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EBERLINE
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November 5, 2008

Mr. Steve Trent
Fluor Hanford Inc.
1200 Jadwin Avenue
Richland, WA 99352

Reference: **P.O. #33677**
Eberline Services R8-09-186-7214, SDG H3886

Dear Mr. Trent:

Enclosed is a data report for three water samples designated under SAF No. F08-086 received at Eberline Services on September 25, 2008. The samples were analyzed according to the accompanying chain-of-custody documents.

Please call if you have any questions concerning this report.

Sincerely,

Melissa C. Mannion
Senior Program Manager

MCM/jag

Enclosure: Data Package

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FEB 03 2009

EDMC

EBRLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H3886

SDG 7214
Contact Melissa C. Mannion

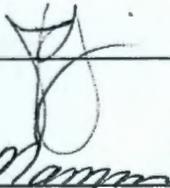
Client Hanford
Contract No. 33677
Case no SDG H3886

S U M M A R Y D A T A S E C T I O N

T A B L E O F C O N T E N T S

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Prepared by


Melissa Mannion

Reviewed by

Lab id EBRLNE
Protocol Fluor
Version Ver 1.0
Form DVD-TOC
Version 3.06
Report date 11/04/08

EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H3886

SDG 7214
Contact Melissa C. Mannion

REPORT GUIDE

Client Hanford
Contract No. 33677
Case no SDG H3886

ABOUT THE DATA SUMMARY SECTION

The Data Summary Section of a Data Package has all data, in several useful orders, necessary for first level, routine review of the data package for a Sample Delivery Group (SDG). This section follows the Data Package Narrative, which has an overview of the data package and a discussion of special problems. It is followed by the Raw Data Section, which has full details.

The Data Summary Section has several groups of reports:

SAMPLE SUMMARIES

The Sample and QC Summary Reports show all samples, including QC samples, reported in one SDG. These reports cross-reference client and lab sample identifiers.

PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches (lab groupings reflecting how work was organized) relevant to the reported SDG with information necessary to check the completeness and consistency of the SDG.

WORK SUMMARY

The Work Summary Report shows all samples and work done on them relevant to the reported SDG.

METHOD BLANKS

The Method Blank Reports, one for each Method Blank relevant to the SDG, show all results and primary supporting information for the blanks.

LAB CONTROL SAMPLES

The Lab Control Sample Reports, one for each Lab Control Sample relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

REPORT GUIDES

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SUMMARY DATA SECTION

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Lab id EBRLNE
Protocol Fluor
Version Ver 1.0
Form DVD-RG
Version 3.06
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EBERLINE SERVICES / RICHMOND

SAMPLE DELIVERY GROUP H3886

SDG 7214
Contact Melissa C. Mannion

GUIDE, cont.

Client Hanford
Contract No. 33677
Case no SDG H3886

ABOUT THE DATA SUMMARY SECTION

DUPLICATES

The Duplicate Reports, one for each Duplicate and Original sample pair relevant to the SDG, show all results, differences and primary supporting information for these QC samples.

MATRIX SPIKES

The Matrix Spike Reports, one for each Spiked and Original sample pair relevant to the SDG, show all results, recoveries and primary supporting information for these QC samples.

DATA SHEETS

The Data Sheet Reports, one for each client sample in the SDG, show all results and primary supporting information for these samples.

METHOD SUMMARIES

The Method Summary Reports, one for each test used in the SDG, show all results, QC and method performance data for one analyte on one or two pages. (A test is a short code for the method used to do certain work to the client's specification.)

REPORT GUIDES

The Report Guides, one for each of the above groups of reports, have documentation on how to read the associated reports.

