1.840E+00
B1L587_AE	2.030E+00	8.110E+00	5.700E+02	3.910E+00	2.410E+01	5.910E+00	2.050E+01	2.420E+01	7.350E+00	2.480E+00	2.920E+02	5.730E+02	3.270E+01	2.380E+02	1.540E+03	2.120E+00
B1L592_AE	2.100E+00	7.550E+00	7.770E+02	3.570E+00	2.270E+01	5.450E+00	1.990E+01	2.200E+01	6.900E+00	3.110E+00	2.660E+02	2.500E+02	3.410E+01	1.580E+02	6.210E+02	2.080E+00
B1L596_AE	2.110E+00	7.260E+00	6.300E+02	3.340E+00	2.220E+01	5.270E+00	1.930E+01	2.060E+01	6.730E+00	3.100E+00	2.630E+02	2.570E+02	2.870E+01	1.610E+02	7.260E+02	1.890E+00
B1L5B1_AE	1.990E+00	8.130E+00	5.800E+02	3.870E+00	2.440E+01	5.870E+00	2.090E+01	2.390E+01	7.410E+00	2.320E+00	2.840E+02	5.840E+02	3.340E+01	2.400E+02	1.560E+03	2.140E+00
B1L5B1-Dup3_AE	2.140E+00	7.330E+00	7.440E+02	3.410E+00	2.310E+01	5.330E+00	1.970E+01	2.100E+01	7.000E+00	3.010E+00	2.720E+02	2.520E+02	3.370E+01	1.600E+02	6.470E+02	2.060E+00
B1L5B3_AE	2.090E+00	7.140E+00	6.400E+02	3.270E+00	2.270E+01	5.190E+00	1.910E+01	2.040E+01	6.900E+00	3.230E+00	2.640E+02	2.690E+02	2.930E+01	1.610E+02	7.400E+02	1.820E+00
B1L5B5_AE	1.990E+00	8.220E+00	5.800E+02	3.910E+00	2.400E+01	6.000E+00	2.050E+01	2.420E+01	7.300E+00	2.480E+00	2.920E+02	5.810E+02	3.420E+01	2.420E+02	1.560E+03	2.030E+00
B1L5B7_AE	2.210E+00	7.620E+00	7.860E+02	3.520E+00	2.310E+01	5.520E+00	2.040E+01	2.170E+01	7.070E+00	3.160E+00	2.640E+02	2.520E+02	3.280E+01	1.630E+02	6.320E+02	2.030E+00
B1L5C0_AE	2.030E+00	6.840E+00	6.790E+02	3.260E+00	2.240E+01	5.020E+00	1.940E+01	2.020E+01	6.830E+00	3.070E+00	2.660E+02	2.660E+02	3.000E+01	1.570E+02	7.250E+02	1.960E+00
B1L5C4_AE	2.000E+00	8.040E+00	5.610E+02	3.940E+00	2.450E+01	5.840E+00	2.050E+01	2.440E+01	7.420E+00	2.410E+00	2.890E+02	5.820E+02	3.310E+01	2.420E+02	1.530E+03	2.050E+00

Gamma Energy Analysis Isotopic a
Data report by Igor Kutnyakov
Data reviewed by. Robert Orr
Procedure. AGG-RLL-002

MDA	PA-234	PA-234m	TH-234	U-235	Np-237	Pu-238	U238	Pu-239	Pu-240	AM-241	AM-243	CM-243	CM-245
B-102													
B1L1L1_AE	2.920E+00	9.980E+01	2.440E+01	6.280E+00	5.710E+00	9.290E+03	1.340E+01	9.990E+03	9.600E+03	3.750E+00	1.390E+00	2.930E+00	2.400E+00
A-4													
B1L4Y7_AE	2.850E+00	9.330E+01	2.250E+01	6.350E+00	5.680E+00	9.010E+03	1.250E+01	8.220E+03	8.930E+03	3.300E+00	1.420E+00	2.830E+00	2.320E+00
B1L500_AE	2.810E+00	9.500E+01	2.370E+01	6.320E+00	5.530E+00	8.810E+03	1.320E+01	1.010E+04	8.950E+03	3.620E+00	1.440E+00	2.730E+00	2.240E+00
B1L504_AE	3.720E+00	7.260E+01	3.960E+01	8.570E+00	1.000E+01	1.380E+04	2.050E+01	1.490E+04	1.410E+04	8.010E+00	2.980E+00	4.330E+00	3.560E+00
B1M5X1_AE	3.150E+00	9.910E+01	2.650E+01	6.610E+00	6.360E+00	9.870E+03	1.380E+01	9.880E+03	9.310E+03	3.880E+00	1.530E+00	3.020E+00	2.480E+00
B1L512_AE	2.930E+00	8.650E+01	2.430E+01	6.350E+00	5.570E+00	9.220E+03	1.310E+01	1.050E+04	9.370E+03	3.670E+00	1.430E+00	2.860E+00	2.350E+00
B1L517_AE	3.730E+00	7.170E+01	3.990E+01	8.700E+00	9.950E+00	1.390E+04	2.060E+01	1.490E+04	1.390E+04	8.070E+00	3.020E+00	4.210E+00	3.460E+00
B1L519_AE	2.930E+00	1.020E+02	2.180E+01	6.390E+00	5.870E+00	9.200E+03	1.290E+01	8.020E+03	8.480E+03	3.170E+00	1.380E+00	2.840E+00	2.330E+00
B1L524_AE	2.970E+00	9.440E+01	2.380E+01	6.250E+00	5.590E+00	9.440E+03	1.370E+01	1.030E+04	9.570E+03	3.590E+00	1.410E+00	2.920E+00	2.400E+00
B1L528_AE	3.880E+00	6.750E+01	3.960E+01	8.540E+00	1.000E+01	1.410E+04	2.050E+01	1.480E+04	1.410E+04	7.960E+00	3.030E+00	4.290E+00	3.530E+00
B1L531_AE	2.890E+00	9.540E+01	2.280E+01	6.450E+00	5.900E+00	9.190E+03	1.270E+01	8.260E+03	8.690E+03	3.300E+00	1.410E+00	2.830E+00	2.330E+00
B1L531_Dup1_AE	2.960E+00	9.310E+01	2.420E+01	6.330E+00	5.480E+00	9.330E+03	1.330E+01	1.070E+04	9.490E+03	3.650E+00	1.400E+00	2.890E+00	2.380E+00
B1L536_AE	3.990E+00	7.470E+01	4.000E+01	8.660E+00	1.000E+01	1.390E+04	2.070E+01	1.490E+04	1.390E+04	7.820E+00	2.980E+00	4.200E+00	3.450E+00
B1L540_AE	2.910E+00	9.800E+01	2.210E+01	6.230E+00	5.750E+00	9.140E+03	1.260E+01	7.950E+03	8.590E+03	3.220E+00	1.380E+00	2.810E+00	2.310E+00
B1L543_AE	2.900E+00	9.870E+01	2.390E+01	6.490E+00	5.680E+00	9.090E+03	1.360E+01	1.070E+04	9.350E+03	3.610E+00	1.380E+00	2.850E+00	2.340E+00
B1L547_AE	4.010E+00	6.900E+01	3.950E+01	8.680E+00	1.000E+01	1.390E+04	2.050E+01	1.500E+04	1.400E+04	8.050E+00	3.030E+00	4.260E+00	3.500E+00
B1L553_AE	2.830E+00	9.160E+01	2.230E+01	6.520E+00	5.890E+00	9.020E+03	1.240E+01	8.160E+03	8.740E+03	3.260E+00	1.410E+00	2.840E+00	2.330E+00
B1L553_Dup2_AE	2.830E+00	9.050E+01	2.450E+01	6.170E+00	5.750E+00	9.030E+03	1.340E+01	1.040E+04	9.150E+03	3.730E+00	1.450E+00	2.790E+00	2.290E+00
B1L557_AE	3.650E+00	6.900E+01	3.950E+01	8.530E+00	9.890E+00	1.390E+04	2.050E+01	1.460E+04	1.400E+04	7.890E+00	3.000E+00	4.260E+00	3.500E+00
B1L562_AE	2.970E+00	8.380E+01	2.340E+01	6.530E+00	5.710E+00	9.360E+03	1.380E+01	1.070E+04	9.530E+03	3.590E+00	1.390E+00	2.910E+00	2.390E+00
B1L568_AE	2.890E+00	1.030E+02	2.200E+01	6.410E+00	5.730E+00	9.100E+03	1.240E+01	8.180E+03	8.830E+03	3.220E+00	1.350E+00	2.870E+00	2.350E+00
B1L570_AE	3.940E+00	6.560E+01	3.940E+01	8.540E+00	9.990E+00	1.400E+04	2.040E+01	1.500E+04	1.380E+04	8.000E+00	3.010E+00	4.230E+00	3.470E+00
B1L577_AE	2.860E+00	1.000E+02	2.280E+01	6.520E+00	5.900E+00	9.050E+03	1.270E+01	8.170E+03	8.950E+03	3.280E+00	1.430E+00	2.810E+00	2.310E+00
B1L582_AE	2.750E+00	9.180E+01	2.430E+01	6.320E+00	5.640E+00	8.700E+03	1.310E+01	1.070E+04	9.290E+03	3.690E+00	1.390E+00	2.830E+00	2.330E+00
B1L587_AE	3.930E+00	6.860E+01	3.990E+01	8.620E+00	1.010E+01	1.370E+04	2.070E+01	1.460E+04	1.380E+04	7.920E+00	2.990E+00	4.210E+00	3.460E+00
B1L592_AE	2.870E+00	8.990E+01	2.210E+01	6.360E+00	5.870E+00	9.140E+03	1.270E+01	8.160E+03	8.670E+03	3.190E+00	1.410E+00	2.830E+00	2.320E+00
B1L596_AE	2.890E+00	9.560E+01	2.380E+01	6.430E+00	5.540E+00	9.150E+03	1.350E+01	1.080E+04	9.410E+03	3.580E+00	1.400E+00	2.870E+00	2.360E+00
B1L5B1_AE	3.630E+00	7.080E+01	4.010E+01	8.650E+00	9.950E+00	1.380E+04	2.080E+01	1.470E+04	1.390E+04	7.940E+00	3.020E+00	4.220E+00	3.470E+00
B1L5B1-Dup3_AE	2.880E+00	9.270E+01	2.260E+01	6.300E+00	5.910E+00	9.110E+03	1.270E+01	8.370E+03	8.670E+03	3.300E+00	1.400E+00	2.810E+00	2.310E+00
B1L5B3_AE	2.860E+00	8.160E+01	2.390E+01	6.290E+00	5.790E+00	9.270E+03	1.340E+01	1.070E+04	9.320E+03	3.690E+00	1.460E+00	2.840E+00	2.340E+00
B1L5B5_AE	3.590E+00	6.770E+01	4.010E+01	8.450E+00	1.010E+01	1.390E+04	2.070E+01	1.470E+04	1.410E+04	7.890E+00	3.010E+00	4.300E+00	3.540E+00
B1L5B7_AE	2.920E+00	9.220E+01	2.200E+01	6.540E+00	5.860E+00	9.230E+03	1.270E+01	8.050E+03	8.490E+03	3.230E+00	1.390E+00	2.910E+00	2.390E+00
B1L5C0_AE	2.830E+00	9.380E+01	2.390E+01	6.420E+00	5.760E+00	8.860E+03	1.350E+01	1.050E+04	9.130E+03	3.610E+00	1.440E+00	2.780E+00	2.290E+00
B1L5C4_AE	3.730E+00	7.240E+01	4.010E+01	8.600E+00	1.000E+01	1.410E+04	2.080E+01	1.480E+04	1.390E+04	7.800E+00	3.020E+00	4.270E+00	3.510E+00

Gross alpha beta report. 325 Counting room Lab 425
Data report by: Igor Kutnyakov
Data reviewed by: Mike Lindberg

Analyst name: Igor Kutnyakov
Peer reviewer name: Michael Lindberg
Project Manager acceptance date: 4/12/2007

Conversions to pCi/g

Sample ID	Gross Beta (pCi/g)	Gross Alpha (pCi/g)
E-102		
B1L1L1	<1.562E+01	<5.907E+00
A-4		
B1L4Y7	<1.562E+01	<5.907E+00
B1L500	<1.561E+01	<5.904E+00
B1L504	<1.561E+01	<5.905E+00
B1M5X1	<1.561E+01	<5.906E+00
B1L512	<1.561E+01	<5.904E+00
B1L517	<1.561E+01	<5.905E+00
B1L519	<1.561E+01	<5.905E+00
B1L524	<1.561E+01	<5.905E+00
B1L528	<1.566E+01	<5.924E+00
B1L531	<1.561E+01	<5.904E+00
B1L531 Du	<1.561E+01	<5.904E+00
B1L536	<1.561E+01	<5.905E+00
B1L540	<1.561E+01	<5.906E+00
B1L543	<1.561E+01	<5.905E+00
B1L547	3.821E+01	<5.906E+00
B1L553	8.479E+01	<5.905E+00
B1L553 Du	8.373E+01	<5.910E+00
B1L557	1.184E+02	<6.442E+00
B1L562	1.231E+02	<9.002E+00
B1L568	1.306E+02	<5.905E+00
B1L570	1.541E+02	<5.910E+00
B1L577	1.241E+02	<5.911E+00
B1L582	1.353E+02	<5.904E+00
B1L587	1.402E+02	<5.903E+00
B1L592	1.322E+02	<5.904E+00
B1L596	1.034E+02	<5.902E+00
B1L5B1	7.130E+02	<5.905E+00
B1L5B1 Du	6.931E+02	<5.904E+00
B1L5B3	7.613E+02	<5.908E+00
B1L5B5	8.349E+02	<5.904E+00
B1L5B7	7.106E+02	<5.950E+00
B1L5C0	1.197E+02	<5.903E+00
B1L5C4	1.163E+02	<5.905E+00

Gross alpha beta report. 325 Counting room Lab 425

Data report by: Igor Kutnyakov
Data reviewed by: Mike Lindberg

Analyst name: Igor Kutnyakov
Peer reviewer name: Michael Lindberg
Project Manager acceptance date: 4/12/2007

Dilution Factor corrected-converted to pCi/ml of pore water

Sample ID	Gross Beta (pCi/ml)	Gross Alpha (pCi/ml)
B1L1L1	<2.676E+02	<1.012E+02
B1L4Y7	<2.218E+02	<8.389E+01
B1L500	<4.098E+02	<1.550E+02
B1L504	<2.965E+02	<1.121E+02
B1M5X1	<1.236E+02	<4.674E+01
B1L512	<7.002E+02	<2.648E+02
B1L517	<7.425E+02	<2.808E+02
B1L519	<7.386E+02	<2.793E+02
B1L524	<5.252E+02	<1.986E+02
B1L528	<2.663E+02	<1.007E+02
B1L531	<3.979E+02	<1.505E+02
B1L531 Du	<3.982E+02	<1.506E+02
B1L536	<5.423E+02	<2.051E+02
B1L540	<4.370E+02	<1.653E+02
B1L543	<3.394E+02	<1.283E+02
B1L547	6.746E+02	<1.043E+02
B1L553	2.000E+03	<1.393E+02
B1L553 Du	1.975E+03	<1.394E+02
B1L557	3.633E+03	<1.976E+02
B1L562	3.277E+03	<2.396E+02
B1L568	4.128E+03	<1.867E+02
B1L570	4.042E+03	<1.551E+02
B1L577	3.947E+03	<1.881E+02
B1L582	3.445E+03	<1.503E+02
B1L587	3.823E+03	<1.610E+02
B1L592	3.260E+03	<1.456E+02
B1L596	3.303E+03	<1.886E+02
B1L5B1	3.626E+03	<3.003E+01
B1L5B1 Du	3.525E+03	<3.003E+01
B1L5B3	3.783E+03	<2.935E+01
B1L5B5	3.431E+03	<2.426E+01
B1L5B7	3.061E+03	<2.563E+01
B1L5C0	3.544E+03	<1.747E+02
B1L5C4	2.907E+03	<1.476E+02

Gross alpha beta report. 325 Counting room Lab 425
Data report by: Igor Kutnyakov
Data reviewed by: Mike Lindberg

Analyst name: Igor Kutnyakov
Peer reviewer name: Michael Lindberg
Project Manager acceptance date: 4/12/2007

Conversions to pCi/g

Sample ID	Gross Beta (pCi/g)	Gross Alpha (pCi/g)
E-102		
B1L1L1-AE	<6.885E+01	<3.113E+01
A-4		
B1L4Y7	<8.022E+01	<3.627E+01
B1L500	<7.720E+01	<3.491E+01
B1L504	<8.207E+01	<3.711E+01
B1M5X1	1.454E+02	1.01E+02
B1L512	<7.794E+01	<3.524E+01
B1L517	<8.408E+01	<3.802E+01
B1L519	<7.891E+01	<3.568E+01
B1L524	<7.736E+01	<3.498E+01
B1L528	<7.827E+01	<3.539E+01
B1L531	<7.951E+01	<3.595E+01
B1L531 Dup1	<8.291E+01	<3.749E+01
B1L536	<8.033E+01	<3.632E+01
B1L540	<8.131E+01	<3.676E+01
B1L543	<7.877E+01	<3.562E+01
B1L547	<7.793E+01	<3.524E+01
B1L553	<7.881E+01	<3.564E+01
B1L553 Dup2	<8.871E+01	<4.011E+01
B1L557	<8.041E+01	<3.636E+01
B1L562	<1.047E+02	<4.736E+01
B1L568	<7.900E+01	<3.572E+01
B1L570	<7.947E+01	<3.593E+01
B1L577	<8.067E+01	<3.648E+01
B1L582	<7.910E+01	<3.576E+01
B1L587	<7.948E+01	<3.594E+01
B1L592	<8.020E+01	<3.626E+01
B1L596	<7.808E+01	<3.531E+01
B1L5B1	<7.747E+01	<3.503E+01
B1L5B1 Dup3	<9.251E+01	<4.183E+01
B1L5B3	<8.084E+01	<3.655E+01
B1L5B5	<8.250E+01	<3.731E+01
B1L5B7	<7.922E+01	<3.582E+01
B1L5C0	<7.348E+01	<3.323E+01
B1L5C4	<7.500E+01	<3.391E+01

PARTICLE SIZE DISTRIBUTION ANALYSIS

Analyst name: REC 4/16-4/25/07
Peer reviewer name: CF Brown
Project Manager acceptance date: 5/24/2007

Balance Used:	1.125E+09
Calibration Expiration:	08/2007
Date:	
Analyst:	REC

Sample ID:	B1L4Y7
Sample + container Wt:	407.02
Tare Wt:	343.72
TOTAL SOIL MATERIAL(g):	63.30

Total starting weight (hydrometer) 67.61

SIEVE NUMBER	X, um	TARE	TOTAL WEIGHT	SOIL WEIGHT	SOIL FRACTION	(BASED ON STARTING WEIGHT)	PERCENT PASSING	PERCENT PASSING (CORRECTED FOR STARTING WEIGHT)
10	2000	116.47	116.47	0.00	0.00%	0.00%	100.00	100.00
18	1000	73.14	79.92	6.78	10.69%	10.03%	89.31	89.97
35	500	123.06	150.01	26.95	42.47%	39.86%	46.84	50.11
60	250	63.47	85.11	21.64	34.11%	32.01%	12.73	18.10
140	106	58.61	64.90	6.29	9.91%	9.30%	2.82	8.80
200	75	76.87	77.89	1.02	1.61%	1.51%	1.21	7.29
270	53	103.45	104.21	0.76	1.20%	1.12%	0.02	6.17
PAN		71.55	71.56	0.01	0.02%	0.01%	0.00	6.15

TOTAL SAND ONLY	63.44
TOTAL SIEVED*	63.30
TOTAL RECOVERED	63.45
% RECOVERED	100.24%

weights on portion of sample that went through 250 micron sieve

tare of pan	pan + silt + clay	silt and clay
392.46	396.74	4.28

Balance Used:	1.125E+09
Calibration Expiration:	08/2007
Date:	
Analyst:	REC

Sample ID:	B1M5X1
Sample + container Wt:	368.44
Tare Wt:	338.27
TOTAL SOIL MATERIAL(g):	30.17

Total starting weight (hydrometer) 41.74

SIEVE NUMBER	X, um	TARE	TOTAL WEIGHT	SOIL WEIGHT	SOIL FRACTION	SOIL FRACTION (BASED ON STARTING WEIGHT)	PERCENT PASSING	PERCENT PASSING (CORRECTED FOR STARTING WEIGHT)
10	2000	116.47	116.47	0.00	0.00%	0.00%	100.00	100.00
18	1000	73.14	73.82	0.68	2.25%	1.63%	97.75	98.37
35	500	123.06	127.63	4.57	15.15%	10.95%	82.60	87.42
60	250	63.47	68.56	5.09	16.87%	12.19%	65.73	75.23
140	106	58.61	71.30	12.69	42.06%	30.40%	23.67	44.83
200	75	76.87	80.51	3.64	12.06%	8.72%	11.60	36.10
270	53	103.45	106.71	3.26	10.81%	7.81%	0.80	28.29
PAN		71.55	71.79	0.24	0.80%	0.57%	0.00	27.72

TOTAL SAND ONLY	29.93
TOTAL SIEVED*	30.17
TOTAL RECOVERED	30.17
% RECOVERED	100.00%

weights on portion of sample that went through 250 micron sieve

tare of pan	pan + silt + clay	silt and clay
396.00	408.09	12.09

Balance Used:	1125341637
Calibration Expiration:	08/2007
Date:	
Analyst:	REC

Sample ID:	B1L524
Sample + container Wt:	416.74
Tare Wt:	343.96
TOTAL SOIL MATERIAL(g):	72.78

Total starting weight (hydrometer) 82.09

SIEVE NUMBER	X, um	TARE	TOTAL WEIGHT	SOIL WEIGHT	SOIL FRACTION	(BASED ON STARTING WEIGHT)	PERCENT PASSING	PERCENT PASSING (CORRECTED FOR STARTING WEIGHT)
10	2000	116.47	116.47	0.00	0.00%	0.00%	100.00	100.00
18	1000	73.14	74.72	1.58	2.17%	1.92%	97.83	98.08
35	500	123.06	138.37	15.31	21.02%	18.65%	76.82	79.43
60	250	63.47	97.98	34.51	47.37%	42.04%	29.44	37.39
140	106	58.61	75.56	16.95	23.27%	20.65%	6.18	16.74
200	75	76.87	79.12	2.25	3.09%	2.74%	3.09	14.00
270	53	103.45	105.54	2.09	2.87%	2.55%	0.22	11.45
PAN		71.55	71.71	0.16	0.22%	0.19%	0.00	11.26

TOTAL SAND ONLY	72.69
TOTAL SIEVED*	72.78
TOTAL RECOVERED	72.85
% RECOVERED	100.10%

weights on portion of sample that went through 250 micron sieve

tare of pan	pan + silt + clay	silt and clay
334.50	342.93	8.43

Balance Used:	1125341637
Calibration Expiration:	08/2007
Date:	
Analyst:	REC

Sample ID:	B1L553
Sample + container Wt:	415.41
Tare Wt:	340.55
TOTAL SOIL MATERIAL(g):	74.86

Total starting weight (hydrometer) 82.09

SIEVE NUMBER	X, um	TARE	TOTAL WEIGHT	SOIL WEIGHT	SOIL FRACTION	SOIL FRACTION (BASED ON STARTING WEIGHT)	PERCENT PASSING	PERCENT PASSING (CORRECTED FOR STARTING WEIGHT)
10	2000	116.47	116.47	0.00	0.00%	0.00%	100.00	100.00
18	1000	73.14	75.96	2.82	3.78%	3.44%	96.22	96.56
35	500	123.06	140.49	17.43	23.37%	21.23%	72.85	75.33
60	250	63.47	98.73	35.26	47.28%	42.95%	25.57	32.38
140	106	58.61	72.42	13.81	18.52%	16.82%	7.05	15.56
200	75	76.87	79.28	2.41	3.23%	2.94%	3.82	12.62
270	53	103.45	106.09	2.64	3.54%	3.22%	0.28	9.41
PAN		71.55	71.76	0.21	0.28%	0.26%	0.00	9.15

TOTAL SAND ONLY	74.37
TOTAL SIEVED*	74.86
TOTAL RECOVERED	74.58
% RECOVERED	99.63%

weights on portion of sample that went through 250 micron sieve

tare of pan	pan + silt + clay	silt and clay
376.67	388.07	11.40

Balance Used:	1125341637
Calibration Expiration:	08/2007
Date:	
Analyst:	REC

Sample ID:	B1L570
Sample + container Wt:	390.03
Tare Wt:	318.27
TOTAL SOIL MATERIAL(g):	71.76

Total starting weight (hydrometer) 81.97

SIEVE NUMBER	X, um	TARE	TOTAL WEIGHT	SOIL WEIGHT	SOIL FRACTION	(BASED ON STARTING WEIGHT)	PERCENT PASSING	PERCENT PASSING (CORRECTED FOR STARTING WEIGHT)
10	2000	116.47	116.47	0.00	0.00%	0.00%	100.00	100.00
18	1000	73.14	79.86	6.72	9.31%	8.20%	90.69	91.80
35	500	123.06	150.22	27.16	37.62%	33.13%	53.07	58.67
60	250	63.47	88.18	24.71	34.22%	30.14%	18.85	28.52
140	106	58.61	68.53	9.92	13.74%	12.10%	5.11	16.42
200	75	76.87	78.78	1.91	2.65%	2.33%	2.47	14.09
270	53	103.45	105.15	1.70	2.35%	2.07%	0.11	12.02
PAN		71.55	71.63	0.08	0.11%	0.10%	0.00	11.92

TOTAL SAND ONLY	72.12
TOTAL SIEVED*	71.76
TOTAL RECOVERED	72.2
% RECOVERED	100.61%

weights on portion of sample that went through 250 micron sieve

tare of pan	pan + silt + clay	silt and clay
375.70	384.56	8.86

Balance Used:	1125341637
Calibration Expiration:	08/2007
Date:	
Analyst:	REC

Sample ID:	B1L5B1
Sample + container Wt:	344.17
Tare Wt:	339.13
TOTAL SOIL MATERIAL(g):	5.04

Total startiug weight (hydrometer) 21.11

SIEVE NUMBER	X, um	TARE	TOTAL WEIGHT	SOIL WEIGHT	SOIL FRACTION	SOIL FRACTION (BASED ON STARTING WEIGHT)	PERCENT PASSING	PERCENT PASSING (CORRECTED FOR STARTING WEIGHT)
10	2000	116.47	116.47	0.00	0.00%	0.00%	100.00	100.00
18	1000	73.14	73.18	0.04	0.79%	0.19%	99.21	99.81
35	500	123.06	123.13	0.07	1.39%	0.33%	97.82	99.48
60	250	63.47	63.52	0.05	0.99%	0.24%	96.83	99.24
140	106	58.61	58.94	0.33	6.55%	1.56%	90.28	97.68
200	75	76.87	77.83	0.96	19.05%	4.55%	71.23	93.13
270	53	103.45	106.85	3.40	67.46%	16.10%	3.77	77.03
PAN		71.55	71.74	0.19	3.77%	0.90%	0.00	76.13

TOTAL SAND ONLY	4.85
TOTAL SIEVED*	5.04
TOTAL RECOVERED	5.04
% RECOVERED	100.00%

weights ou portion of sample that went through 250 micron sieve

tare of pan	pan + silt + clay	silt and clay
not taken	not takeu	

Balance Used:	1125341637
Calibration Expiration:	08/2007
Date:	
Analyst:	REC

Sample ID:	B1L5B1 DUP
Sample + container Wt:	350.11
Tare Wt:	343.75
TOTAL SOIL MATERIAL(g):	6.36

Total starting weight (hydrometer) 23.39

SIEVE NUMBER	X, um	TARE	TOTAL WEIGHT	SOIL WEIGHT	SOIL FRACTION	(BASED ON STARTING WEIGHT)	PERCENT PASSING	PERCENT PASSING (CORRECTED FOR STARTING WEIGHT)
10	2000	116.47	116.50	0.03	0.49%	0.13%	99.51	99.87
18	1000	73.14	73.15	0.01	0.16%	0.04%	99.34	99.83
35	500	123.06	123.10	0.04	0.66%	0.17%	98.69	99.66
60	250	63.47	63.52	0.05	0.82%	0.21%	97.87	99.44
140	106	58.61	58.97	0.36	5.90%	1.54%	91.97	97.91
200	75	76.87	78.08	1.21	19.84%	5.17%	72.13	92.73
270	53	103.45	107.36	3.91	64.10%	16.72%	8.03	76.02
PAN		71.55	72.04	0.49	8.03%	2.09%	0.00	73.92

TOTAL SAND ONLY	5.58
TOTAL SIEVED*	6.36
TOTAL RECOVERED	6.1
% RECOVERED	95.91%

weights on portion of sample that went through 250 micron sieve

tare of pan	pan + silt + clay	silt and clay
392.51	409.45	16.94

000012

Balance Used:	1125341637
Calibration Expiration:	08/2007
Date:	
Analyst:	REC

Sample ID:	B1L5B7
Sample + container Wt:	347.82
Tare Wt:	343.96
TOTAL SOIL MATERIAL(g):	3.86

Total starting weight (hydrometer) 50.96

SIEVE NUMBER	X, um	TARE	TOTAL WEIGHT	SOIL WEIGHT	SOIL FRACTION	SOIL FRACTION (BASED ON STARTING WEIGHT)	PERCENT PASSING	PERCENT PASSING (CORRECTED FOR STARTING WEIGHT)
10	2000	116.47	116.47	0.00	0.00%	0.00%	100.00	100.00
18	1000	73.14	73.14	0.00	0.00%	0.00%	100.00	100.00
35	500	123.06	123.10	0.04	1.10%	0.08%	98.90	99.92
60	250	63.47	63.49	0.02	0.55%	0.04%	98.35	99.88
140	106	58.61	58.80	0.19	5.22%	0.37%	93.13	99.51
200	75	76.87	77.20	0.33	9.07%	0.65%	84.07	98.86
270	53	103.45	106.21	2.76	75.82%	5.42%	8.24	93.45
PAN		71.55	71.85	0.30	8.24%	0.59%	0.00	92.86

TOTAL SAND ONLY	3.34
TOTAL SIEVED*	3.86
TOTAL RECOVERED	3.64
% RECOVERED	94.30%

weights on portion of sample that went through 250 micron sieve

tare of pan	pan + silt + clay	silt and clay
376.92	424.56	47.64

Balance Used:	1125341637
Calibration Expiration:	08/2007
Date:	
Analyst:	REC

Sample ID:	B1L5C4
Sample + container Wt:	390.50
Tare Wt:	338.29
TOTAL SOIL MATERIAL(g):	52.21

Total starting weight (hydrometer) 80.08

SIEVE NUMBER	X, um	TARE	TOTAL WEIGHT	SOIL WEIGHT	SOIL FRACTION	(BASED ON STARTING WEIGHT)	PERCENT PASSING	PERCENT PASSING (CORRECTED FOR STARTING WEIGHT)
10	2000	116.47	116.47	0.00	0.00%	0.00%	100.00	100.00
18	1000	73.14	85.17	12.03	23.29%	15.02%	76.71	84.98
35	500	123.06	137.14	14.08	27.26%	17.58%	49.46	67.39
60	250	63.47	74.32	10.85	21.00%	13.55%	28.46	53.85
140	106	58.61	67.95	9.34	18.08%	11.66%	10.38	42.18
200	75	76.87	79.09	2.22	4.30%	2.77%	6.08	39.41
270	53	103.45	106.52	3.07	5.94%	3.83%	0.14	35.58
PAN		71.55	71.62	0.07	0.14%	0.09%	0.00	35.49

TOTAL SAND ONLY	51.59
TOTAL SIEVED*	52.21
TOTAL RECOVERED	51.66
% RECOVERED	98.95%

weights on portion of sample that went through 250 micron sieve

tare of pan	pan + silt + clay	silt and clay
396.12	421.30	25.18

J0000 4

PARTICLE SIZE DISTRIBUTION ANALYSIS

Preliminary Data until reviewed
Analyst name: REC
Peer reviewer: CF Brown
Project Manager acceptance date: 5/24/2007

air to oven dried values for particle densities

B1L4Y7	0.79%
B1M5X1	1.18%
B1L524	0.67%
B1L553	0.54%
B1L570	0.44%
B1L5B1	1.12%
B1L5B1 DUP	0.94%
B1L5B7	2.07%
B1L5C4	0.71%

**NOTE: several particle density flasks broken-back calculated for flask + H2O weight-MMV

	g	g	g	g	g		
Particle Densities	PYC WT	PYC+soil	PYC + soil (oven dry)	PYC+soil+H2O	PYC+H2O	de-aired water-to back calculate for	Ps
B1L4Y7-1	38.4898	48.4936	48.4150	94.646	88.29	49.80	2.77
B1L4Y7-2	38.4497	48.4562	48.3775	94.560	broken	88.24	2.75
B1L4Y7-3	38.1069	48.1147	48.0360	94.267	87.92	49.81	2.77
B1M5X1	37.9776	47.9857	47.8687	94.106	87.78	49.80	2.77
B1M5X1	37.9236	47.9330	47.8160	94.047	87.71	49.79	2.78
B1M5X1	38.7441	48.7471	48.6302	94.843	broken	88.53	2.76
B1L524	38.1832	48.2089	48.1422	94.334	87.93	49.75	2.79
B1L524	37.4261	47.4259	47.3594	93.389	87.03	49.60	2.77
B1L524	37.2928	47.3081	47.2415	93.490	87.08	49.79	2.80
B1L553	38.4832	48.4733	48.4198	94.612	broken	88.27	2.76
B1L553	38.3705	48.3719	48.3183	94.532	broken	88.16	2.78
B1L553	38.5907	48.6101	48.5564	94.757	88.34	49.75	2.80
B1L570	41.8853	51.8229	51.7797	98.010	91.67	49.78	2.78
B1L570	36.6175	46.6234	46.5799	92.824	86.44	49.82	2.78
B1L570	37.6680	47.6771	47.6336	93.770	87.45	49.78	2.73
B1L5B1	38.4852	48.4894	48.3787	94.685	88.29	49.80	2.82
B1L5B1	38.1041	48.1116	48.0009	94.300	87.92	49.82	2.81
B1L5B1	37.9777	47.9843	47.8736	94.163	87.78	49.80	2.81
B1L5B1 DUP	37.9246	47.9337	47.8409	94.125	87.71	49.79	2.83
B1L5B1 DUP	38.1837	48.1837	48.0910	94.349	87.93	49.75	2.83
B1L5B1 DUP	37.2112	47.2152	47.1224	93.400	87.03	49.82	2.79
B1L5B7	37.2934	47.3022	47.0991	93.461	87.08	49.79	2.86
B1L5B7	38.5905	48.5961	48.3930	94.758	88.34	49.75	2.89
B1L5B7	41.8854	51.8885	51.6855	98.032	91.67	49.78	2.84
B1L5C4	36.6168	46.6191	46.5489	92.862	86.44	49.82	2.82
B1L5C4	37.669	47.6691	47.5989	93.898	87.45	49.78	2.84
B1L5C4	41.3029	51.3133	51.2430	97.610	91.25	49.95	2.77

water density @ 0.99756 g/cm3 for 23 C.

avg of 50 ml of de-aired water (used for broken flask calculations!) 49.79

PARTICLE SIZE DISTRIBUTION ANALYSIS

B1L4Y7 = Sample ID
72.99 = wet sample weight, g
7.96% = wet mass wetness, g/g
67.61 = oven dry soil weight, g/g
2.76 = particle size density, g/cm3
0.005 = HMP concentration, g/cm3
20.0 = average temperature, C
0.9983 = water density
1.003 = solution density, g/cm3 (Eq. 5 of Gee and Bauder 1986)
0.0100 = water viscosity, g/cm s (works for T =/> than 20 C)
0.0102 = solution viscosity, g/cm s (Eq. 6 of Gee and Bauder 1986)

Analyst name: REC
Peer reviewer: CF Brown
Project Manager acceptanee date: 5/24/2007

Time, min	Temp, C	R, g/L	Blank, g/L (Composite correction)	Corr. R, g/L	Settling Depth, cm	P, %	t^-0.5	X, um
0.5	20	11.0	5	6.0	18.10	8.87	1.41	80.28
1	20	9.0	5	4.0	17.78	5.92	1.00	56.25
3	20	8.0	5	3.0	17.61	4.44	0.58	32.32
10	20	8.0	5	3.0	17.61	4.44	0.32	17.70
30	20	8.0	5	3.0	17.61	4.44	0.18	10.22
60	20	8.0	5	3.0	17.61	4.44	0.13	7.23
90	20	8.0	5	3.0	17.61	4.44	0.11	5.90
120	20	8.0	5	3.0	17.61	4.44	0.09	5.11
1440	20	7.5	5	2.5	17.53	3.70	0.03	1.47

m	CLAY %
0.496909	3.9

B1M5X1 = Sample ID
47.35 = wet sample weight, g
13.44% = wet mass wetness, g/g
41.74 = oven dry soil weight, g/g
2.77 = particle size density, g/cm3
0.005 = HMP concentration, g/cm3
20.0 = average temperature, C
0.9983 = water density
1.003 = solution density, g/cm3 (Eq. 5 of Gee and Bauder 1986)
0.0100 = water viscosity, g/cm s (works for T =/> than 20 C)
0.0102 = solution viscosity, g/cm s (Eq. 6 of Gee and Bauder 1986)

Time, min	Temp, C	R, g/L	Blank, g/L (Composite correction)	Corr. R, g/L	Settling Depth, cm	P, %	t^-0.5	X, um
0.5	20	21.0	5	16.0	19.74	38.33	1.41	83.71
1	20	17.0	5	12.0	19.09	28.75	1.00	58.20
3	20	13.0	5	8.0	18.43	19.17	0.58	33.02
10	20	11.0	5	6.0	18.10	14.37	0.32	17.92
30	20	10.0	5	5.0	17.94	11.98	0.18	10.30
60	20	9.0	5	4.0	17.78	9.58	0.13	7.25
90	20	9.0	5	4.0	17.78	9.58	0.11	5.92
120	20	9.0	5	4.0	17.78	9.58	0.09	5.13
1440	20	8.5	5	3.5	17.69	8.39	0.03	1.48

m	CLAY %
0.803173	8.6

B1L524 = **Sample ID**
85.15 = wet sample weight, g
3.73% = wet mass wetness, g/g
82.09 = oven dry soil weight, g/g
2.79 = particle size density, g/cm3
0.005 = HMP concentration, g/cm3
20.0 = average temperature, C
0.9983 = water density
1.003 = solution density, g/cm3 (Eq. 5 of Gee and Bauder 1986)
0.0100 = water viscosity, g/cm s (works for T =/> than 20 C)
0.0102 = solution viscosity, g/cm s (Eq. 6 of Gee and Bauder 1986)