REPORT GUIDES

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Lab id EBRLNE
Protocol Fluor
Version Ver 1.0
Form DVD-RG
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3886

LAB SAMPLE SUMMARY

SDG 7214
 Contact Melissa C. Mannion

Client Hanford
 Contract No. 33677
 Case no SDG H3886

LAB						CHAIN OF	
SAMPLE ID	CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	SAF NO	CUSTODY	COLLECTED
R809186-01	B1TRL0	B-C6353-S	WATER		F08-086	F08-086-009	09/23/08 10:30
R809186-02	B1TRL1	C-C6356-S	WATER		F08-086	F08-086-022	09/24/08 08:55
R809186-03	B1TRL2	C-C6356-S	WATER		F08-086	F08-086-023	09/24/08 08:55
R809186-04	Lab Control Sample		WATER		F08-086		
R809186-05	Method Blank		WATER		F08-086		
R809186-06	Duplicate (R809186-03)	C-C6356-S	WATER		F08-086		09/24/08 08:55

Lab id EBRINE
 Protocol Fluor
 Version Ver 1.0
 Form DVD-LS
 Version 3.06
 Report date 11/04/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3886

SDG 7214
 Contact Melissa C. Mannion

QC SUMMARY

Client Hanford
 Contract No. 33677
 Case no SDG H3886

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL SAMPLE ID	DEPARTMENT SAMPLE ID
7214	F08-086-009	B1TRL0	WATER		6.0 L		09/25/08 2	R809186-01	7214-001
	F08-086-022	B1TRL1	WATER		6.0 L		09/25/08 1	R809186-02	7214-002
	F08-086-023	B1TRL2	WATER		6.0 L		09/25/08 1	R809186-03	7214-003
		Method Blank	WATER					R809186-05	7214-005
		Lab Control Sample	WATER					R809186-04	7214-004
		Duplicate (R809186-03)	WATER		6.0 L		09/25/08 1	R809186-06	7214-006

Lab id EBRLNE
 Protocol Fluor
 Version Ver 1.0
 Form DVD-QS
 Version 3.06
 Report date 11/04/08

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3886

SDG 7214
 Contact Melissa C. Mannion

PREP BATCH SUMMARY

Client Hanford
 Contract No. 33677
 Case no SDG H3886

TEST	MATRIX	METHOD	PREPARATION ERROR			PLANCHETS ANALYZED			QUALI-
			BATCH	2σ %	CLIENT MORE	RE BLANK	LCS	DUP/ORIG MS/ORIG	
Alpha Spectroscopy									
PA	WATER	Pa-231 in Water	6169-118	14.8	3	1	1	1/1	
Gamma Spectroscopy									
I	WATER	Iodine 129 in Water	6169-118	19.4	3	1	1	1/1	
Liquid Scintillation Counting									
SE_L	WATER	Selenium 79 in Water	6169-118	11.2	3	1		1/1	

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group.
 Blank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

Lab id EBRLNE
 Protocol Fluor
 Version Ver 1.0
 Form DVD-PBS
 Version 3.06
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3886