Time, min	Temp, C	R, g/L	Blank, g/L (Composite correction)	Corr. R, g/L	Settling Depth, cm	P, %	t^-0.5	X, um
0.5	20	18.0	5	13.0	19.25	15.84.	1.41	82.12
1	20	15.0	5	10.0	18.76	12.18	1.00	57.32
3	20	13.0	5	8.0	18.43	9.75	0.58	32.80
10	20	11.5	5	6.5	18.19	7.92	0.32	17.85
30	20	10.5	5	5.5	18.02	6.70	0.18	10.26
60	20	10.0	5	5.0	17.94	6.09	0.13	7.24
90	20	9.0	5	4.0	17.78	4.87	0.11	5.88
120	20	9.0	5	4.0	17.78	4.87	0.09	5.09
1440	20	7.5	5	2.5	17.53	3.05	0.03	1.46

m	CLAY %
1.229266	3.4

B1L553 = **Sample ID**
89.76 = wet sample weight, g
4.19% = wet mass wetness, g/g
86.15 = oven dry soil weight, g/g
2.78 = particle size density, g/cm3
0.005 = HMP concentration, g/cm3
20.0 = average temperature, C
0.9983 = water density
1.003 = solution density, g/cm3 (Eq. 5 of Gee and Bauder 1986)
0.0100 = water viscosity, g/cm s (works for T =/> than 20 C)
0.0102 = solution viscosity, g/cm s (Eq. 6 of Gee and Bauder 1986)

Time, min	Temp, C	R, g/L	Blank, g/L (Composite correction)	Corr. R, g/L	Settling Depth, cm	P, %	t^-0.5	X, um
0.5	20	19.5	5	14.5	19.50	16.83	1.41	82.93
1	20	17.0	5	12.0	19.09	13.93	1.00	58.02
3	20	15.5	5	10.5	18.84	12.19	0.58	33.28
10	20	14.0	5	9.0	18.60	10.45	0.32	18.11
30	20	11.0	5	6.0	18.10	6.96	0.18	10.32
60	20	10.0	5	5.0	17.94	5.80	0.13	7.26
90	20	10.0	5	5.0	17.94	5.80	0.11	5.93
120	20	10.0	5	5.0	17.94	5.80	0.09	5.13
1440	20	8.0	5	3.0	17.61	3.48	0.03	1.47

m	CLAY %
1.552601	4.0

B1L570 = Sample ID
84.78 = wet sample weight, g
3.43% = wet mass wetness, g/g
81.97 = oven dry soil weight, g/g
2.76 = particle size density, g/cm3
0.005 = HMP concentration, g/cm3
20.0 = average temperature, C
0.9983 = water density
1.003 = solution density, g/cm3 (Eq. 5 of Gee and Bauder 1986)
0.0100 = water viscosity, g/cm s (works for T =/> than 20 C)
0.0102 = solution viscosity, g/cm s (Eq. 6 of Gee and Bauder 1986)

Time, min	Temp, C	R, g/L	Blank, g/L (Composite correction)	Corr. R, g/L	Settling Depth, cm	P, %	t^-0.5	X, um
0.5	20	17.0	5	12.0	19.09	14.64	1.41	82.47
1	20	14.5	5	9.5	18.68	11.59	1.00	57.68
3	20	13.0	5	8.0	18.43	9.76	0.58	33.08
10	20	11.5	5	6.5	18.19	7.93	0.32	18.00
30	20	10.0	5	5.0	17.94	6.10	0.18	10.32
60	20	10.0	5	5.0	17.94	6.10	0.13	7.30
90	20	10.0	5	5.0	17.94	6.10	0.11	5.96
120	20	9.0	5	4.0	17.78	4.88	0.09	5.14
1440	20	8.0	5	3.0	17.61	3.66	0.03	1.48

m	CLAY %
1.62628	4.2

B1L5B1 = Sample ID
25.17 = wet sample weight, g
19.21% = wet mass wetness, g/g
21.11 = oven dry soil weight, g/g
2.81 = particle size density, g/cm3
0.005 = HMP concentration, g/cm3
20.0 = average temperature, C
0.9983 = water density
1.003 = solution density, g/cm3 (Eq. 5 of Gee and Bauder 1986)
0.0100 = water viscosity, g/cm s (works for T =/> than 20 C)
0.0102 = solution viscosity, g/cm s (Eq. 6 of Gee and Bauder 1986)

Time, min	Temp, C	R, g/L	Blank, g/L (Composite correction)	Corr. R, g/L	Settling Depth, cm	P, %	t^-0.5	X, um
0.5	20	23.0	5	18.0	20.07	85.25	1.41	83.33
1	20	19.5	5	14.5	19.50	68.68	1.00	58.07
3	20	15.5	5	10.5	18.84	49.73	0.58	32.96
10	20	11.5	5	6.5	18.19	30.79	0.32	17.74
30	20	9.0	5	4.0	17.78	18.95	0.18	10.12
60	20	8.5	5	3.5	17.69	16.58	0.13	7.14
90	20	8.5	5	3.5	17.69	16.58	0.11	5.83
120	20	8.0	5	3.0	17.61	14.21	0.09	5.04
1440	20	7.0	5	2.0	17.45	9.47	0.03	1.45

m	CLAY %
4.80711	11.0

B1L5B1 = **Sample ID**
28.06 = wet sample weight, g
19.96% = wet mass wetness, g/g
23.39 = oven dry soil weight, g/g
2.82 = particle size density, g/cm3
0.005 = HMP concentration, g/cm3
20.0 = average temperature, C
0.9983 = water density
1.003 = solution density, g/cm3 (Eq. 5 of Gee and Bauder 1986)
0.0100 = water viscosity, g/cm s (works for T =/> than 20 C)
0.0102 = solution viscosity, g/cm s (Eq. 6 of Gee and Bauder 1986)

Time, min	Temp, C	R, g/L	Blank, g/L (Composite correction)	Corr. R, g/L	Settling Depth, cm	P, %	t^-0.5	X, um
0.5	20	25.0	5	20.0	20.40	85.50	1.41	83.92
1	20	21.0	5	16.0	19.74	68.40	1.00	58.38
3	20	16.0	5	11.0	18.92	47.03	0.58	33.00
10	20	12.5	5	7.5	18.35	32.06	0.32	17.80
30	20	9.5	5	4.5	17.86	19.24	0.18	10.14
60	20	9.0	5	4.0	17.78	17.10	0.13	7.15
90	20	9.0	5	4.0	17.78	17.10	0.11	5.84
120	20	8.0	5	3.0	17.61	12.83	0.09	5.03
1440	20	7.0	5	2.0	17.45	8.55	0.03	1.45

m	CLAY %
5.77751	10.4

B1L5B7 = **Sample ID**
62.58 = wet sample weight, g
22.81% = wet mass wetness, g/g
50.96 = oven dry soil weight, g/g
2.86 = particle size density, g/cm3
0.005 = HMP concentration, g/cm3
20.0 = average temperature, C
0.9983 = water density
1.003 = solution density, g/cm3 (Eq. 5 of Gee and Bauder 1986)
0.0100 = water viscosity, g/cm s (works for T =/> than 20 C)
0.0102 = solution viscosity, g/cm s (Eq. 6 of Gee and Bauder 1986)

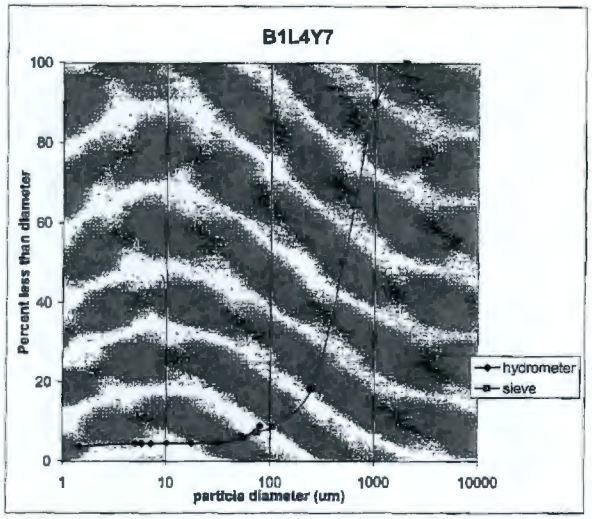
Time, min	Temp, C	R, g/L	Blank, g/L (Composite correction)	Corr. R, g/L	Settling Depth, cm	P, %	t^-0.5	X, um
0.5	20	54.0	5	49.0	25.16	96.16	1.41	92.02
1	20	49.0	5	44.0	24.34	86.35	1.00	64.00
3	20	40.5	5	35.5	22.94	69.67	0.58	35.88
10	20	32.0	5	27.0	21.55	52.99	0.32	19.04
30	20	26.0	5	21.0	20.56	41.21	0.18	10.74
60	20	24.0	5	19.0	20.24	37.29	0.13	7.53
90	20	22.0	5	17.0	19.91	33.36	0.11	6.10
120	20	20.5	5	15.5	19.66	30.42	0.09	5.25
1440	20	13.0	5	8.0	18.43	15.70	0.03	1.47

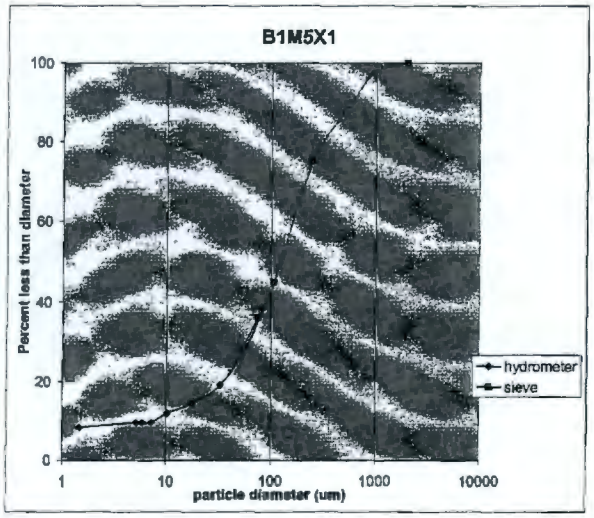
m	CLAY %
11.5183	19.3

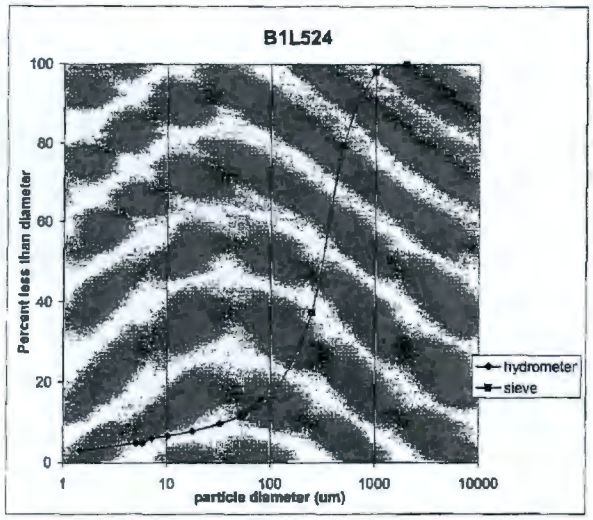
B1L5C4 = Sample ID
83.96 = wet sample weight, g
4.85% = wet mass wetness, g/g
80.08 = oven dry soil weight, g/g
2.81 = particle size density, g/cm3
0.005 = HMP concentration, g/cm3
20.0 = average temperature, C
0.9983 = water density
1.003 = solution density, g/cm3 (Eq. 5 of Gee and Bauder 1986)
0.0100 = water viscosity, g/cm s (works for T =/> than 20 C)
0.0102 = solution viscosity, g/cm s (Eq. 6 of Gee and Bauder 1986)

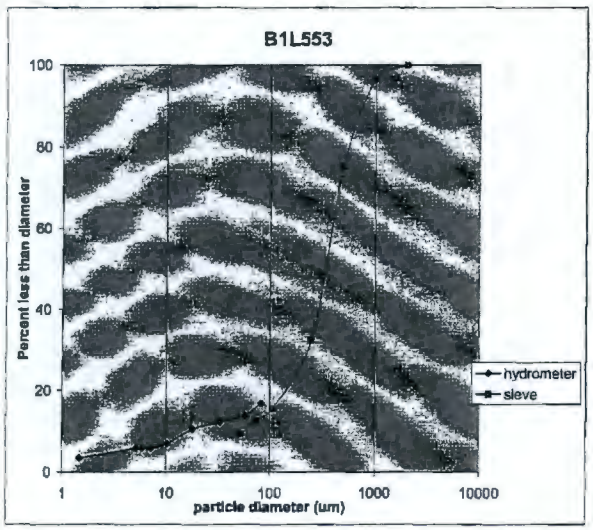
Time, min	Temp, C	R, g/L	Blank, g/L (Composite correction)	Corr. R, g/L	Settling Depth, cm	P, %	t^-0.5	X, um
0.5	20	33.0	5	28.0	21.71	34.97	1.41	86.68
1	20	29.0	5	24.0	21.06	29.97	1.00	60.36
3	20	27.0	5	22.0	20.73	27.47	0.58	34.58
10	20	21.5	5	16.5	19.83	20.60	0.32	18.52
30	20	18.5	5	13.5	19.33	16.86	0.18	10.56
60	20	17.0	5	12.0	19.09	14.99	0.13	7.42
90	20	15.5	5	10.5	18.84	13.11	0.11	6.02
120	20	15.0	5	10.0	18.76	12.49	0.09	5.20
1440	20	11.5	5	6.5	18.19	8.12	0.03	1.48

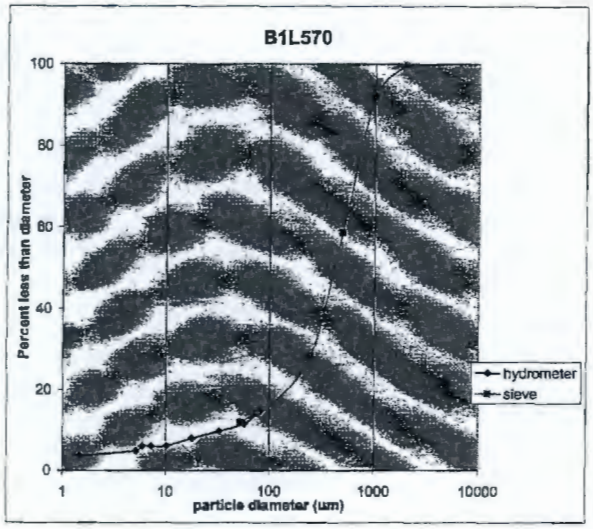
m	CLAY %
3.3013	9.1

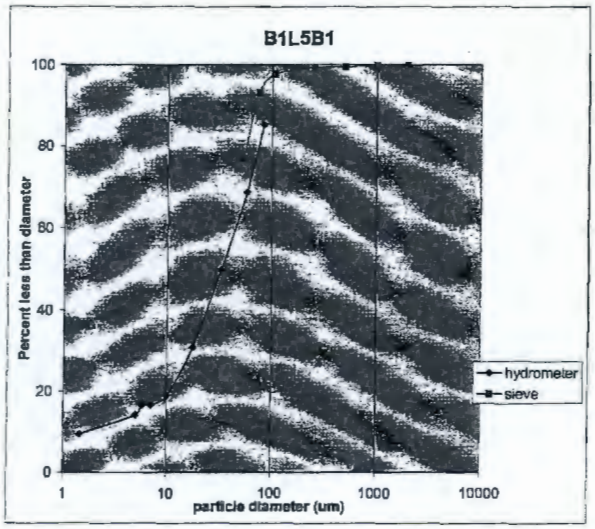

B1L4Y7
Percent less than diameter
100
80
60
40
20
0
1
10
100
1000
10000
particle diameter (um)
hydrometer
sieve

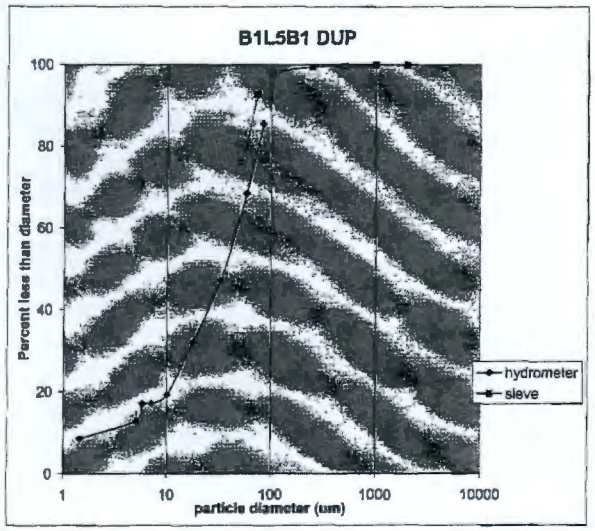

B1M5X1
Percent less than diameter
100
80
60
40
20
0
1
10
100
1000
10000
particle diameter (um)
hydrometer
sieve

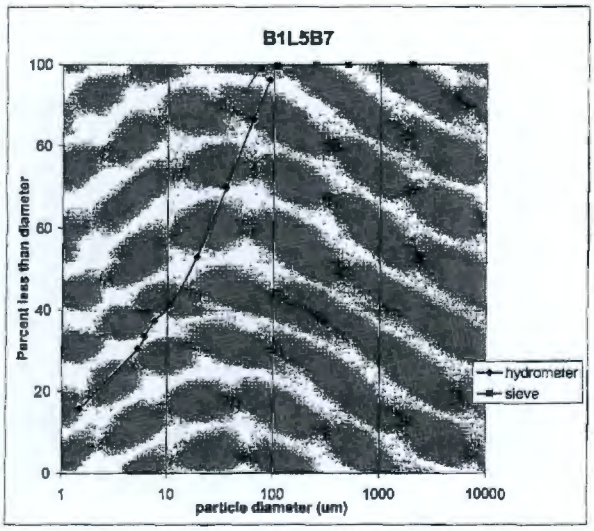

B1L524
Percent less than diameter
100
80
60
40
20
0
1
10
100
1000
10000
particle diameter (um)
hydrometer
sieve

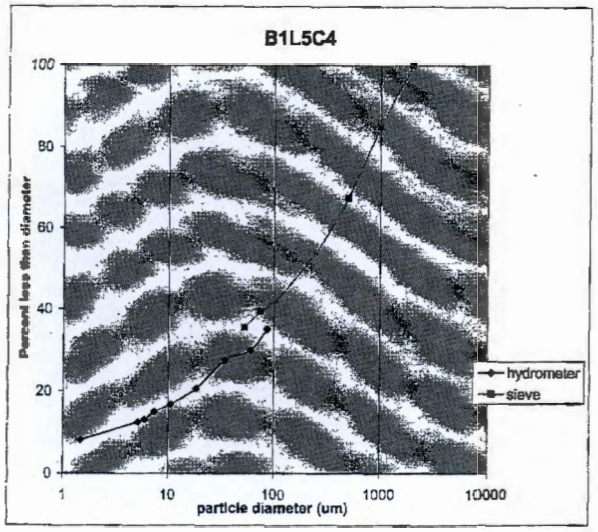

B1L553
Percent less than diameter
100
80
60
40
20
0
1
10
100
1000
10000
particle diameter (um)
hydrometer
sieve


B1L570
Percent less than diameter
100
80
60
40
20
0
1
10
100
1000
10000
particle diameter (um)
hydrometer
sieve


B1L5B1
Percent less than diameter
100
80
60
40
20
0
1
10
100
1000
10000
particle diameter (um)
hydrometer
sieve


B1L5B1 DUP
Percent less than diameter
100
80
60
40
20
0
1
10
100
1000
10000
particle diameter (um)
hydrometer
sieve


B1L5B7
Percent less than diameter
100
60
60
40
20
0
1
10
100
1000
10000
particle diameter (um)
hydrometer
sieve


B1L5C4
Percent less than diameter
100
80
60
40
20
0
1
10
100
1000
10000
particle diameter (um)
hydrometer
sieve

Matric Potential

Scale ID 1118410163 exp 08/2007
calibration set: HN 3418

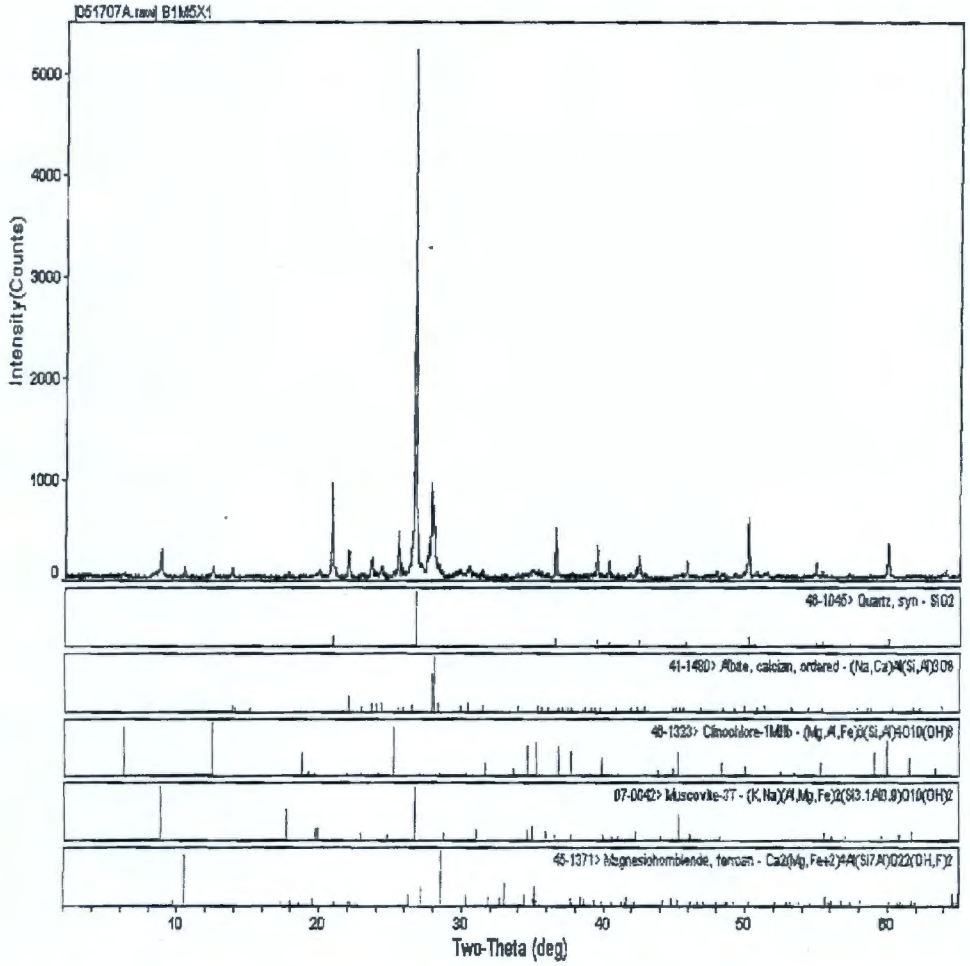
Preliminary Data until reviewed
Analyst name: IVK start 2/26/07 took out 3/9/07
Peer reviewer name: MMV
Project Manager acceptance date: 4/12/2007

Sample I	depth (ft)	Vial Tare	vial + dry FP (b-4 cores)	dry FP	Vial + wet I	Wet FP	Vial + dry FP	Dry FP	Wfp (g H2O/gfp)	MC pre-tes	Matric Potential (Mpa)
B1L5L3	29.0-31.5	16.6315	16.6932	0.0617	16.7739	0.1424	16.6916	0.0601	1.3694	none taken	**0.0035**
B1L5L4	43-45.5	16.7337	16.7964	0.0627	16.8792	0.1455	16.796	0.0623	1.3355		**0.0038**
B1L5L5	122-124	16.7433	16.8043	0.0610	16.8417	0.0984	16.8026	0.0593	0.6594		**0.0509**
B1LNH0	160.5-163	16.6549	16.7168	0.0619	16.7531	0.0982	16.7169	0.0620	0.5839		**0.0797**
B1L5L6	260-262	16.7668	16.8291	0.0623	16.8772	0.1104	16.8281	0.0613	0.8010		**0.0249**
B1L5L7	283-285	16.6246	16.6854	0.0608	16.7339	0.1093	16.6849	0.0603	0.8126		**0.0236**

CEC Calculations
5/14/2007
MJL

Analyst name: IVK/MJL
Peer reviewer name: CF Brown
Project Manager acceptance date: 5/24/2007

Sample ID	Soil cpm	Soil Wt (g)	Soil Activity (cpm/g)	Solution Activity (cpm)	Solution (cpm/meq)	CEC (meq/g)	CEC (meq/100 g)	Average CEC (meq/100 g)	St Dev	%RSD
B1L4Y7 rep1	5389	2.01	2681	18664	207063	0.013	1.29	1.44	0.204	14.2
B1L4Y7 rep2	6272	2.02	3105	18533	196028	0.016	1.58			
B1M5X1 rep1	6688	1.90	3520	19936	199537	0.018	1.76	1.77	0.007	0.38
B1M5X1 rep2	6774	1.94	3492	20382	196873	0.018	1.77			
B1L524 rep1	6077	1.99	3054	21495	232633	0.013	1.31	1.51	0.284	18.8
B1L524 rep2	5951	1.97	3021	16758	176145	0.017	1.71			
B1L553 rep1	4794	1.96	2446	20713	223248	0.011	1.10	1.09	0.002	0.2
B1L553 rep2	4623	1.96	2359	20837	215859	0.011	1.09			
B1L570 rep1	4572	1.98	2309	20304	216411	0.011	1.07	1.10	0.048	4.4
B1L570 rep2	4472	1.97	2270	19023	200053	0.011	1.13			
B1L5B1 rep1	8966	1.96	4574	17790	175756	0.026	2.60	2.74	0.191	7.0
B1L5B1 rep2	9254	1.98	4674	17402	162679	0.029	2.87			
B1L5B7 rep1	12199	1.94	6288	15880	144727	0.043	4.34	4.41	0.097	2.2
B1L5B7 rep2	12605	1.91	6599	15822	147243	0.045	4.48			
B1L5C4 rep1	6961	1.95	3570	17356	175064	0.020	2.04	1.87	0.244	13.1
B1L5C4 rep2	6613	1.96	3374	18716	199216	0.017	1.69			



Materials Data, Inc. [jsd44893|d3h027]<c:\Documents and Settings\d3h027\My Documents\Project Mangan\Brown\062207> Wednesday, Jun 06, 2007 01:53p (MDI\JADE8)

E-102			
B1L1L1	B1L1L1	54.94	54.94
A-4			
B1L4Y7	B1L4Y7	22-22.5	22.25
B1L500	B1L500	30.5-31	30.75
B1L504	B1L504	39.5-40	39.75
B1M5X1	B1M5X1	51	51
B1L512	B1L512	59-59.5	59.25
B1L517	B1L513	62.5	62.5
B1L519	B1L519	77-77.5	77.25
B1L524	B1L524	90-90.5	90.25
B1L528	B1L528	100	100
B1L531	B1L531	108.5	108.5
B1L531 Dup1	B1L531	108.5	108.5
B1L536	B1L536	119.5-120	119.75
B1L540	B1L540	130.5-131	130.75
B1L543	B1L543	137-137.5	137.25
B1L547	B1L547	147-147.5	147.25
B1L553	B1L553	162.5-163	162.75
B1L553 Dup2	B1L553	162.5-163	162.75
B1L557	B1L557	172-172.5	172.25
B1L562	B1L562	185-185.5	185.25
B1L568	B1L568	199.5-200	199.75
B1L570	B1L570	204.5-205	204.75
B1L577	B1L577	222-222.5	222.25
B1L582	B1L582	234.5-235	234.75
B1L587	B1L587	247-247.5	247.25
B1L592	B1L592	259.5-260	259.75
B1L596	B1L596	269.5-270	269.75
B1L5B1	B1L5B1	282.5-283	282.75
B1L5B1 Dup3	B1L5B1	282.5-283	282.75
B1L5B3	B1L5B3	287-287.5	287.25
B1L5B5	B1L5B5	292-292.5	292.25
B1L5B7	B1L5B7	297-297.5	297.25
B1L5C0	B1L5C0	304.5-305	304.75
B1L5C4	B1L5C4	314.5-315	314.75

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-002	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
E-102 Direct Push Grab Sample 54.94'	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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: Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE: Sample Stored but not relinquished on 10-27-06 at 15:30.

PRESERVATION			None	None									
TYPE OF CONTAINER			G/P	Moisture Resistant Cont.									
NO. OF CONTAINER(S)			1	1									
VOLUME			1L	200g									
SAMPLE ANALYSIS			SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216									
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L1L1	SOIL	10-27-06	1440	X	X								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
K Auldes / Hughes	10-30-06 11:00	A4 Cooler 10-30-06 / KOH	10-30-06 11:00
A4 Cooler	11-7-06 1600	RMA Fridge/Trailer	11-7-06 1600
RMA Fridge/Trailer	12-6-06 0850	Albuquerque/Wise	12-6-06 0850
Albuquerque/Wise	12-6-06 10:20	M. Valero / M. Valero	12-6-06 10:20

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; ~~Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129)~~ Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) ~~Strontium-89,90 - Total Sr (Total beta radiostrontium)~~ ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; ~~TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon)~~ pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

PMG 10/23/06

LABORATORY COPY

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

A-6003-618(01/06)

DEC. 8.2006 1:44PM HSRG 509 1 P.3

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor Hanford

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No; Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/325

LABORATORY COPY

CLIENT SAMPLE NO. (1st # in series) B1L1L1

WORK PACKAGE NO:

PROJECT NO:

VERIFIER: Michelle Valero (Signature)

DATE: 12/6/06

TIME: 10:20 am pm

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-121	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise/Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	AIR QUALITY: ☐	DATA TURNAROUND: 60 Days / 60 Days	
SAMPLING LOCATION: C5301, I-1 22'-22.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N ~~579-1~~ 504-1 11-13-06	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE: Tied to B1L4Y7 COC F06-059-003

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L4Y7	SOIL	11-28-06	13:10	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
K Hughes	11-28-06/14:30	A4 site fridge	11-28-06/14:30
Lanman	12-7-06 0930	CSR	12-7-06
A 4 Site frig	12-7-06 0930	Lanman	12-7-06 0930
Lanman	12-7-06 11:00	M. Valerio	12/7/06 11:00

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) Strontium-89,90 – Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-122	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-2 25.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N ~~5751~~ 504-1 11-13-06	COA 121623E510	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

SPECIAL HANDLING AND/OR STORAGE: Tied to COC F06-059-004

PRESERVATION	None	None			
TYPE OF CONTAINER	G/P	Moisture Resistant Cont			
NO. OF CONTAINER(S)	1	1			
VOLUME	1L	200g			
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;			

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L4Y8	SOIL	11-28-06	1340	V	✓						

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
KHUGHES	11-28-06 1430	A4 Sidefridge	11-28-06/1430
A4 Sidefrig	12-7-06 0930	Lanman	12-7-06 0930
Lanman	12-7-06 11:00	M. Valenta	12/7/06 11:00

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 (Total carbon) pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-123	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-3 27.5FT – 28FT	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-~~5731~~ 504-1	COA 121623ES10	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, SD=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE: Tied to COC F06-059-005

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216)										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L4Y9	SOIL	11-28-06	14:05	✓	✓								

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
BHCHES	11-28-06/1430	A4 Sitefridge	11-28-06/14:30
A4 Frig Site	12-7-06 0930	L.L. Lamman	12-7-06 0930
L.L. Lamman	12-7-06 11:00	M. Valuto	12/7/06 11:00

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

DEC. 7. 2006 8:27AM AGG UTIL NO. 307 P. 8

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-124	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
CS301, I-5 30.5-31 Ft	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N ~~575-1~~ 504-1 AFM 11-13-06	121623E510	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE: Tie to COC F06-059-006

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L500	SOIL	11-29-06	10:15	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
KHUGHES	11-29-06 / 1045	A4 Site Fridge	11-29-06 / 10:45
A4 Site Frig	12-7-06 0930	L Hanman	12-7-06 0930
L Hanman	12-7-06 11:00	M. Valero	12/7/06 11:00

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129) Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon)- TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

DEC. 7.2006 8:27PM AG&G D9T81 NO.507 P.7

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-125	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: C5301, 1-6 31.5-32 Ft	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: ~~HNF-N-575-1~~ 504-1 pg 11-13-06	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE: Tie to COC F06-059-007

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L501	SOIL	11-29-06	10:35	✓	✓								

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
K HUGHES [signature]	11-29-06 1045	A-4 Site Fridge #1	11-29-06 10:45
A 4 Site Frig	12-7-06 0930	L Harman [signature]	12-7-06 0930
L Harman [signature]	12-7-06 11:00	M. Valuta M. Valuta	12-7-06 11:00
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

DEC. 7. 2006 8:28PM AG&G DSTB1 NO. 587 P. 8

0000007

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-126	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	80	60 Days / 60 Days

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.	AIR QUALITY
C5301, I-7 34.5-35FT	216-A-4 and 200-E-102 Geochemical Modeling Parameters	F06-059	☐

ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT
	HNF-N-~~575-1~~ 504-1 11-29-06	121623ES10	GOVERNMENT VEHICLE

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
PNNL Building 325	N/A	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

SPECIAL HANDLING AND/OR STORAGE: Tie to COC F06-059-008

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1L602	SOIL	11-29-06	12 40	✓	✓	

CHAIN OF POSSESSION	SIGN/ PRINT NAMES
RELINQUISHED BY/REMOVED FROM — DATE/TIME	RECEIVED BY/STORED IN — DATE/TIME
B3 Hughes 11-29-06/1400	A4 Site fridge/11-29-06/1400
A4 Site Frig 12-7-06 0930	L Hanman 12-7-06 0930
L Hanman 12-7-06 11:00	M. Vasuma M. Vasuma 12/13/06 11:00

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6007-548(01/06)

DEC. 7.2006 8:28PM HUGHES 17181 NO.307 P.9

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-127	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION C5301, I-8 37.5-38 FT	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters		**SAF NO.** F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N ~~575-1~~ 509-1 pg 11-13-06	**COA** 121623ES10	**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

SPECIAL HANDLING AND/OR STORAGE
Tie to COC F06-059-009

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L503	SOIL	11-29-06	13:10	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R. Pfister / [illegible] 11-29-06	1400	A-4 SITE FRIG. 11-29-06	1400
A4 Site Frig 12-7-06	0930	L L Hamman / L L Hamman 12-7-06	0930
L L Hamman / L L Hamman 12-7-06		Cristina Tovar	12/7/06 [illegible]

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99) Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

A-6002-618(10/06)

DEC. 7.2006 8:29PM AG&G D9TB1 NO.507 P.10

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-129	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	80	60 Days / 60 Days

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.	AIR QUALITY
C5301, I-10 41.5-FT-42FT	216-A-4 and 200-E-102 Geochemical Modeling Parameters	F06-059	[ ]

ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT
	HNF-N-~~575-1~~ 504-1 11-17-06	121623ES10	GOVERNMENT VEHICLE

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
PNNL Building 325	N/A	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

SPECIAL HANDLING AND/OR STORAGE: Tie to COC F06-059-011

PRESERVATION	None	None			
TYPE OF CONTAINER	G/P	Moisture Resistant Cont			
NO. OF CONTAINER(S)	1	1			
VOLUME	1L	200g			
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;			

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L505	SOIL	11-27-06	1345	✓	✓						

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R. Pfister/ 11-29-06	1400	A4 SITE FRIG. 11-29-06	1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Site Frig 12-7-06	0930	L Harman 12-7-06	0930
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Harman 12-7-06		Cadrin Davis	12/7/06 11:40
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon) TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-130	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-12 44.5' → 45' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L506	SOIL	11-30-06	1820	✓	—

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R HOGAES/B Pfister	11-30-06/1430	A4 Side fridge	11-30-06/1430
A4 Side Frig	12-7-06 0930	L Hanman/L Hanman	12-7-06 0930
L Hanman/L Hanman	12-7-06	Opinion Form	12/7/06 11:40am

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) Strontium-89,90 -- Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

A-6003-618(01/06)

DEC. 7.2006 8:35PM AG&G D9TB1 NO.508 P.2

J0001300

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-131	PAGE 1 OF 1
COLLECTOR Pope/Hughes/Pfister/Wise	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80 / DATA TURNAROUND
SAMPLING LOCATION C5301, I-L3 47' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐ / 60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Coat
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L507	SOIL	11-30-06	1350	✓	✓

CHAIN OF POSSESSION	SIGN/ PRINT NAMES		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J.J. HUGHES	11-30-06/1400	A4 Site fridge	11-30-06/1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Frig site	12-7-06 09:30	L.L. Hanman	12-7-06 0930
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L.L. Hanman	12-7-06	Cherian Jeni	12/7/06 [illegible]
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/05)

DEC. 7.2006 8:35PM AG&G D9TB1 NO.5068 P.3

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-134	PAGE 1 OF 1
COLLECTOR Pope/Hughes/Pfister/Wise.	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80 / DATA TURNAROUND
SAMPLING LOCATION C5301, I-16 54½' – 55 bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐ / 60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cook	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1L510	SOIL	12-4-06	1040	✓	✓	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	12-4-06 1100	A-4 Refer	12-4-06 1100
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Refer	12-7-06 09.30	L Hanman	12-7-06 09.30
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Hanman	12-7-06	[illegible]	12/7/06 [illegible]
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr (Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

DEC. 7.2006 8:36PM AG&G D9TB1 NO.308 P.4

0001 02

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-135	PAGE 1 OF 1
COLLECTOR Pope/Hughes/Pfister/Wise	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80 / DATA TURNAROUND
SAMPLING LOCATION CS301, T-17 57'-57.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐ / 60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L511	SOIL	12-4-06	1240	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	12-4-06 1400	A-4 Ref	12-4-06 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Ref	12-7-06 0930	LLaarman [signature]	12-7-06 0930
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLaarman [signature]	12-7-06	Cmoran Sui	12/7/06 [illegible]
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) Strontium-89,90 -- Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

A-6003-618(01/06)

DEC. 7.2006 8:36PM AG&G D9181 NO.588 P.5

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-136	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	80	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY**	
C5301, I-18 59-59.5 bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059	☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None							
TYPE OF CONTAINER	G/P	Moisture Resistant Cont.							
NO. OF CONTAINER(S)	1	1							
VOLUME	1L	200g							
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;							

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L612	SOIL	12-4-06	1300	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	12-4-06 1400	A4 Ref	12-4-06 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Ref	12-7-06 0930	LLanman [signature]	12-7-06 0930
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman [signature]	12-7-06	[signature]	12/7/06 [illegible]
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier I) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

J0001C4

DEC. 7. 2006 8:37AM AGRG DYIBI NO.308 P.6

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-137	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	80	
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	60 Days / 60 Days
C5301, I-19 625' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L513	SOIL	12-4-06	1330	L	L

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	12-4-06 1400	A-4 Ref	12-4-06 1400
A-4 Ref	12-7-06 0930	[signature]	12-7-06 0930
[signature]	12-7-06	[signature]	12/7/06 11:00 am

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 {Tier 1} {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

DEC. 7.2006 8:37PM HNF-N LAB 1 NO. 308 P. 7

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-138	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Popa/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	8D	
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY**	
C5301, 1-20 65' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059	☐	60 Days / 60 Days
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L514	SOIL	12-4-06	1355	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	12-4-06 1400	A-4 Ref	12-4-06 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A-4 Ref	12-7-06 0930	[signature]	12-7-06 0930
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	12-7-06	[signature]	12/7/06 11:00am
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/05)

DEC. 7. 2006 8:37AM HNSG LSI/RI NO. 308 P. 8

000108

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor Hanford

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No; Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) BIL4Y7, BIL4Y8, BIL4Y9, BIL500, BIL501, BIL502, BIL503, BIL504, BIL505, BIL506, BIL507, BIL510, BIL511, BIL512, BIL513, BIL514

WORK PACKAGE NO: PROJECT NO:

VERIFIER: Michelle Valdez (Signature) DATE: 12/7/06 TIME: 11:00 am pm

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

LABORATORY COPY

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-239	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-4	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-~~575-4~~ 504-1 N/A 11-13-06	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		N/A		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: 2,737 g

SPECIAL HANDLING AND/OR STORAGE:

PRESERVATION	None											
TYPE OF CONTAINER	Split Spoon Liner											
NO. OF CONTAINER(S)	1											
VOLUME	1000g											
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS											