LAB WORK SUMMARY

SDG 7214
Contact Melissa C. Mannion

Client Hanford
Contract No. 33677
Case no SDG H3886

LAB SAMPLE	CLIENT SAMPLE ID	COLLECTED	LOCATION	MATRIX	SUF-	RECEIVED	CUSTODY	SAF No	PLANCHET	TEST	FIX	ANALYZED	REVIEWED	BY	METHOD
R809186-01	B1TRL0								7214-001	I		10/23/08	10/24/08	BW	Iodine 129 in Water
09/23/08	B-C6353-S			WATER					7214-001	PA	R1	10/28/08	11/03/08	BW	Pa-231 in Water
09/25/08	F08-086-009						F08-086		7214-001	SE_L		10/22/08	10/27/08	BW	Selenium 79 in Water
R809186-02	B1TRL1								7214-002	I		10/23/08	10/24/08	BW	Iodine 129 in Water
09/24/08	C-C6356-S			WATER					7214-002	PA		10/21/08	11/03/08	BW	Pa-231 in Water
09/25/08	F08-086-022						F08-086		7214-002	SE_L		10/22/08	10/27/08	BW	Selenium 79 in Water
R809186-03	B1TRL2								7214-003	I		10/24/08	10/24/08	BW	Iodine 129 in Water
09/24/08	C-C6356-S			WATER					7214-003	PA		10/21/08	11/03/08	BW	Pa-231 in Water
09/25/08	F08-086-023						F08-086		7214-003	SE_L		10/22/08	10/27/08	BW	Selenium 79 in Water
R809186-04	Lab Control Sample								7214-004	I		10/24/08	10/24/08	BW	Iodine 129 in Water
				WATER					7214-004	PA	R1	10/31/08	11/03/08	BW	Pa-231 in Water
							F08-086								
R809186-05	Method Blank								7214-005	I		10/24/08	10/24/08	BW	Iodine 129 in Water
				WATER					7214-005	PA		10/21/08	11/03/08	BW	Pa-231 in Water
							F08-086		7214-005	SE_L		10/22/08	10/27/08	BW	Selenium 79 in Water
R809186-06	Duplicate (R809186-03)								7214-006	I		10/24/08	10/24/08	BW	Iodine 129 in Water
09/24/08	C-C6356-S			WATER					7214-006	PA	R1	10/21/08	11/03/08	BW	Pa-231 in Water
09/25/08							F08-086		7214-006	SE_L		10/22/08	10/27/08	BW	Selenium 79 in Water

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
I	F08-086	Iodine 129 in Water	I129_SEP_LEPS_GS	3			1	1	1	6
PA	F08-086	Pa-231 in Water	PA231_IE_PLATE_AEA	3			1	1	1	6
SE_L	F08-086	Selenium 79 in Water	SE79_SEP_DIS_LSC	3			1		1	5
TOTALS				9			3	2	3	17

Lab id EBRLNE
Protocol Fluor
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SAMPLE DELIVERY GROUP H3886

7214-005

Method Blank

METHOD BLANK

SDG <u>7214</u>	Client/Case no <u>Hanford</u>	SDG <u>H3886</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>33677</u>	
Lab sample id <u>R809186-05</u>	Client sample id <u>Method Blank</u>	
Dept sample id <u>7214-005</u>	Material/Matrix <u>WATER</u>	
	SAF No <u>F08-086</u>	

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Selenium-79	15758-45-9	12.4	14	22.5	30.0	U	SE_L
Iodine 129	15046-84-1	0.119	0.58	1.30	5.00	U	I
Protactinium 231	14331-85-2	0.044	0.27	0.490	1.00	U	PA

AquiferTubeInstalSamplingandAnalysis

QC-BLANK 67503

Lab id <u>EBRLNE</u>
Protocol <u>Fluor</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
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METHOD BLANKS

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SAMPLE DELIVERY GROUP H3886

7214-004

Lab Control Sample

LAB CONTROL SAMPLE

SDG <u>7214</u> Contact <u>Melissa C. Mannion</u> Lab sample id <u>R809186-04</u> Dept sample id <u>7214-004</u>	Client/Case no <u>Hanford</u> <u>SDG H3886</u> Contract <u>No. 33677</u> Client sample id <u>Lab Control Sample</u> Material/Matrix <u>WATER</u> SAF No <u>F08-086</u>
---	--

ANALYTE	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS TEST	ADDED pCi/L	2σ ERR pCi/L	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Iodine 129	259	5.4	<u>6.60</u>	5.00	I	232	9.3	112	67-133	80-120
Protactinium 231	7.43	1.0	0.231	1.00	PA	6.05	0.24	<u>123</u>	63-137	80-120

AquiferTubeInstalSamplingandAnalysis

QC-LCS 67502

LAB CONTROL SAMPLES

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Lab id <u>EBRLNE</u>
Protocol <u>Fluor</u>
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Form <u>DVD-LCS</u>
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Report date <u>11/04/08</u>