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1L5L3	SOIL	11-29-06	0930	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R. Pfister/[signature] 11-29-06	1045	A-4 SITE FRIG 11-29-06	1045
A4 SITE REF	12/11/6 1215	J. Wacker [signature]	12/11/6 1215
J. Wacker [signature]	12/11/06 1450	M. Valenta M. Valenta	12/11/06 1750
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

(1)Density; Particle Size (Hydrometer) - D422; Saturated Hydraulic Conductivity; Soil Cation Exchange Capacity - 9080; Generic Testing; SPECIAL STUDIES {No CAS}

LABORATORY COPY

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

A-6003-618(01/06)

DEC. 12. 2006 10:32AM HGRG LYIRI NO. 511 P. 3

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-240	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 60	DATA TURNAROUND
Pope/Hughes/Pfister/Wise Mokler	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	**60 Days / 60 Days**
C5301, I-11 43-45.5FT	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-~~375-1~~ 504-1 11-13-06	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE: Tie to COC F07-001-002

PRESERVATION	None
TYPE OF CONTAINER	Split Spoon Liner
NO. OF CONTAINER(S)	1
VOLUME	1000g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1L5L4	SOIL	11-30-06	12:30	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RJ Hughes	11-30-06/1400	A4 site field	11-30-06/1400
A4 site field	12/11/06 1210	J. Mokler	12/11/06-1210
J. Mokler	12/11/06 1450	M. Valenta	12/11/06 1456

SPECIAL INSTRUCTIONS

(1)Density; Particle Size (Hydrometer) - D422; Saturated Hydraulic Conductivity; Soil Cation Exchange Capacity - 9080; Generic Testing; SPECIAL STUDIES (No CAS)

LABORATORY COPY

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

A-6003-61B(01/06)

DEC.12.2006 10:33AM AG&G D9TB1 NO.511 P.4

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor Hanford

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C:	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes; If required: Present	No; Absent
If absent, list discrepancies by sample number/container identification: Seals present on sample B1L5L3 absent on B1L5L4		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:	B1L5L4	B1L5L3	

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) B1L5L3 + B1L5L4

WORK PACKAGE NO: PROJECT NO:

VERIFIER: Michelle Valero (Signature) DATE: 12/11/06 TIME: 2:50 am pm

LABORATORY COPY

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-132	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	**60 Days / 60 Days**
C5301, I-t4 50.0'-50.5' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L508	SOIL	11-30-06	1410	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
K Hughes	11-30-06/14:30	A4 Site fridge	11-30-06/14:30
A4 Site fridge	12-12-06 1300	Lhanman	12/12/06 1300
Lhanman	12/12/06 1505	M. Valenta	12/12/06 1505

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH {Soil} - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

J0011

DEC.13.2006 10:19AM AG&G D9TB1 NO.512 P.11

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-133	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-15 52'-52.5' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L609	SOIL	12-4-06	1020	✓	✓							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W M Wheelhouse	12-4-06 1100	A-4 Site Rep	12-4-06 1100
A4 Frig	12-12-06 1300	L Harman	12-12-06 1300
L Harman	12/12/06 1505	M. Valenta	12/12/06 1505

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6002-051(06/06)

DEC.13.2006 10:19AM AG&G D9TB1 NO.512 P.12

J00012

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-139	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION CS301, I-21 67 - 67½ bgs	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters		**SAF NO.** F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-1	**COA** 121623ES10	**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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L515	SOIL	12/5/06	1020	✓	✓							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	12-5-06 1050	A-4 Ref.	12-5-06 1050
[illegible]	12-12-06 A-4 Frig	L. Lanman	12/12/06 1300
L. Lanman	12/12/06 1505	M. Valenta	12/12/06 1505

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS (Uranium) Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

J0001 13

DEC.13.2006 10:15AM H&S 509/01 NO.316 P.13

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-140	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-22 69.5' - 70' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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; Dr.=Drum Liquids; DS=Drum Solids; L=Liquid; O=Oil; S=Soil; SE=Sediment; T=Tissue; V=Vegitation; W=Water; WI=Wipe; X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L516	SOIL	12-5-06	1035	✓	✓								

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	12-5-06 1050	A-4 Rcd	12-5-06 1050
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Frig	12-12-06 1300	[illegible]	12/12/06 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	12/12/06 1505	M. Valenta	12/12/06 1505
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

DEC.13.2006 10:20AM AG&G D9TB1 NO.512 P.14

J0001124

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-141	PAGE 1 OF 1
COLLECTOR: Pope/Hughes/Pfister/Wise / Larman	COMPANY CONTACT: TRENT, SJ — TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 80 — DATA TURNAROUND: 60 Days / 60 Days
SAMPLING LOCATION: C5301, I-23 72.5' - 73' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1 — COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L517	SOIL	12/5/06	1240	✓	✓							

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLarman SLarman	12-5-06 1430	A4 Ref	12-5-06 1430
A4 Frig	12-12-06 1300	LLarman SLarman	12/12/06 1300
LLarman SLarman	12/12/06 1505	M. Valenta M. Valenta	12/12/06 1505

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 (Total organic carbon} TC - 415.1 (Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-142	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION C5301, I-24 74.5' – 75 bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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 80 | AIR QUALITY ☐ | DATA TURNAROUND 60 Days / 60 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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L51B	SOIL	12-5-06	1300	✓	✓							

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman LLanman	12-5-06 1430	A4 Ref	12-5-06 1430
A4 Frig	12/12/06 1300	LLanman LLanman	12/12/06 1300
LLanman LLanman	12/12/06 1505	U. Valenza M. Valenza	12/12/06 1505

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

DEC.13.2006 10:21AM AG&G D9TB1 NO.512 P.1b

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-143	PAGE 1 OF 1
COLLECTOR: Pope/Hughes/Pfister/Wise /Lanman	COMPANY CONTACT: TRENT, SJ — TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 80 — DATA TURNAROUND: 60 Days / 60 Days
SAMPLING LOCATION: C5301, I-25 77-77.5 bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1 — COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cork										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L519	SOIL	12-5-06	1315	✓	✓								

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: LLanman & Llanman	DATE/TIME: 12-5-06 1430	RECEIVED BY/STORED IN: A 4 Ref	DATE/TIME: 12-5-06 1430
RELINQUISHED BY/REMOVED FROM: A4 Frig	DATE/TIME: 12-12-06 1300	RECEIVED BY/STORED IN: LLanman & Llanman	DATE/TIME: 12-12-06 1300
RELINQUISHED BY/REMOVED FROM: LLanman & Llanman	DATE/TIME: 12/12/06 1505	RECEIVED BY/STORED IN: M. Valerio M. Valerio	DATE/TIME: 12/12/06 1505
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

DEC.13.2006 10:21AM AG&G DYIB1 NO.512 P.17

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-144	PAGE 1 OF 1
COLLECTOR: Pope/Hughes/Pfister/Wise Hanman	COMPANY CONTACT: TRENT, SJ — TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 80 — DATA TURNAROUND: 60 Days / 60 Days
SAMPLING LOCATION: C5301, I-26 80.5' – 81' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1 — COA: 121623E510	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, Wt=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216)										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L520	SOIL	12-5-06	1350	✓	✓								

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Hanman	12/5/06 1430	A.4 Rd	12-5-06 1430
A4 Frig	12-12-06 1300	Hanman	12/12/06 1300
Hanman	12/12/06 1505	M. Valuio	12/12/06 1505

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon) pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

DEC.13.2006 10:21AM HS&Q DYIRI NO.316 P.18

00011

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-145	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise /Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION C5301, I-27 825' - 83' bgs	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters		**SAF NO.** F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-1	**COA** 121623ES10	**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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - 02216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1L521	SOIL	12-5-06	1415	✓	✓	

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman	12-5-06 1430	A4 Ref	12-5-06 1430
A4 Frig	12-12-06 1300	LLanman	12-12-06 1310
LLanman	12/12/06 1505	M. Valuto	12/12/06 1505

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

DEC.13.2006 10:22PM AG&G DYIEI NO.512 P.19

JU0113

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-146	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION C5301, I-28 85- 85.5 bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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 80 | AIR QUALITY ☐ | DATA TURNAROUND 60 Days / 60 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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L522	SOIL	12-5-06	1425	✓	✓								

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman	12-5-06 1430	A4 Ref	12-5-06 1430
A4 Frig	12-12-06 1300	LLanman	12-12-06 1300
LLanman	12-12-06 1505	M. Valenta M. Valero	12/12/06 1505

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

DEC.13.2006 10:22AM HSRC DATA 7.02

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-149	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, J-31 92.5 bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623E510	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L525	SOIL	12-7-06	1400	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman LLanman	12-7-06 1500	A4 Frig	12-7-06 1500
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Frig	12-12-06 1300	LLanman LLanman	12-12-06 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman LLanman	12/12/06 1505	M. Valenta M. Valenta	12/12/06 1509
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-418(01/06)

DEC.13.2006 10:22AM HS&G DYIRI NO.316 P.21

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-150	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise/Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-32 94.5-95.	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1L526	SOIL	12-7-06	1420	✓	✓	

CHAIN OF POSSESSION	SIGN/ PRINT NAMES		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman	12-7-06 1500	A4 Frig	12-7-06 1500
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Frig	12-12-06 1300	Lanman	12/12/06 1310
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman	12/12/06 1505	M. Valenta	12/12/06 1505
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6083-616(01/06)

DEC. 13. 2006 10:23AM HS&G DPIBI NO. 316 P. 22

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-151	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION C5301, I-33 97-97.5 bgs	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters		**SAF NO.** F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-1	**COA** 121623ES10	**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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L527	SOIL	12-7-06	1430	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman	12-7-06 1500	A4 Frig	12-7-06 1500
A4 Frig	12/12/06 1300	Lanman	12/12/06 1300
Lanman	12/12/06 1505	M. Valenta / M. Valles	12/12/06 1505

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY NOTES

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

DEC.13.2006 10:25AM HS&G 17181

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-152	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-34 100 bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Coat	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L528	SOIL	12-7-06	~~1440~~ 1445 ✓	✓								
			~~SAE~~ 12-7-06									

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman/SLanman	12-7-06 1500	A4 Frig	12-7-06 1500
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Frig	12/12/06 1300	LLanman/SLanman	12/12/06 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman/SLanman	12/12/06 1505	M. Valenta M. Valenta	12/12/06 1505
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

{1}Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6002-615(04/06)

DEC.13.2006 10:23AM AG&G DYIAL NO.316 P.04

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-153	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise/Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION: C5301, I-35 102.5 - 103' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059		
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216)		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L629	SOIL	12-7-06	1505	✓	✓							

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman	12-7-06 1515	A 4 Frig	12-7-06 1515
A4 Frig	12/12/06 1300	LLanman	12/12/06 1300
LLanman	12/12/06 1505	N. Valenta	12/12/06 1505

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) Strontium-89,90 -- Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

DEC. 15. 2006 10:24AM HSRG LAB NO. 312 P. 2

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-L54	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise/Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-36 104.5' – 105' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cook
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L530	SOIL	12-7-06	1520	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman LLanman	12-7-06 1530	A-4 Frig	12-7-06 1530
A-4 Frig	12-12-06 1300	LLanman LLanman	12/12/06 1300
LLanman LLanman	12/12/06 1505	M. Valenta M. Valenta	12/12/06 1505

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

DEC.13.2006 10:24AM HS&G DYIBI NO.512 P.20

00010

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor Hanford

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No; Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) BIL508, BIL509, BIL515, BIL516, BIL517, BIL518, BIL519, BIL520, BIL521, BIL522, BIL525, BIL526, BIL527, BIL528, BIL529, BIL530

WORK PACKAGE NO: PROJECT NO:

VERIFIER: Michelle Valuo (Signature) DATE: 12/12/06 TIME: 8:05 am pm

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

LABORATORY COPY

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-155	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	AIR QUALITY: ☐	DATA TURNAROUND: 60 Days / 60 Days	
SAMPLING LOCATION: C5301, I-37 108.5 bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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, Wt=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L531	SOIL	12-11-06	0925	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman	12-11-06 0945	A-4 Frig	12-11-06 1045
A-4 Frig	12-15-06 0930	Wise W.M. Wise	12-15-06 0930
Wise W.M. Wise	12-15-06 11:15	M. Valuta M. Valuta	12/15/06 1115

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

DEC.15.2006 5:56PM AG&G D9TB1 NO.514 P.2

00012

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-156	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	AIR QUALITY: ☐	DATA TURNAROUND: 60 Days / 60 Days	
SAMPLING LOCATION: C5301, I-38 110 bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) ON SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1L632	SOIL	12-11-06	0950	✓	✓	

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman	12-11-06 1045	A-4 Frig	12-11-06 1045
A-4 Rf	12-15-06 0930	W.M. Wise	12-15-06 0930
W.M. Wise	12-15-06 11:15	M. Valuta	12/15/06 1115

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY; Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6007-818(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-157	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise /Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION C5301, I-39 112' - 112.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059		
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	CDA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L533	SOIL	12-11-06	1005	✓	✓								

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Lanman J Lanman	12-11-06 1040	A 4 Frig	12-11-06 1045
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Ref	12-15-06 0930	Wise W.M. Wise	12-15-06 0930
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise W.M. Wise	12-15-06 11:15	M. Valenta M. Valenta	12/15/06 11:15
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon} TOC - 415.1 {Total organic carbon) TC - 415.1 {Total carbon} pH (Soil) - 9045 (pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

A-6101-018(01/05)

DEC.15.2006 5:57PM AG&G D9T81 NO.514 P.4

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-158	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION/ C5301, I-40 115' - 115.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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 80 | AIR QUALITY ☐ | DATA TURNAROUND 60 Days / 60 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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L534	SOIL	12-11-06	1020	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L L Lanman / B Lanman	12-11-06 1045	A A Fritz	12-11-06 1045
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A A Fritz	12-15-06 0930	W.M. Wise	12-15-06 0930
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W.M. Wise	12-15-06 11:15	M. Valuna / M. Valuna	12/15/06 11:15
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6000-618(01/05)

DEC.15.2006 5:57PM AG&G D9T81 NO.514 P.5

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-159	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	**60 Days / 60 Days**
C5301, I-41 117.5' – 118' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216e

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L635	SOIL	12-11-06	1045	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman	12-11-06 1100	A4 Frig	12-11-06 1100
A4 Rfer	12-15-06 0930	Wise W.M. Wise	12-15-06 0930
W.M. Wise	12-15-06 11:15	M. Valuto M. Valuto	12/15/06 11:15

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY SECTION

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

DEC.15.2006 5:57PM AG&G D9TB1 NO.514 P.6

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-160	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION C5301, I-42 119.5'- 120' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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 80 | AIR QUALITY ☐ | DATA TURNAROUND 60 Days / 60 Days

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

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L536	SOIL	12-11-06	1300	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM L.L. Lanman	DATE/TIME 12-11-06 1450	RECEIVED BY/STORED IN A.4 Frig	DATE/TIME 12-11-06 1450
RELINQUISHED BY/REMOVED FROM A.4 Frig	DATE/TIME 12-15-06 0930	RECEIVED BY/STORED IN [illegible]	DATE/TIME 12-15-06 0930
RELINQUISHED BY/REMOVED FROM W.M. Wise	DATE/TIME 12-15-06 11:15	RECEIVED BY/STORED IN M. Valuto	DATE/TIME 12/15/06 11:15
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

A-6003-618(04/06)

DEC.15.2006 5:58PM AG&G D9TB1 NO.514 P.7

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-161	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise/Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
PRICE CODE 80	DATA TURNAROUND 60 Days / 60 Days	AIR QUALITY ☐	
SAMPLING LOCATION C5301, I-43 121.5 - 122' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Paramaters	SAF NO. F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1L637	SOIL	12-11-06	1320

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman	12-11-06 1450	A 4 Fridge	12-11-06 1458
A4 Ref	12-15-06 0930	W.M. Wise	12-15-06 0930
W.M. Wise	12-15-06 11:15	M. Valencia	12/15/06 11:15

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6001-618(01/05)

DEC. 15. 2006 5:58PM AG&G D9TB1 NO. 514 P. 8

0001 of 4

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-162	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Larman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION C5301, I-45 124.5'-125' bgs	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters		**SAF NO.** F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-1	**COA** 121623ES10	**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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None			
TYPE OF CONTAINER	G/P	Moisture Resistant Cont			
NO. OF CONTAINER(S)	1	1			
VOLUME	1L	200g			
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216			

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L538	SOIL	12-11-06	1435	✓	✓							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Larman	12-11-06 1450	A4 Frig	12-11-06 1450
A4 Ref	12-15-06 0900	W.M. Wise	12-15-06 0930
W.M. Wise	12-15-06 11:15	M. Valuite	12/15/06 1115

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

DEC.15.2006 5:59PM AG&G D9T81 NO.514 P.10

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-163	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pilster/Wise/Lamman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION C5301, I-46 127'-127.5 bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES30	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 80 — DATA TURNAROUND: 60 Days / 60 Days — AIR QUALITY ☐

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L539	SOIL	12-11-06	1500	✓	✓								

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lamman	12-11-06 1530	A4 Frig	12-11-06 1530
A4 Ref	12-15-06 0930	White W.M. Wise	12-15-06 0930
W.M. Wise	12-15-06 1115	M. Valencia	12/15/06 1115

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon) pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY USE ONLY

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

A-6003-610(01/06)

DEC.15.2006 5:59PM AG&G D9TB1 NO.514 P.11

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-164	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: C5301, I-47 130.5' – 131' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623FS10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cork										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L540	SOIL	12-11-06	1515	✓	✓								

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman	12-11-06 1530	A 4 Frig	12-11-06 1530
A 4 Frig	12-15-06 0930	W.M. Wise	12-15-06 0930
W.M. Wise	12-15-06 11:15	M. Vakuno M. Vakuno	12/15/06 11:15

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) Strontium-89,90 -- Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

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

A-6003-618(01/06)

DEC.15.2006 5:59PM AG&G D9TB1 NO.514 P.12

00012

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-241	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise/Larman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: ☐	SAMPLING LOCATION: C5301, I-44 122' – 124' bgs
PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1
COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None
TYPE OF CONTAINER	Split Spoon Liner
NO. OF CONTAINER(S)	1
VOLUME	1000g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1L6L6	SOIL	12-11-06	1350	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Larman	12-11-06 1450	A4 Frig	12-11-06 1450
A4 Ref	12-15-06 0900	W.M. Wise	12-15-06 0900
W.M. Wise	12/15/06 11:15	M. Valuta	12/15/06 1115

SPECIAL INSTRUCTIONS

(1)Density; Particle Size (Hydrometer) - D422; Saturated Hydraulic Conductivity; Soil Cation Exchange Capacity - 9080; Generic Testing; SPECIAL STUDIES (No CAS)

LABORATORY COPY

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

A-6007-618(01/06)

DEC.15.2006 5:58PM AG&G D9TB1 NO.514 P.9 J0001 of 8

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor Hanford

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes	No;
	If required: Present	Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) BIL531, 5 BIL532, BIL533, BIL534, BIL535, BIL536, BIL537, BIL515, BIL538, BIL539, BIL540

WORK PACKAGE NO: PROJECT NO:

VERIFIER: Michelle Valuo (Signature) DATE: 12/15/06 TIME: 11:15 am pm

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

LABORATORY COPY

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-165	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	60 Days / 60 Days
C5301, I-48 132.5'-133' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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, W/I=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L541	SOIL	12-13-06	0745	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman	12-13-06 0900	A 4 Frig	12/13/06 0900
A4 Frig	12-18-06 1100	L Lanman	12-18-06 1100
L Lanman	12-18-06 1125	M. Valenta M. Valenta	12/18/06 1125

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr (Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

DEC. 19. 2006 6:31PM HS&G DYIBI NO. 516 P. 3

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-166	PAGE 1 OF 1
COLLECTOR: Pope/Hughes/Plister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 80 / DATA TURNAROUND: 60 Days / 60 Days
SAMPLING LOCATION: C5301, I-49 135' – 135.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO.: F06-059	AIR QUALITY: ☐
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L542	SOIL	12-13-06	0810	✓	✓							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman	12-13-06 0900	A 4 Frig	12/13/06 0900
A4 Frig	12-18-06 11:00	L Lanman	12-18-06 1100
L Lanman	12-18-06 1125	M. Valenta	12/18/06 1125

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS (Iodine-129} Tc-99 by ICPMS (Technetium-99} Uranium by ICPMS (Uranium} Strontium-89,90 -- Total Sr (Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon} TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon} pH (Soil) - 9045 (pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance}

LABORATORY COPY

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

DEC.13.2006 0:37PM HNF-N-575-1 NO.318 P.4

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-167	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise/Lanman/Lulu	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-50 137-137.5 bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. FINF-N-575-1	COA 121623PS10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L643	SOIL	12-13-06	~~0805~~	✓	✓							
			0825 12-13-06									

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
L Lanman 12-13-06 0900	A 4 Frig	12-13-06 0900
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
A4 Rec. 12/18/6 - 1100	J. Mulu	12/18/6 - 1100
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
J. Mulu 12/18/06 1125	M. Valenta M. Valenta	12/18/06 1125
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

DEC.19.2006 6:41PM HSRC JPIRI NO.316 P.3

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-168	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise /Lanman/McWh	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-51 140.5 -141 bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623E510	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L544	SOIL	12-13-06	0850	✓	✓							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman	12-13-06 0900	A-4 Frig	12-13-06 0900
A4 Frig	12/18/6 12/18/6 1100	JMcWhirter	12/18/6 1100
JMcWhirter	12/18/06 1125	M. Valvo	12/18/06 1125

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

DEC.19.2006 6:32PM AG&G DYIAL NO.316 P.6

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-169	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise/Lanman/McWh	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-52 142' - 142.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	CDA 121623ES10	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, W1=Wipe, X=Other

FOSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L545	SOIL	12-13-06	0900	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman	12-13-06 0915	A4 Frig	12-13-06 0915
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 FRIG	12/18/6 1100	J McWh	12/18/6 1100
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J McWh	12/18/06 11:25	M. Valenza M. Valenza	12/18/06 11:25
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

DEC.13.2006 9:52AM HSRG 509 NO.918 P.1

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor Hanford

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C:	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No; Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) BIL541, BIL542, BIL543, BIL544, BIL545

WORK PACKAGE NO: PROJECT NO:

VERIFIER: Michelle Valero (Signature) DATE: 12/18/06 TIME: 11:25 am pm

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

LABORATORY COPY

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-147	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION C5304, I-29 88' – 88.5 bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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 80 | AIR QUALITY ☐ | DATA TURNAROUND 60 Days / 60 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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L623	SOIL	12-7-06	1230	✓	✓								

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise Wise	12-7-06 1245	A.4 Ref	12-7-06 1245
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Ref	12-21-06 1410	W.M. Wise	12-21-06 1410
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W.M. Wise	12-21-06 1510	M. Valenta M. Valenta	12/21/06 1510
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/05)

DEC.22.2006 5:04PM AGAG DYIBI NO.320 P.3

0001470

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-148	PAGE 1 OF 1
COLLECTOR Pope/Hughes/Pfister/Wise	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80 AIR QUALITY ☐	DATA TURNAROUND 60 Days / 60 Days
SAMPLING LOCATION C5301, I-30 90' — 890.5bgs 12-7-06	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059		
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	CDA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont.		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L524	SOIL	12-7-06	1235	✓	✓							

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wm Wise, 12-7-06	1245	A-4 Ref 12-7-06	1245
A-4 Ref 12-21-06	1410	Wm Wise 12-21-06	1410
W.M. Wise 12-21-06	1510	M. Valenta M. Valenta	12/21/06 1510

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-518(01/06)

DEC.22.2006 5:04PM AG&G D9TB1 NO.520 P.4

00014

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-170	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise/Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-53 145.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO. 1	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L546	SOIL	12-13-06	0925	✓	✓							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L L Lanman	12-13-06 0950	A 4 Frig	12-13-06 0950
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
AH Ref	12-21-06 1410	WMWise/Wise	12-21-06 1410
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W. M. Wise Wise	12-21-06 1510	M. Vaunta M. Vaunta	12/21/06 1510
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

DEC.22.2006 5:04PM AG&G D9TB1 NO.520 P.5

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-171	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
SAMPLING LOCATION: C5301, T-54 147'-147.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO.: F06-059
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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: 80 — DATA TURNAROUND: 60 Days / 60 Days — AIR QUALITY: ☐

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L547	SOIL	12-13-06	0945	✓	✓							

CHAIN OF POSSESSION	DATE/TIME	SIGN/ PRINT NAMES: RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM: KLLanman	12-13-06 0950	A 4 Frig	12-13-06 0950
RELINQUISHED BY/REMOVED FROM: A4 Ref	12-21-06 1410	W.M. Wise	12-21-06 1410
RELINQUISHED BY/REMOVED FROM: W. M. Wise	12-21-06 1510	M. Valenta	12/21/06 1510
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity {1}; IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

DEC.22.2006 3:05PM HG&G DYIEL NO.320 P.8

0001419

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor Hanford

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No; Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) B1L523, B1L524, B1L546, B1L547

WORK PACKAGE NO: PROJECT NO:

VERIFIER: Michelle Valero (Signature) DATE: 12/21/06 TIME: 3:10 am pm

LABORATORY COPY

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-172	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	AIR QUALITY: ☐	DATA TURNAROUND: 60 Days / 60 Days	
SAMPLING LOCATION: CS301, I-55 149.5'-150' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L548	SOIL	12-14-06	0810	✓	✓						

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible] Wise	12-14-06 1500	A-4 Ref	12-14-06 1500
A-4 Ref	1-8-07 1050	W.M. Wise [illegible]	1-8-07 1050
W.M. Wise [illegible]	1-8-07 11:30	MJ Lindberg [illegible]	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

00051

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-173	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY [ ]	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-56 152' - 152.5' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L549	SOIL	12-14-06	0835	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Willie Wise	12-14-06 1500	A4 Ref	12-14-06 1500
A4 Ref	1-8-07 1050	W.M. Wise	1-8-07 1050
W.M. Wise	1-8-07 11:30	MJ Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-174	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8O	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.
C5301, I-57 154'-154.5' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters	F06-059

ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
PNNL Building 325	N/A	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L550	SOIL	12-14-06	0850	✓	✓						

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wile Wise 12-14-06	1500	A-4 Ref 12-14-06	1500
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A-4 Ref 1-8-07	1050	W. M. Wise 1-8-07	1050
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W. M. Wise 1-8-07	11:30	MJ Lindberg 1/8/07	11:30
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

00013

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-175	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY [ ]	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-58	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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: 157.5' - 158' bgs

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L551	SOIL	12-14-06	0915		0915							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise Wise 12-14-06	1500	A-4 Ref 12-14-06	1500
A-4 Ref 1-8-07	1050	W. M. Wise Wise 1-8-07	1050
W. M. Wise Wise 1-8-07	11:30	MJ Lindberg MJL 1/8/07	11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

0001134

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-176	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	60 Days / 60 Days
C5301, I-59 160'-160.5' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L552	SOIL	12-14-06	1150	←	←							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Will Wise	12-14-06 1500	A4 Ref	12-14-06 1500
A4 Ref	1-8-07 1050	W. M. Wise	1-8-07 1050
W. M. Wise	1-8-07 11:30	MT Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

00013

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-177	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days

SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.
C5301, I-60 162.5'-163' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters	F06-059

ICE CHEST NO.	FIELD LOGBOOK NO.	COA	METHOD OF SHIPMENT
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE

SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.
PNNL Building 325	N/A	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1L553	SOIL	12/14/6	1220

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wade Wise	12-14-06 1500	A4 Ref	12-14-06 1500
A4 Ref	1-8-07 1050	W.M. Wise / Wade	1-8-07 1050
W.M. Wise / Wade	1-8-07 11:30	MJ Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-178	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-61 164.5' 145'	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L554	SOIL	12/14/6	1250								

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	12-14-6 1500	At Ref	12-14-06 1500
At Ref	1-8-07 1050	W. M. Wise [signature]	1-8-07 1050
W. M. Wise [signature]	1-8-07 11:30	M.T. Lindberg [signature]	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-179 | PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
SAMPLING LOCATION: C5301, I-62 167'-167.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO.: F06-059
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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: 80 | AIR QUALITY: ☐ | DATA TURNAROUND: 60 Days / 60 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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L555	SOIL	12-14-06	1310	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W. M. Wise	12-14-06 1500	A4 Ref	12-14-06 1500
A4 Ref	1-8-07 1050	W. M. Wise	1-8-07 1050
W. M. Wise	1-8-07 11:30	MT Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-180 | PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
SAMPLING LOCATION: C5301, I-63 169.5'-170' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO.: F06-059
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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: 80 | AIR QUALITY: [ ] | DATA TURNAROUND: 60 Days / 60 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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L556	SOIL	12-14-06	1330	✓	✓							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
White Wise 12-14-06	1500	A4 Ref 12-4-06	12-14-06
A4 Ref 1-8-07	1050	W. M. Wise White 1-8-07	1050
W. M. Wise White 1-8-07	11:30	MJ Lindberg MJL AA 1/8/07	11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-181

COLLECTOR: Pope/Hughes/Pfister/Wise	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	DATA TURNAROUND: 60 Days / 60 Days		
SAMPLING LOCATION: C5301, I-64 172-172.5 bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	AIR QUALITY: [ ]
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216:	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L557	SOIL	12-14-06	1400	✓	✓						

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	12-14-06 1500	A4 Ref [signature]	12-14-06 1500
A4 Ref [signature]	1-8-07 1050	W. M. Wise [signature]	1-8-07 1050
W. M. Wise [signature]	1-8-07 11:30	MJ Lindberg [signature]	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

000169

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-182 | PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: C5301, I-65 175'-175.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L558	SOIL	12-14-06	1415	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise Wise	12-14-06 1500	A4 Ref	12-14-06 1500
A4 Ref	1-8-07 1050	W. M. Wise	1-8-07 1050
W. M. Wise	1-8-07 11:30	MJ Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

10100C

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-183	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION C5301, I-66 177'-177.5' bgs	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters		**SAF NO.** F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-1	**COA** 121623ES10	**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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1L559	SOIL	12-14-06	1440	✓	✓	

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wade Wise	12-14-06 1500	AY Ref	12-14-06 1500
AY Ref	1-8-07 1050	W. M. Wise	1-8-07 1050
W. M. Wise	1-8-07 11:30	MJ Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

000102

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-184	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** TRENT, SJ
SAMPLING LOCATION CS301, I-67 179.5'-180' bgs	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters		**SAF NO.** F06-059
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-1	**COA** 121623ES10	**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 80 **DATA TURNAROUND** 60 Days / 60 Days

AIR QUALITY ☐

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

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L560	SOIL	12-14-06	1500	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise Wise	12-14-06 1500	A4 Ref	12-14-06 1500
A4 Ref	1-8-07 1050	W.M. Wise Wise	1-8-07 1050
W.M. Wise Wise	1-8-07 11:30	MJ Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

JUU103

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-185	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-68 182'-182.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None								
TYPE OF CONTAINER	G/P	Moisture Resistant Cont								
NO. OF CONTAINER(S)	1	1								
VOLUME	1L	200g								
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;								

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1L561	SOIL	12/14/6	1515

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise Wise	12-14-06 1500	A4 Ref	12-14-06 1500
A4 Ref	1-8-07 1050	W.M. Wise	1-8-07 1050
W.M. Wise	1-8-07 11:30	MJ Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

0001044

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-187	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, t-70 187' - 187.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY [ ]	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - 02216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L563	SOIL	12-18-06	1420	✓	✓							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman	12-18-06 1445	A4 Frig	12-18-06 1445
A4 Frig	1-8-07 1050	W. M. Wise	1-8-07 1050
W.M. Wise	1-8-07 11:30	MS Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-188

COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
SAMPLING LOCATION: C5301, I-71 189.5' – 190' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO.: F06-059
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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: 80

AIR QUALITY: ☐

DATA TURNAROUND: 60 Days / 60 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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L564	SOIL	12-18-06	1435	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman	12/18/06 1445	A 4 Frig	12-18-06 1445
H4 Ref	1-8-07 1050	W.M. Wise	1-8-07 1050
W.M. Wise	1-8-07 11:30	MJ Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

00100

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-189	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise / Hanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 8O	AIR QUALITY: ☐	DATA TURNAROUND: 60 Days / 60 Days	
SAMPLING LOCATION: C5301, I-72 192' — 192.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L565	SOIL	12-18-06	1450	✓	✓						

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
HHanman	12-18-06 1530	A4 Frig	12-18-06 1530
A4 Ref	1-8-07 1050	W. M. Wise	1-8-07 1050
W. M. Wise	1-8-07 11:30	MSLindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-190	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise /Lanman	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	60 Days / 60 Days
C5301, I-73 194' — 194.5 bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L566	SOIL	12-18-06	1520	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman LLanman	12-18-06 1530	A4 Frig	12-18-06 1530
A4 Rep	1-8-07 1050	W.M. Wise	1-8-07 1050
W.M. Wise	1-8-07 11:30	MJ Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-191

COLLECTOR: Pope/Hughes/Pfister/Wise/Larman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
SAMPLING LOCATION: C5301, I-74 197' – 197.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO.: F06-059
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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: 8O

AIR QUALITY: ☐

DATA TURNAROUND: 60 Days / 60 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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L567	SOIL	12-19-06	0820	✓	✓						

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larman	12-19-06 0945	A4 Frig	12-19-06 0945
A4 Ref	1-8-07 1050	W. M. Wise	1-8-07 1050
W. M. Wise	1-8-07 11:30	MS Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-192	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	60 Days / 60 Days
C5301, I-75 199.5' – 200' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
FNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L568	SOIL	12-19-06	0905	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman / L Lanman	12-19-06 0945	A H Fig	12-19-06 0945
A H Fig	1-8-07 1050	W. M. Wise	1-8-07 1050
W. M. Wise	1-8-07 11:30	MJ Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-193

COLLECTOR: Pope/Hughes/Pfister/Wise Kanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 8O	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: [ ]	
SAMPLING LOCATION: C5301, I-76 202 — 202.5 bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L569	SOIL	12-19-06	0930	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Kanman	12-19-06 0945	A H Frig	12-19-06 0945
H4Ref	1-8-07 1050	W. M. Wise	1-8-07 1050
W. M. Wise	1-8-07 11:30	MTLindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-194	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: [ ]	
SAMPLING LOCATION: C5301, I-77 204.5'-205' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L570	SOIL	12-19-06	1000	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: W. M. Wise	DATE/TIME: 12-19-06 1000	RECEIVED BY/STORED IN: A4 Ref	DATE/TIME: 12-19-06 1000
RELINQUISHED BY/REMOVED FROM: A4 Ref	DATE/TIME: 1-8-07 0850	RECEIVED BY/STORED IN: W. M. Wise	DATE/TIME: 1-8-07 0850
RELINQUISHED BY/REMOVED FROM: W. M. Wise	DATE/TIME: 1-8-07 11:30	RECEIVED BY/STORED IN: MSLindsey	DATE/TIME: 1/8/07 11:30
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

0001.2

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-195

COLLECTOR: Pope/Hughes/Pfister/Wise (Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: BO	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: [ ]	
SAMPLING LOCATION: C5301, I-78 207 - 207.6' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L571	SOIL	12-19-06	1020	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman / Gamma	12-19-06 1100	A4 Frig	12-19-06 1100
A4 Ref	1-8-07 1050	W. M. Wise	1-8-07 1050
W. M. Wise	1-8-07 11:30	MS Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

00013

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-196	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	AIR QUALITY: [ ]	DATA TURNAROUND: 60 Days / 60 Days	
SAMPLING LOCATION: C5301, I-79 209.5 – 210' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L572	SOIL	12-19-06	1050	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman / Lanman	12-19-06 1050	A 4 Frig	12-19-06 1100
A4 Ref	1-8-07 1050	W. M. Wise / Wise	1-8-07 1050
W. M. Wise / Wise	1-8-07 11:30	Michael Lindberg	1/8/07 11:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

00001.4

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No; Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) BIL548, BIL549, BIL550, BIL551, BIL552, BIL553, BIL554, BIL555, BIL556, BIL557, BIL558, BIL559, BIL560, BIL561

WORK PACKAGE NO: F96068 PROJECT NO:

VERIFIER: Michelle Valleo (Signature) DATE: 1/8/07 TIME: 12:00 am pm

Sample No. continued: BIL563, BIL564, BIL565, BIL566, BIL567, BIL568, BIL569, BIL570, BIL571, & MMV BIL572

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

LABORATORY COPY

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-186	PAGE 1 OF 1
COLLECTOR Pope/Hughes/Pfister/Wise Lanmon Mokler	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80
SAMPLING LOCATION C5301, I-69 185' – 185.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	DATA TURNAROUND 60 Days / 60 Days
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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None			
TYPE OF CONTAINER	G/P	Moisture Resistant Cont			
NO. OF CONTAINER(S)	1	1			
VOLUME	1L	200g			
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;			

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L562	SOIL	12-18-06	0910	✓	✓						

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanmon Mokler	12-18-06 1040	A4 Frig	12-18-06 1040
A4 Frig	1-9-07 0700	W.M. Wise	1-9-07 0700
W.M. Wise	1-9-07 0855	M. Valenta	1/9/07 0855

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-610(01/06)

0010010

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No; Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) BIL562

WORK PACKAGE NO: F96068 PROJECT NO:

VERIFIER: Michelle Valero (Signature) DATE: 1/9/07 TIME: 8:55 am pm

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-197	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Kanman	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** TRENT, SJ
PRICE CODE 8O	**DATA TURNAROUND** 60 Days / 60 Days	**AIR QUALITY** ☐	
SAMPLING LOCATION C5301, I-80 212' - 212.5' bgs	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters	**SAF NO.** F06-059	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-1	**COA** 121623ES10	**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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L573	SOIL	12-19-06	1255	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Hanman	12-19-06 1345	A4 Frig	12-19-06 1345
A4 Frig	1-9-07 0945	Hanman	1-9-07 0945
Hanman	1-9-07 1030	M. Valencia	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-198	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-81 214.5' – 215' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L574	SOIL	12/19/06	1330	✓	✓						

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman	12/19/06 1345	A-4 Frig	12-19-06 1335
A-4 Frig	1-9-07 0945	Lanman	1-9-07 0945
Lanman	1-9-07 1030	M. Valenta	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-199	PAGE 1 OF 1
COLLECTOR Pope/Hughes/Pfister/Wise Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8O AIR QUALITY ☐
SAMPLING LOCATION C5301, I-82 217' - 217.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	DATA TURNAROUND 60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L575	SOIL	12-19-06	1345	✓	✓						