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3886

7214-006

B1TRL2

DUPLICATE

SDG <u>7214</u> Contact <u>Melissa C. Mannion</u> Duplicates Lab sample id <u>R809186-06</u> Dept sample id <u>7214-006</u>	Client/Case no <u>Hanford</u> SDG <u>H3886</u> Contract <u>No. 33677</u> ORIGINAL Lab sample id <u>R809186-03</u> Dept sample id <u>7214-003</u> Received <u>09/25/08</u> Client sample id <u>B1TRL2</u> Location/Matrix <u>C-C6356-S</u> <u>WATER</u> Collected/Volume <u>09/24/08 08:55</u> <u>6.0 L</u> Custody/SAF No <u>F08-086-023</u> <u>F08-086</u>
---	--

ANALYTE	DUPLICATE pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST	ORIGINAL pCi/L	2σ ERR (COUNT)	MDA pCi/L	QUALI- FIERS	RPD %	3σ TOT	DER σ
Selenium-79	4.68	14	23.8	30.0	U	SE_L	-4.98	14	23.9	U	-	1.0	
Iodine 129	-0.040	1.0	2.28	5.00	U	I	-0.965	1.9	4.42	U	-	0.9	
Protactinium 231	0.034	0.10	0.190	1.00	U	PA	0.127	0.25	0.469	U	-	0.7	

AquiferTubeInstalSamplingandAnalysis

QC-DUP#3 67504

Lab id <u>EBRLNE</u>
Protocol <u>Fluor</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DUP</u>
Version <u>3.06</u>
Report date <u>11/04/08</u>

EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H3886

7214-001

B1TRL0

DATA SHEET

SDG <u>7214</u>	Client/Case no <u>Hanford</u>	SDG <u>H3886</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>33677</u>	
Lab sample id <u>R809186-01</u>	Client sample id <u>B1TRL0</u>	
Dept sample id <u>7214-001</u>	Location/Matrix <u>B-C6353-S</u>	<u>WATER</u>
Received <u>09/25/08</u>	Collected/Volume <u>09/23/08 10:30</u>	<u>6.0 L</u>
	Custody/SAF No <u>F08-086-009</u>	<u>F08-086</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Selenium-79	15758-45-9	3.43	15	25.4	30.0	U	SE_L
Iodine 129	15046-84-1	0.416	0.61	1.37	5.00	U	I
Protactinium 231	14331-85-2	0	0.085	0.203	1.00	U	PA

AquiferTubeInstalSamplingandAnalysis

DATA SHEETS

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EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H3886

7214-002

B1TRL1

DATA SHEET

SDG <u>7214</u>	Client/Case no <u>Hanford</u>	SDG <u>H3886</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>33677</u>	
Lab sample id <u>R809186-02</u>	Client sample id <u>B1TRL1</u>	
Dept sample id <u>7214-002</u>	Location/Matrix <u>C-C6356-S</u>	<u>WATER</u>
Received <u>09/25/08</u>	Collected/Volume <u>09/24/08 08:55</u>	<u>6.0 L</u>
	Custody/SAF No <u>F08-086-022</u>	<u>F08-086</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALI- FIERS	TEST
Selenium-79	15758-45-9	3.54	17	28.8	30.0	U	SE_L
Iodine 129	15046-84-1	-0.178	0.95	2.17	5.00	U	I
Protactinium 231	14331-85-2	0	0.18	0.691	1.00	U	PA

AquiferTubeInstalSamplingandAnalysis

Lab id <u>EBRLNE</u>
Protocol <u>Fluor</u>
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EBERLINE SERVICES / RICHMOND
SAMPLE DELIVERY GROUP H3886

7214-003

B1TRL2

DATA SHEET

SDG <u>7214</u>	Client/Case no <u>Hanford</u>	SDG <u>H3886</u>
Contact <u>Melissa C. Mannion</u>	Contract No. <u>33677</u>	
Lab sample id <u>R809186-03</u>	Client sample id <u>B1TRL2</u>	
Dept sample id <u>7214-003</u>	Location/Matrix <u>C-C6356-S</u>	<u>WATER</u>
Received <u>09/25/08</u>	Collected/Volume <u>09/24/08 08:55</u>	<u>6.0 L</u>
	Custody/SAF No <u>F08-086-023</u>	<u>F08-086</u>

ANALYTE	CAS NO	RESULT pCi/L	2σ ERR (COUNT)	MDA pCi/L	RDL pCi/L	QUALIFIERS	TEST
Selenium-79	15758-45-9	-4.98	14	23.9	30.0	U	SE_L
Iodine 129	15046-84-1	-0.965	1.9	4.42	5.00	U	I
Protactinium 231	14331-85-2	0.127	0.25	0.469	1.00	U	PA

AquiferTubeInstalSamplingandAnalysis

Lab id <u>EBRLNE</u>
Protocol <u>Fluor</u>
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Report date <u>11/04/08</u>

EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3886

LAB METHOD SUMMARY

PA-231 IN WATER
ALPHA SPECTROSCOPY

Test PA Matrix WATER
SDG 7214
Contact Melissa C. Mannion

Client Hanford
Contract No. 33677
Contract SDG H3886

RESULTS

LAB	RAW	SUF-	Protactinium	
SAMPLE ID	TEST FIX	PLANCHET	CLIENT SAMPLE ID	231
Preparation batch 6169-118				
R809186-01	R1	7214-001	B1TRL0	U
R809186-02		7214-002	B1TRL1	U
R809186-03		7214-003	B1TRL2	U
R809186-04	R1	7214-004	Lab Control Sample	<u>HIGH</u>
R809186-05		7214-005	Method Blank	U
R809186-06	R1	7214-006	Duplicate (R809186-03)	- U

Nominal values and limits from method RDLs (pCi/L) 1.00
AquiferTubeInstalSamplingandAnalysis

METHOD PERFORMANCE

LAB	RAW	SUF-	MDA	ALIQ	PREP	DILU-	YIELD	EFF	COUNT	FWHM	DRIFT	DAYS	ANAL-		
SAMPLE ID	TEST FIX	CLIENT SAMPLE ID	pCi/L	L	FAC	TION	%	%	min	keV	KeV	HELD	PREPARED	YZED	DETECTOR
Preparation batch 6169-118 2σ prep error 14.8 % Reference Lab Notebook #6169, pg. 118															
R809186-01	R1	B1TRL0	0.203	0.150			43	1001				35	10/20/08	10/28	SS-040
R809186-02		B1TRL1	0.691	0.150			28	400				27	10/20/08	10/21	SS-039
R809186-03		B1TRL2	0.469	0.150			22	906				27	10/20/08	10/21	SS-027
R809186-04	R1	Lab Control Sample	0.231	0.150			61	1001					10/20/08	10/31	SS-042
R809186-05		Method Blank	0.490	0.150			27	966					10/20/08	10/21	SS-031
R809186-06	R1	Duplicate (R809186-03)	0.190	0.150			51	907				27	10/20/08	10/21	SS-032
Nominal values and limits from method			1.00	0.150			20-105	200				180			

PROCEDURES REFERENCE PA231_IE_PLATE_AEA
SPP-007 Aqueous Sample Receipt by Chemistry Laboratory, rev 0
SPP-062 Sample Aliquoting, rev 0
CP-912 Protactinium-231 in Water Sample, rev 1

AVERAGES ± 2 SD MDA 0.379 ± 0.406
FOR 6 SAMPLES YIELD 39 ± 31

METHOD SUMMARIES

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SUMMARY DATA SECTION

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Lab id EBRINE
Protocol Fluor
Version Ver 1.0
Form DVD-LMS
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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3886

LAB METHOD SUMMARY

IODINE 129 IN WATER
GAMMA SPECTROSCOPY

Test I Matrix WATER

SDG 7214

Contact Melissa C. Mannion

Client Hanford

Contract No. 33677

Contract SDG H3886

RESULTS

LAB RAW SUF-
SAMPLE ID TEST FIX PLANCHET CLIENT SAMPLE ID Iodine 129

Preparation batch 6169-118

R809186-01	7214-001	B1TRL0	U
R809186-02	7214-002	B1TRL1	U
R809186-03	7214-003	B1TRL2	U
R809186-04	7214-004	Lab Control Sample	ok
R809186-05	7214-005	Method Blank	U
R809186-06	7214-006	Duplicate (R809186-03)	- U