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman	12-19-06 1430	A 4 Frig	12-19-06 1430
A4 Frig	1-9-07 0945	LLanman	1-9-07 0945
LLanman	1-9-07 1030	M. Vakira	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-200 | PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: BO	AIR QUALITY: ☐	DATA TURNAROUND: 60 Days / 60 Days	
SAMPLING LOCATION: C5301, I-83 219.5' – 220' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L576	SOIL	12-19-06	1405	✓	✓							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman LLanman	12-19-06 1430	A4 Frig	12-19-06 1430
A4 Frig	1-9-07 0945	LLanman LLanman	1-9-07 0945
LLanman LLanman	1-9-07 1030	M. Valenta M. Valenta	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-201	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-84 222'-222.5' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L577	SOIL	12-19-06	1445	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	12-19-06 1450	A4 Ref	12-19-06 1450
A4 Frig	1-9-07 0945	[illegible]	1-9-07 0945
[illegible]	1-9-07 1030	M. Valencia	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-202	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-85 225' - 225.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L578	SOIL	12-19-06	1505	✓	✓							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman LLanman	12-19-06 1515	A 4 Frig	12-19-06 1515
A4Frig	1-9-07 0945	LLanman LLanman	1-9-07 0945
LLanman LLanman	1-9-07 1030	M. Valentin M. Valentin	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-203 | PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869
PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 80	DATA TURNAROUND: 60 Days / 60 Days
AIR QUALITY: ☐	SAMPLING LOCATION: C5301, I-86 227'-227.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters
SAF NO.: F06-059	ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1
COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L579	SOIL	12-20-06	0820	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman LLanman	12-20-06 1000	A 4 Frig	12-20-06 1000
A 4 Frig	1-9-07 0945	LLanman LLanman	1-9-07 0945
LLanman LLanman	1-9-07 1030	M. Valenia M. Valenia	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-204	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-87 229' - 229.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L580	SOIL	12-20-06	0850	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman / L Lanman	12-20-06 1000	A 4 Frig	12-20-06 1000
A 4 Frig	1-9-07 0945	L Lanman / L Lanman	1-9-07 0945
L Lanman / L Lanman	1-9-07 1030	M Valenta / M. Valenta	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

C9100023

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-205	PAGE 1 OF 1
COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80 / DATA TURNAROUND 60 Days / 60 Days
SAMPLING LOCATION C5301, I-88 233.5' — 234' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L581	SOIL	12/20/06	0935	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman	12-20-06 1000	A4 Frig	12-20-06 1000
A4 Frig	1-9-07 0945	LLanman	1-9-07 0945
LLanman	1-9-07 1030	M. Valenta	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

00100

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-206	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-89 234.5' – 235' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L582	SOIL	12-20-06	0945	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman / L Lanman	12-20-06 1000	A4 Frig	12-20-06 1000
A4 Frig	1-9-07 0945	L Lanman / L Lanman	1-9-07 0945
L Lanman / L Lanman	1-9-07 1030	M Vaughn III / Valw	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-207	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION C5301, I-90 236.5' – 237' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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 8O

AIR QUALITY ☐

DATA TURNAROUND: 60 Days / 60 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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L583	SOIL	12-20-06	1020	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman / Hanna	12-20-06 1100	A4 Frig	12-20-06 1100
A4 Frig	1-9-07 0945	Lanman / Hanna	1-9-07 0945
Lanman / Hanna	1-9-07 1030	M. Vikmia / M. Vikmia	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-208	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION C5301, I-91 240' - 240.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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 80 — DATA TURNAROUND 60 Days / 60 Days

AIR QUALITY ☐

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

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L584	SOIL	12-20-06	1225	✓	✓

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman	12-20-06 1330	A-4 Frig	12-20-06 1330
A4 Frig	1-09-07 0945	LLanman	1-9-07 0945
LLanman	1-9-07 1030	M Valenta	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-209 PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 8O	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: C5301, I-92 242' - 242.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L585	SOIL	12-20-06	1240	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman LLanman	12-20-06 1330	A4 Frig	12-20-06 1330
A4 Frig	1-9-07 0945	LLanman LLanman	1-9-07 0945
LLanman LLanman	1-9-07 1030	M. Villalta M Villalta	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-210

COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 8O	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: [ ]	
SAMPLING LOCATION: C5301, I-93 244.5' - 245.0' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L586	SOIL	12-20-06	1320	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman LLanman	12-20-06 1330	A-4 Frig	12-20-06 1330
A-4 Frig	1-9-07 0945	LLanman LLanman	1-9-07 0945
LLanman LLanman	1-9-07 1030	M. Vakili M. Vakili	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

00051

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-211

COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 8O	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: C5301, I-94 247' – 247.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L587	SOIL	12-20-06	1355	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman / Lanman	12-20-06 1430	A H Frig	12-20-06 1430
A H Frig	1-9-07 0945	L Lanman / Lanman	1-9-07 0945
L Lanman / Lanman	1-9-07 1030	M. Vuente / M. Vuente	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-212	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION C5301, I-95 249.5' – 250' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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 80 | AIR QUALITY ☐ | DATA TURNAROUND 60 Days / 60 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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L588	SOIL	12-20-06	1420	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman [signature]	12-2006 1430	A4 Frig	12-2006 1430
A4 Frig	1-9-07 0945	LLanman [signature]	1-9-07 0945
LLanman [signature]	1-9-07 1030	[illegible]	1/11/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

000183

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-213	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** TRENT, SJ
PRICE CODE 8O	**DATA TURNAROUND** 60 Days / 60 Days	**AIR QUALITY** ☐	
SAMPLING LOCATION C5301, I-96 252'-252.5' bgs	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters	**SAF NO.** F06-059	
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-1	**COA** 121623ES10	**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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L589	SOIL	12-21-06	0850	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W.M. Wise	12-21-06 0900	A4 Ref	12-21-06 0900
A4 Frig	1-9-07 0945	L Hanna	1-9-07 0945
L Hanna	1-9-07 1030	M Vakilia	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

00013 4

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-214	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8O	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION C5301, I-97 259' - 259.5' bgs	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters		**SAF NO.** F06-059	**AIR QUALITY** ☐	60 Days / 60 Days
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-1	**COA** 121623ES10	**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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L590	SOIL	12-21-06	0910	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W.M. Wise Wise	12-21-06 0915	A4-Ref	12-21-06 0915
A4 Frig	1-9-07 0945	Lthomas Thomas	1-9-07 0945
Lthomas Thomas	1-9-07 1030	M. Villa M. Villa	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

000139

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-215

COLLECTOR: Pope/Hughes/Pfister/Wise	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: C5301, I-98 257'-257.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L591	SOIL	12-21-06	0930	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W. M. Wise Wade	12-21-06 0955	A4-Ref	12-21-06 0955
A 4 Frig	1-9-07 0945	LHarman LHarman	1-9-07 0945
LHarman LHarman	1-9-07 1030	M. Valenta M. Valenta	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-216	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-99 259.5'-260' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L592	SOIL	12-21-06	1025	✓	✓						

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W M Wise Wise	12-21-06 1030	A4-Ref	12-21-06 1030
A4 Frig	1-9-07 0945	L L Garman L L Garman	1-9-07 0945
L L Garman L L Garman	1-9-07 1030	M. Vakiha M. Vakiha	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-217	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY [ ]	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-101	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
262'- 262'.5" bgs	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1L593	SOIL	12/21/06	1215

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
GMW Wise	12-21-06 1230	A4 Ref	12-21-06 1230
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Frig	1-9-07 0945	[illegible]	1-9-07 0945
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	1-9-07 1030	M. Varma	1/9/07 1030
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-218	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	8O	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ			
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY**	☐	60 Days / 60 Days
C5301, I-102	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059			
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**			
264,5# - 265	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE			
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**			
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1L594	SOIL	12/21/6	1235

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W.M. Wise	12-21-06 1240	AYRef	12-21-06 1240
AY Frig	1-9-07 0945	L L Hanman	1-9-07 0945
L L Hanman	1-9-07 1030	H Vallino	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

RETAIN

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-219 | PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: BO	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: C5301, I-103	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.: 266.5'1 - 267'	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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=Vegitabon, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L595	SOIL	12/21/6	1245	✓	✓							

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
N.M. Wise	12-21-06 1245	AY Ref	12-21-06 1245
AY Frig	1-9-07 0945	L L Lanman	1-9-07 0945
L L Lanman	1-9-07 1630	M. Vanita	1/9/07 1630

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F06-059-220

COLLECTOR: Pope/Hughes/Pfister/Wise	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 8O	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: C5301, I-104 269.5 - 270' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1L596	SOIL	12-21-06	1405	✓	✓						

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W. M. Wise	12-21-06 1400	A4 Ref	12-21-06 1410
A4 Frig	1-9-07 0945	[illegible]	1-9-07 0945
[illegible]	1-9-07 1535	M. Vikito	1/9/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

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

A-6003-610(01/06)

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No; Absent
If absent, list discrepaucies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) BIL573, BIL574, BIL575, BIL576, BIL577, BIL578, BIL579, BIL580, BIL581, BIL582, BIL583, BIL584, BIL585, BIL586, BIL587

WORK PACKAGE NO: F96068 PROJECT NO:

VERIFIER: Michelle Valle (Signature) DATE: 1/9/07 TIME: 10:30 am pm

Sample No continued: BIL588, BIL589, BIL590, BIL591, BIL592, BIL593, BIL594, BIL595, BIL596.

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-245	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Hughes/Wise/Pope/Pfister	TRENT, SJ	376-3586	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	60 Days / 60 Days
C5301, I-SS-160 160.5'-163' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-~~575-1~~ 504-1 RJA 12-14-06	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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: Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None
TYPE OF CONTAINER	Split Spoon Liner
NO. OF CONTAINER(S)	4
VOLUME	100lbs
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1LNH0	SOIL	12-14-06	1210	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise, WISP	12-14-06 1500	A4 Ref	12-14-06 1500
A4 Frig	1-11-07 1000	L.L. Lanman	1-11-07 1000
L.L. Lanman	1-11-07 11:15	M. Valencia M. Valvo	1/11/07 11:15

SPECIAL INSTRUCTIONS

PNNL will hold samples until authorized to perform analysis by Steve Trent (1)Density; Particle Size (Hydrometer) - D422; Saturated Hydraulic Conductivity; Soil Cation Exchange Capacity - 9080; Generic Testing; SPECIAL STUDIES (No CAS)

LABORATORY COPY

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

A-6003-618(01/06)

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: FLUOR

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No; Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

LABORATORY COPY

CLIENT SAMPLE NO. (1st # in series) BILN40

WORK PACKAGE NO.

PROJECT NO: 52717

VERIFIER: Michelle Valko (Signature)

DATE: 1/11/07

TIME: 11:15 am pm

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-242	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION: C5301, I-100 2160'-2162' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO.: F06-059		
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None
TYPE OF CONTAINER	Split Spoon Liner
NO. OF CONTAINER(S)	1
VOLUME	1000g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1L5L6	SOIL	12/21/06	1150

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W.M. Wise	12-21-06 1220	A4 Ref	12-21-06 1220
A4 Ref	1-15-07 1000	W.M. Wise	1-15-07 1000
W.M. Wise	1-16-07 0800	M. Valenta	1/16/07 0800

SPECIAL INSTRUCTIONS

(1)Density; Particle Size (Hydrometer) - D422; Saturated Hydraulic Conductivity; Soil Cation Exchange Capacity - 9080; Generic Testing; SPECIAL STUDIES (No CAS)

LABORATORY COPY

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

A-6403-618(01/06)

JAN.17.2007 10:49AM AG&G DSTB1 NO.530 P.27

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-243	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise/Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, 1-110 283' - 285' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None
TYPE OF CONTAINER	Split Spoon Liner
NO. OF CONTAINER(S)	1
VOLUME	1000g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1L5L7	SOIL	12-27-06	1320	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman	12-27-06 1415	A4 Frig	12-22-06 1415
Relq @ A4	1-15-07 1000	W. M. Wise	1-15-07 1000
W. M. Wise	1-16-07 0800	M. Valenta	1/16/07 0800

SPECIAL INSTRUCTIONS

(1)Density; Particle Size (Hydrometer) - D422; Saturated Hydraulic Conductivity; Soil Cation Exchange Capacity - 9080; Generic Testing; SPECIAL STUDIES (No CAS)

LABORATORY COPY

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

A-6003-618(01/06)

JAN.17.2007 10:50AM AG&G D9TB1 NO.540 P.02

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes	No:
	If required: Present	Absent
If absent, list discrepancies by sample number/container identification: BIL5L7- no custody seal present		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/325

CLIENT SAMPLE NO. (1st # in series) BIL5L6, BIL5L7

WORK PACKAGE NO.: PROJECT NO: 52717

VERIFIER: Michelle Valvo (Signature) DATE: 1/16/07 TIME: 8:00 am pm

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

LABORATORY COPY

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-221	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise /Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-105 272.5' - 273' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Coat									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L597	SOIL	12-27-06	0930	✓	L							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L.L. Lanman	12-27-06 1100	A4 Frig	12-27-07 1100
A4 Ref	1-18-07 0815	W.M. Wise	1-18-07 0815
Wise	1-18-07 10:30	M. Valenta M. Valenta	1/18/07 10:30

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) Strontium-89,90 -- Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

A-6003-518(01/06)

JAN.22.2007 9:54AM AG&G D9T81 NO.532 P.3

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-222	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise /Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-106 274.5' – 275' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None			
TYPE OF CONTAINER	G/P	Moisture Resistant Cont			
NO. OF CONTAINER(S)	1	1			
VOLUME	1L	200g			
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216			

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L598	SOIL	12-27-06	0940	✓	✓							

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
LLanman [signature]	12-27-06 1100	A 4 Frig	12-27-06 1100
A4 Frig	1-18-07 0815	W.M. Wise [signature]	1-18-07 0815
[signature]	1-18-07 1030	M. Vanessa M. Valle	1/18/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B {TAL}; ICP Metals - 6020 {TAL}; 310.1_ALKALINITY: Alkalinity {1}; IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

JAN.22.2007 9:54AM AG&G D9TB1 NO.532 P.4

0000209

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-223	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Plister/Wise Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5301, I-107 277.5' – 278' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L599	SOIL	12-27-06	1045	✓	✓

CHAIN OF POSSESSION	SIGN/ PRINT NAMES		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman	12-27-06 1100	A4 Frig	12-27-06 1100
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise	1-18-07 1030	M. Vakuna	1/18/07 1030
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

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

JAN.22.2007 9:54AM AG&G D9TB1 NO.532 P.5

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-224	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 80	DATA TURNAROUND: 60 Days / 60 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: C5301, I-108 280' - 280.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

FOSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L5B0	SOIL	12-27-06	1220	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman / Lanman	12-27-06 1300	H 4 Frig	12-27-06 1300
H 4 Frig	1-18-07 0815	W.M. Wise / Wise	1-18-07 0815
Wise / Wise	1-18-07 1030	M. Valenzo / M. Valenzo	1/18/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) Strontium-89,90 -- Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

A-6003-618(01/06)

JAN.22.2007 9:55AM AG&G D9TB1 NO.532 P.6

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-225	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	60 Days / 60 Days
C5301, I-109 282.5' - 283' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L5B1	SOIL	12-27-06	1255	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lamman L Lamman	12-27-06 1300	A4 Frig	12-27-06 1300
A H Rod	1-18-07 0815	W M Wise Wise	1-18-07 0815
Wise Wise	1-18-07 1030	M. Valerio M. Valerio	1/18/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

JAN.22.2007 9:55AM AG&G DSTB1 NO.532 P.7

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-226	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	60 Days / 60 Days
C5301, T-111 285.5'- 286' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-579-1	121623E510	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont.		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1L5B2	SOIL	12-27-06	1345	✓	✓	

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman	12-27-06 1415	A4 Frig.	12-27-06 1415
A4 Ref	1-18-07 0815	W.M. Wise	1-18-07 0815
Wise	1-18-07 1030	M. Valuna	1/18/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

JAN.22.2007 9:55AM AG&G D9TB1 NO.532 P.8

J0007213

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-227	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION C5301, I-112 287' – 287.5' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1L6B3	SOIL	12-27-06	1355	✓	✓								

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L L Lanman	12-27-06 1415	A4 Frig	12-27-06 1415
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Ref	1-18-07 0815	W. M. Wise	1-18-07 0815
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W. Wise	1-18-07 1030	M. Valenta	1/18/07 1030
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS (Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon) TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance)

LABORATORY COPY

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

A-6003-618(01/06)

JAN.22.2007 9:56AM AG&G D9TB1 NO.532 P.9

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F08-059-228	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION: C5301, I-113 289.5'-290' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO.: F06-059		
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1L5B4	SOIL	12-28-06	0855	✓	✓	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W.M. Wise / Wise	12-28-06 0850	A4 Ref	12-28-06 0850
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Ref	1-18-07 0815	W.M. Wise / Wise	1-18-07 0815
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise / Wise	1-18-07 1030	M. Valenta / M. Valenta	1/18/07 1030
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FDG-059-229	PAGE 1 OF 1
COLLECTOR Pope/Hughes/Pfister/Wise	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80 / DATA TURNAROUND
SAMPLING LOCATION C5301, I-114 292'-292.5'	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐ / 60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture OnVent - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L5B5	SOIL	12-28-06	1010	—	—

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W.M. Wise	12-28-06 1020	A4-Ref	12-28-06 1020
A4 Ref	1-18-07 0815	W.M. Wise	1-18-07 0815
Wise	1-18-07 1030	M. Valenta	1/18/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) Strontium-89,90 -- Total Sr (Total beta radiostrontium) ICP Metals - 60108 (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

A-6003-618(01/06)

JAN.22.2007 9:56AM AG&G D9TB1 NO.532 P.11

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-230	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION: C5301, I-115 294.5'-295' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059		
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 1216Z3ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Coat	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L5B6	SOIL	12-28-06	1430	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W.M. Wise Wise	12-28-06 1445	A4 Ref	12-28-06 1445
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Ref	1-18-07 0815	W.M. Wise/Wise	1-18-07 0815
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise/Wise	1-18-07 1030	M. Valenta M. Valenta	1/18/07 1030
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) Strontium-89,90 – Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

A-6003-618(01/05)

JAN.22.2007 9:57AM AG&G D9T81 NO.532 P.12

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-231	PAGE 1 OF 1
COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 80 / DATA TURNAROUND: 60 Days / 60 Days
SAMPLING LOCATION: C5301, I-116 297-297.5 FT	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO.: F06-059	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L5B7	SOIL	1-2-07	0930	✓	✓							

CHAIN OF POSSESSION	SIGN/ PRINT NAMES
RELINQUISHED BY/REMOVED FROM: L Lanman / DATE/TIME: 1/2/07 1100	RECEIVED BY/STORED IN: A 4 Frig / DATE/TIME: 1-2-07 1100
RELINQUISHED BY/REMOVED FROM: A-4 Reef / DATE/TIME: 1-18-07 0815	RECEIVED BY/STORED IN: W. M. Wise / DATE/TIME: 1-18-07 0815
RELINQUISHED BY/REMOVED FROM: Wise / DATE/TIME: 1-18-07 1030	RECEIVED BY/STORED IN: Valenta M. Valles / DATE/TIME: 1/18/07 1030
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 {Tier 1} {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/05)

JAN.22.2007 9:57AM AG&G D9TB1 NO.532 P.13

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-232	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-117 299.5'-300' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L5B8	SOIL	1-2-07	1240	✓	✓							

CHAIN OF POSSESSION		SIGN/PRINT NAMES	
RELINQUISHED BY/REMOVED FROM L Lanman 1-2-07	DATE/TIME 1300	RECEIVED BY/STORED IN A4 Frig 1-2-07	DATE/TIME 1300
RELINQUISHED BY/REMOVED FROM A4 Ref 1-18-07	DATE/TIME 0815	RECEIVED BY/STORED IN W.M. Wise 1-18-07	DATE/TIME 0815
RELINQUISHED BY/REMOVED FROM Wise 1-18-07	DATE/TIME 1030	RECEIVED BY/STORED IN M. Valenta M. Valenta 1/18/07	DATE/TIME 1030
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-619(01/06)

JAN.22.2007 9:58AM AG&G D9TB1 NO.532 P.14

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-233	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise/Lanman	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	**60 Days / 60 Days**
C5301, I-118 303'-303.5' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	FHF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L5B9	SOIL	01/03/07	0925	✓	✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L.L. Lanman	1-3-07 1300	A 4 Frig.	1-3-07 1300
A4 Frig	1-18-07 0815	W.M. Wise	1-18-07 0815
Wise	1-18-07 1030	M. Valenta	1/18/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