Nominal values and limits from method RDLs (pCi/L) 5.00

AquiferTubeInstalSamplingandAnalysis

METHOD PERFORMANCE

LAB RAW SUF- MDA ALIQ PREP DILU- YIELD EFF COUNT FWHM DRIFT DAYS ANAL-
SAMPLE ID TEST FIX CLIENT SAMPLE ID pCi/L L FAC TION % % min keV KeV HELD PREPARED YZED DETECTOR

Preparation batch 6169-118 2σ prep error 19.4 % Reference Lab Notebook #6169, pg. 118

R809186-01	B1TRL0	1.37	0.500	80	982	30	10/23/08	10/23	XSPEC-004
R809186-02	B1TRL1	2.17	0.500	83	981	29	10/23/08	10/23	XSPEC-002
R809186-03	B1TRL2	4.42	0.500	80	<u>213</u>	30	10/23/08	10/24	XSPEC-004
R809186-04	Lab Control Sample	<u>6.60</u>	0.500	91	<u>213</u>		10/23/08	10/24	XSPEC-002
R809186-05	Method Blank	1.30	0.500	91	1006		10/23/08	10/24	XSPEC-004
R809186-06	Duplicate (R809186-03)	2.28	0.500	78	1003	30	10/23/08	10/24	XSPEC-002

Nominal values and limits from method 5.00 0.500 20-105 300 100 180

PROCEDURES REFERENCE I129_SEP_LEPS_GS
SPP-062 Sample Aliquoting, rev 0
CP-531 Iodine-129, 131 in Water, Large Aliquots, rev 1

AVERAGES ± 2 SD MDA 3.02 ± 4.17
FOR 6 SAMPLES YIELD 84 ± 12

Lab id EBRLNE
Protocol Fluor
Version Ver 1.0
Form DVD-LMS
Version 3.06
Report date 11/04/08

METHOD SUMMARIES

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EBERLINE SERVICES/RICHMOND

SAMPLE DELIVERY GROUP H3886

LAB METHOD SUMMARY

SELENIUM 79 IN WATER

LIQUID SCINTILLATION COUNTING

Test SE L Matrix WATER
SDG 7214
Contact Melissa C. Mannion

Client Hanford
Contract No. 33677
Contract SDG H3886

RESULTS

LAB RAW SUP-
SAMPLE ID TEST FIX PLANCHET CLIENT SAMPLE ID Selenium-79

Preparation batch 6169-118

R809186-01		7214-001	B1TRL0	U
R809186-02		7214-002	B1TRL1	U
R809186-03		7214-003	B1TRL2	U
R809186-05		7214-005	Method Blank	U
R809186-06		7214-006	Duplicate (R809186-03)	- U

Nominal values and limits from method RDLs (pCi/L) 30.0
AquiferTubeInstalSamplingandAnalysis

METHOD PERFORMANCE

LAB RAW SUP- MDA ALIQ PREP DILU- YIELD EFF COUNT FWHM DRIFT DAYS ANAL-
SAMPLE ID TEST FIX CLIENT SAMPLE ID pCi/L L FAC TION % % min keV KeV HELD PREPARED YZED DETECTOR

Preparation batch 6169-118 2σ prep error 11.2 % Reference Lab Notebook #6169, pg. 118

R809186-01		B1TRL0	25.4	0.0500			78	50		29	10/22/08	10/22	LSC-005
R809186-02		B1TRL1	28.8	0.0500			67	50		28	10/22/08	10/22	LSC-005
R809186-03		B1TRL2	23.9	0.0500			80	50		28	10/22/08	10/22	LSC-005
R809186-05		Method Blank	22.5	0.0500			84	50			10/22/08	10/22	LSC-005
R809186-06		Duplicate (R809186-03)	23.8	0.0500			80	50		28	10/22/08	10/22	LSC-005