JAN.22.2007 9:58AM AG&G D9TB1 NO.532 P.15

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-234	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ	BO	
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY**	
C5301, I-119 304.5 - 305' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059	☐	60 Days / 60 Days
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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, K=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L5C0	SOIL	1-3-07	0940	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman	1-3-07 1300	A 4 Frig	1-3-07 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A-4 Ref	1-18-07 0865	W.M. Wise	1-18-07 0865
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise	1-18-07 1030	M. Valenta	1/18/07 1030
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-616(01/06)

JAN.22.2007 9:58AM AG&G D9TB1 NO.532 P.16

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-235	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	60 Days / 60 Days
C5301, I-120 307 - 307.5 BLS	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont.
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L5C1	SOIL	1-3-07	1015	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman	1-3-07 1300	A 4 Frig	1-3-07 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Frig	1-18-07 0815	W. M. Wise	1-18-07 0815
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Wise	1-18-07 1030	M. Valenta	1/18/07 1030
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

JAN.22.2007 9:59AM NO.352 P.17

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-236	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise /Lanma	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-121 309.5' - 310' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1L5C2	SOIL	01/03/07	1225	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM LLANMAN Llanma	DATE/TIME 1-3-07 1300	RECEIVED BY/STORED IN A4 Frig	DATE/TIME 1-3-07 1300
RELINQUISHED BY/REMOVED FROM A4 Ref	DATE/TIME 1-18-07 0815	RECEIVED BY/STORED IN W.M. Wise Wise	DATE/TIME 1-18-07 0815
RELINQUISHED BY/REMOVED FROM Wise Wise	DATE/TIME 1-18-07 1030	RECEIVED BY/STORED IN M. Valenta M. Valenta	DATE/TIME 1/18/07 1030
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

JAN.22.2007 9:54AM AGX&G LYIBI NO.542 P.18

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-237	PAGE 1 OF 1
COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ — TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 80 — DATA TURNAROUND: 60 Days / 60 Days
SAMPLING LOCATION: C5301, I-122 312'-312.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	AIR QUALITY: ☐
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1 — COA: 121623ES10	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, Wt=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D7216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L5C3	SOIL	1-3-07	1245	—	—

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman	1-3-07 1300	A4 Frig	1-3-07 1300
A4 Ref	1-18-07 0815	W.M. Wise	1-18-07 0815
Wise	1-18-07 1030	M. Valenta	1/18/07 1030

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/05)

JAN.22.2007 9:59AM AG&G D9TB1 NO.532 P.19

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-238	PAGE 1 OF 1
COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80 / DATA TURNAROUND
SAMPLING LOCATION C5301, I-123 314.5' - 315' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐ / 60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1L5C4	SOIL	1-3-07	1315	✓	✓

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Lanman 1-3-07 1330	RECEIVED BY/STORED IN: A4 Frig 1-3-07 1330	DATE/TIME
RELINQUISHED BY/REMOVED FROM: A4 Ref 1-18-07 0815	RECEIVED BY/STORED IN: W.M. Wise 1-18-07 0815	DATE/TIME
RELINQUISHED BY/REMOVED FROM: Wise 1-18-07 1030	RECEIVED BY/STORED IN: M. Valenzo 1/18/07 1030	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance}

LABORATORY COPY

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

A-6003-618(01/06)

JAN.22.2007 10:00AM AG&G D9TB1 NO.532 P.20

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No: Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) BIL597-BIL599; BIL5B0-BIL5B9; BIL5C0-BIL5C4

WORK PACKAGE NO: PROJECT NO: 52717

VERIFIER: Michelle Valero (Signature) DATE: 1/18/07 TIME: 10:30 am/pm

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

LABORATORY COPY

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-246	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise Lunman	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	**60 Days / 60 Days**
C5301, I-124 317.5' – 318' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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				
	PRESERVATION	None	None	
	TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
	NO. OF CONTAINER(S)	1	1	
	VOLUME	1L	200g	
SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1LX09	SOIL	1/4/07	0935	✓	✓	

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: L Lunman	RECEIVED BY/STORED IN: A 4 Frig	DATE/TIME: 1-4-07 1300
RELINQUISHED BY/REMOVED FROM: A 4 Rel	RECEIVED BY/STORED IN: W. M. Wise	DATE/TIME: 1-23-07 0900
RELINQUISHED BY/REMOVED FROM: W. M. Wise	RECEIVED BY/STORED IN: M. Valenta M. Valenta	DATE/TIME: 1/23/07 1315
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 {Total organic carbon} TC - 415.1 (Total carbon) pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

JAN.24.2007 11:37AM AG&G D9T61 NO.533 P.3

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-147	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	DATA TURNAROUND
Pope/Hughes/Pfister/Wise /Lanman	TRENT, SJ	373-5869	TRENT, SJ	80	60 Days / 60 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	
C5301, I-125 319.5- 320 bgs	Z16-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623E510	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1LX10	SOIL	1-4-07	1015	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman	1-4-07 1300	A 4 Frig	1-4-07 1300
A4 Ref	1-23-07 0900	W.M. Wise	1-23-07 0900
W.M. Wise	1-23-07 1315	M. Valenta	1/23/07 1315

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99) Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr (Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon) TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 (pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

JAN.24.2007 11:38AM AG&G D9T81 NO.533 P.4

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-248	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION C5301, I-126 322.5' – 323' bgs	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters		**SAF NO.** F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-1	**COA** 121623ES10	**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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Holdtime Gamma – D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1LX11	SOIL	1-4-07	1045	✓	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
H Lanman / Lanman	1-4-07 1300	A 4 Frig	1-4-07 1300
A4 Ref	1-23-07 0900	W.M. Wise / Wise	1-23-07 0900
W.M. Wise / Wise	1-23-07 1315	M. Valenta M. Valenta	1/23/07 1315

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-61(R01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-249	PAGE 1 OF 1
COLLECTOR Pope/Hughes/Pfister/Wise Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8O AIR QUALITY ☐
SAMPLING LOCATION C5301, I-127 324.5'-325' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	DATA TURNAROUND 60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1LX12	SOIL	01-04-07	1100	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Lanman	DATE/TIME 1-4-07 1300	RECEIVED BY/STORED IN A H Frig	DATE/TIME 1-4-07 1300
RELINQUISHED BY/REMOVED FROM W.M. Wise	DATE/TIME 1-23-07 0900	RECEIVED BY/STORED IN W.M. Wise	DATE/TIME 1-23-07 0900
RELINQUISHED BY/REMOVED FROM W.M. Wise	DATE/TIME 1-23-07 1315	RECEIVED BY/STORED IN M. Valenta	DATE/TIME 1/23/07 1315
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

A-6003-519(01/05)

JAN.24.2007 11:39AM AG&G D9TB1 NO.533 P.6

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-251	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8O	DATA TURNAROUND
Pope/Hughes/Pfister/Wise / Lanman	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAP NO.**	**AIR QUALITY** ☐	**60 Days / 60 Days**
C5301, I-129 329.5'- 330' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ESID	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216g

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1LX14	SOIL	1-8-07	0900	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman S Lanman	1-8-07 1030	A4 Frig	1-8-07 1030
A4 Ref.	1-23-07 0900	W. M. Wise	1-23-07 0900
W. M. Wise	1-23-07 1315	M. Valenta M. Valenta	1/23/07 1315

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

JAN.24.2007 11:39AM AC&G D9T81 NO.533 P.7

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-252	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION C5301, I-130 332.5' - 332' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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 80 | AIR QUALITY ☐ | DATA TURNAROUND 60 Days / 60 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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	G/P	Moisture Resistant Cont
NO. OF CONTAINER(S)	1	1
VOLUME	1L	200g
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1LX15	SOIL	01-08-07	0945	✓	✓

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Hagman / Lanman	1-8-07 1030	A 4 Frig	1-8-07 1030
A4 Ref	1-23-07 0900	W. M. Wise / Wise	1-23-07 0900
W. M. Wise / Wise	1-23-07 1315	M. Valenta / M. Valenta	1/23/07 1315

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 — Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

JAN.24.2007 11:39AM AG&G DSTB1 NO.533 P.8

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-253	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION C5301, I-131 334.5' - 335' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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 80 — DATA TURNAROUND: 60 Days / 60 Days — AIR QUALITY ☐

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1LX18	SOIL	1-8-07	1015	✓	✓							

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman	1-8-07 1030	A H Friig	1-8-07 1030
A H Ref	1-23-07 0900	W. M. Wise	1-23-07 0904
W. M. Wise	1-23-07 1315	N. Vaunta M-Valerio	1/23/07 1315

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) Strontium-89,90 – Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1 ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-254	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-132 337' - 337.5bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1LX17	SOIL	01-08-07	12.35	✓	✓								

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM LLanman LLanman	DATE/TIME 1-8-07 1445	RECEIVED BY/STORED IN A 4 Frig	DATE/TIME 1-8-07 1445
RELINQUISHED BY/REMOVED FROM A4 Ref	DATE/TIME 1-23-07 0900	RECEIVED BY/STORED IN W.M. Wise	DATE/TIME 1-23-07 0900
RELINQUISHED BY/REMOVED FROM W.M. Wise	DATE/TIME 1-23-07 1315	RECEIVED BY/STORED IN M. Valenta M. Valenta	DATE/TIME 1/23/07 1315
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

JAN.24.2007 11:40AM AG&G D9TB1 NO.533 P.10

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-255	PAGE 1 OF 1

COLLECTOR: Pope/Hughes/Pfister/Wise Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
SAMPLING LOCATION: C5301, I-133 339.5' – 340' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO.: F06-059
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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: 80 — DATA TURNAROUND: 60 Days / 60 Days — AIR QUALITY: ☐

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216)										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1LX18	SOIL	01-08-07	1250	✓	✓								
			1255 1-8-07										

CHAIN OF POSSESSION	DATE/TIME	SIGN/ PRINT NAMES: RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM: Lanman	1-8-07 1445	A 4 Frig	1-8-07 1445
RELINQUISHED BY/REMOVED FROM: A4 Ref	1-23-07 0900	W. M. Wise	1-23-07 0900
RELINQUISHED BY/REMOVED FROM: W. M. Wise	1-23-07 1315	M. Valenta M. Valenta	1/23/07 1315
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

JAN.24.2007 11:40AM AG&G D9TB1 NO.533 P.11

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-256	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Hughes/Pfister/Wise Lanman	TRENT, SJ	373-5869	TRENT, SJ	AIR QUALITY ☐	60 Days / 60 Days
SAMPLING LOCATION C5301, I-134 342.5' - 343' bgs	**PROJECT DESIGNATION** 216-A-4 and 200-E-102 Geochemical Modeling Parameters		**SAP NO.** F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-1	**COA** 121623ES10	**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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None		
TYPE OF CONTAINER	G/P	Moisture Resistant Cont		
NO. OF CONTAINER(S)	1	1		
VOLUME	1L	200g		
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216g		

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1LX19	SOIL	01-08-07	1340	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L Lanman / Lanman 1-8-07	1-8-07 1445	A 4 Frig 1-8-07	1445
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
A4 Rel 1-23-07	0900	W. M. Wise / Wise 1-25-07	0900
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W. M. Wise / Wise 1-23-07	1315	M. Valenta M. Valenta 1/23/07	1315
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
W. M. Wise			
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

JAN.24.2007 11:41AM AG&G D9T81 NO.533 P.12

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-257	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-135 3445'- 345' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Holding Content - D2216;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1LX20	SOIL	01-08-07	1455	✓	✓								

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM LLanman SLanman	DATE/TIME 1-8-07 1500	RECEIVED BY/STORED IN A4 Frig	DATE/TIME 1-8-07 1500
RELINQUISHED BY/REMOVED FROM A4 Frig	DATE/TIME 1-23-07 0900	RECEIVED BY/STORED IN W. M. Wise	DATE/TIME 1-23-07 0900
RELINQUISHED BY/REMOVED FROM W. M. Wise	DATE/TIME 1-23-07 1315	RECEIVED BY/STORED IN M Valerio M. Valerio	DATE/TIME 1/23/07 1315
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) I-129 by ICPMS (Iodine-129) Tc-99 by ICPMS (Technetium-99) Uranium by ICPMS (Uranium) Strontium-89,90 -- Total Sr (Total beta radiostrontium) ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon) TOC - 415.1 (Total organic carbon) TC - 415.1 (Total carbon) pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) (Specific Conductance)

LABORATORY COPY

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

JAN.24.2007 11:41AM AG&G D9TB1 NO.533 P.13

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-258	PAGE 1 OF 1
COLLECTOR: Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT: TRENT, SJ — TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: BD — DATA TURNAROUND: 60 Days / 60 Days
SAMPLING LOCATION: C5301, I-136 347' - 347.5' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters	SAF NO.: F06-059	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1 — COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None			
TYPE OF CONTAINER	G/P	Moisture Resistant Cont			
NO. OF CONTAINER(S)	1	1			
VOLUME	1L	200g			
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;			

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1LX21	SOIL	1-8-07	1505	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: L Lanman & Hanna	DATE/TIME: 1-8-07 1515	RECEIVED BY/STORED IN: A A Frig	DATE/TIME: 1-8-07 1515
RELINQUISHED BY/REMOVED FROM: A A Rej	DATE/TIME: 1-23-07 0900	RECEIVED BY/STORED IN: W. M. Wise	DATE/TIME: 1-23-07 0900
RELINQUISHED BY/REMOVED FROM: W. M. Wise	DATE/TIME: 1-23-07 1315	RECEIVED BY/STORED IN: M. Valenta M. Valenta	DATE/TIME: 1/23/07 1315
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 (pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-259	PAGE 1 OF 1
COLLECTOR Pope/Hughes/Pfister/Wise /Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80 / DATA TURNAROUND
SAMPLING LOCATION C5301, I-137 349.5' – 350' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐ / 60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None									
TYPE OF CONTAINER	G/P	Moisture Resistant Cont									
NO. OF CONTAINER(S)	1	1									
VOLUME	1L	200g									
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1LX22	SOIL	1-9-07	0830	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM Hanman	DATE/TIME 1-9-07 1000	RECEIVED BY/STORED IN A H Frig	DATE/TIME 1-9-07 1000
RELINQUISHED BY/REMOVED FROM A H Frig	DATE/TIME 1-23-07 0900	RECEIVED BY/STORED IN W. M. Wise	DATE/TIME 1-23-07 0900
RELINQUISHED BY/REMOVED FROM W. M. Wise	DATE/TIME 1-23-07 1315	RECEIVED BY/STORED IN M. Valenta	DATE/TIME 1/23/07 1315
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 – Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 (pH Measurement) Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

JAN.24.2007 11:42AM AG&G D9TB1 NO.533 P.15

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F06-059-260	PAGE 1 OF 1
COLLECTOR: Pope/Hughes/Pfister/Wise Lanman	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: BD; DATA TURNAROUND: 60 Days / 60 Days
SAMPLING LOCATION: C5301, I-138 352.5'-353' bgs	PROJECT DESIGNATION: 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO.: F06-059	AIR QUALITY: ☐
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-575-1	COA: 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216g	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME									
B1LX23	SOIL	1-9-07	0845	✓	✓							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Lanman	DATE/TIME: 1-9-06 1000	RECEIVED BY/STORED IN: A4 Frig	DATE/TIME: 1-9-07 1000
RELINQUISHED BY/REMOVED FROM: A4 Frig	DATE/TIME: 1-23-07 0800	RECEIVED BY/STORED IN: W. M. Wise	DATE/TIME: 1-23-07 0800
RELINQUISHED BY/REMOVED FROM: W. M. Wise	DATE/TIME: 1-23-07 1315	RECEIVED BY/STORED IN: M. Valenta	DATE/TIME: 1/23/07 1315
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M (Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-261	PAGE 1 OF 1

COLLECTOR Pope/Hughes/Pfister/Wise / Lanman	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 80	DATA TURNAROUND
SAMPLING LOCATION C5301, I-139 354.5'-355' bgs	PROJECT DESIGNATION 216-A-4 and 200-E-102 Geochemical Modeling Parameters		SAF NO. F06-059	AIR QUALITY ☐	60 Days / 60 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-575-1	COA 121623ES10	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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None										
TYPE OF CONTAINER	G/P	Moisture Resistant Cont										
NO. OF CONTAINER(S)	1	1										
VOLUME	1L	200g										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1LX24	SOIL	1-9-07	1440	✓	✓								

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lanman	1-9-07 1500	A 4 Reig	1-9-07 1500
A4 Reig	1-23-07 0900	W. M. Wise	1-23-07 0900
W. M. Wise	1-23-07 1315	M. Vakma M. Vakma	1/23/07 1315

SPECIAL INSTRUCTIONS

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) {Specific Conductance}

LABORATORY COPY

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

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No; Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) B1LX09 - B1LX12, B1LX14 - B1LX24

WORK PACKAGE NO; PROJECT NO: 52717

VERIFIER: Michelle Valuo (Signature) DATE: 1/23/07 TIME: 1:15 am pm

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.

LABORATORY COPY

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F06-059-281	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 80	DATA TURNAROUND
Pope/Pfister/Hughes/Wise/Lanman	TRENT, SJ	373-5869	TRENT, SJ		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAP NO.**	**AIR QUALITY** ☐	**60 Days / 60 Days**
C5301, I-Organic Layer 51' bgs	216-A-4 and 200-E-102 Geochemical Modeling Parameters		F06-059		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-575-1	121623ES10	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
PNNL Building 325	N/A		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: Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	G/P	Moisture Resistant Cont	
NO. OF CONTAINER(S)	1	1	
VOLUME	1L 500	200g	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Moisture Content - D2216;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
~~B1M5X1~~	~~SOIL~~	~~1-18-07~~	~~0850~~	✓	✓	
B1M5X1	Soil	11-30-06	1450	✓	✓	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
KM Wise	1-18-07 1020	MO745 Ref 2	1-18-07 1020
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
MO 745 Ref #3	1-25-07 1300	L. L. Lanman	1-25-07 1300
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
L. L. Lanman	1-25-07 1315	M. Valero	1/25/07 1315
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

(1)Gross Alpha; Gross Beta; Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} I-129 by ICPMS {Iodine-129} Tc-99 by ICPMS {Technetium-99} Uranium by ICPMS {Uranium} Strontium-89,90 -- Total Sr {Total beta radiostrontium} ICP Metals - 6010B (TAL); ICP Metals - 6020 (TAL); 310.1_ALKALINITY: Alkalinity (1); IC Anions - 300.0; TIC - 415.1M {Total Inorganic Carbon} TOC - 415.1 {Total organic carbon} TC - 415.1 {Total carbon} pH (Soil) - 9045 {pH Measurement} Conductivity - 9050 (Tier 1) (Specific Conductance)

COPY 1-19-07

LABORATORY COPY

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

A-6003-618(01/06)

JAN.29.2007 12:49PM AG&G DYIBI NO.334 P.3

0002649

SAMPLE INSPECTION FORM

SAMPLE RECEIPT

CLIENT: Fluor

RECEIVING DOCUMENT INFORMATION VERIFICATION:
Agreement
Non-Agreement (Explain)

SAMPLE CONTAINER CONDITION (check one):	Intact/Satisfactory;	Other (Explain)
Explanation:		

CONTAINER TEMPERATURE (provide or check N/A):	°C;	N/A
Comments:		

SAMPLE CUSTODY SEALS (check one):	Required: Yes If required: Present	No; Absent
If absent, list discrepancies by sample number/container identification:		

CONDITION OF SAMPLE SEALS (check one):	N/A;	Intact;	Breached
Describe discrepancies by sample number/container identification:			

RESOLUTION OF SAMPLE DISCREPANCIES/DEFICIENCIES/ADDITIONAL COMMENTS:

LABORATORY COPY

SAMPLE STORAGE LOCATION: 325/313

CLIENT SAMPLE NO. (1st # in series) B1M5X1

WORK PACKAGE NO:

PROJECT NO: 52717

VERIFIER: Michelle Valero (Signature)

DATE: 1/25/07

TIME: 1:15 am pm

This is the preferred method for documenting information. Alternate methods may be used provided the content and method of processing is consistent with this QA Plan.