Nominal values and limits from method 30.0 0.0500 20-105 25 180

PROCEDURES REFERENCE SE79_SEP_DIS_LSC
SPP-062 Sample Aliquoting, rev 0
RP-340 Selenium-79 in Solids and Water, rev 0

AVERAGES ± 2 SD MDA 24.9 ± 4.84
FOR 5 SAMPLES YIELD 78 ± 13

METHOD SUMMARIES

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SDG 7214
 Contact Melissa C. Mannion

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SAMPLE SUMMARY

The Sample and QC Summary Reports show all samples, including QC samples, reported in one Sample Delivery Group (SDG).

The Sample Summary Report fully identifies client samples and gives the corresponding lab sample identification. The QC Summary Report shows at the sample level how the lab organized the samples into batches and generated QC samples. The Preparation Batch and Method Summary Reports show this at the analysis level.

The following notes apply to these reports:

- * LAB SAMPLE ID is the lab's primary identification for a sample.
- * DEPARTMENT SAMPLE ID is an alternate lab id, for example one assigned by a radiochemistry department in a lab.
- * CLIENT SAMPLE ID is the client's primary identification for a sample. It includes any sample preparation done by the client that is necessary to identify the sample.
- * QC BATCH is a lab assigned code that groups samples to be processed and QCed together. These samples should have similar matrices.

QC BATCH is not necessarily the same as SDG, which reflects samples received and reported together.

- * All Lab Control Samples, Method Blanks, Duplicates and Matrix Spikes are shown that QC any of the samples. Due to possible reanalyses, not all results for all these QC samples may be relevant to the SDG. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.

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PREPARATION BATCH SUMMARY

The Preparation Batch Summary Report shows all preparation batches in one Sample Delivery Group (SDG) with information necessary to check the completeness and consistency of the SDG.

The following notes apply to this report:

- * The preparation batches are shown in the same order as the Method Summary Reports are printed.
- * Only analyses of planchets relevant to the SDG are included.
- * Each preparation batch should have at least one Method Blank and LCS in it to validate client sample results.
- * The QUALIFIERS shown are all qualifiers other than U, J, B, L and H that occur on any analysis in the preparation batch. The Method Summary Report has these qualifiers on a per sample basis.

These qualifiers should be reviewed as follows:

- X Some data has been manually entered or modified. Transcription errors are possible.
- P One or more results are 'preliminary'. The data is not ready for final reporting.
- 2 There were two or more results for one analyte on one planchet imported at one time. The results in DVD may not be the same as on the raw data sheets.

Other lab defined qualifiers may occur. In general, these should be addressed in the SDG narrative.

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WORK SUMMARY

The Work Summary Report shows all samples, including QC samples, and all relevant analyses in one Sample Delivery Group (SDG). This report is often useful as supporting documentation for an invoice.

The following notes apply to this report:

- * TEST is a code for the method used to measure associated analytes. Results and related information for each analyte are on the Data Sheet Report. In special cases, a test code used in the summary data section is not the same as in associated raw data. In this case, both codes are shown on the Work Summary.
- * SUFFIX is the lab's code to distinguish multiple analyses (recounts, reworks, reanalyses) of a fraction of the sample. The suffix indicates which result is being reported. An empty suffix normally identifies the first attempt to analyze the sample.
- * The LAB SAMPLE ID, TEST and SUFFIX uniquely identify all supporting data for a result. The Method Summary Report for each TEST has method performance data, such as yield, for each lab sample id and suffix and procedures used in the method.
- * PLANCHET is an alternate lab identifier for work done for one test. It, combined with the TEST and SUFFIX, may be the best link to raw data.
- * For QC samples, only analyses that directly QC some regular sample are shown. The Lab Control Sample, Method Blank, Duplicate, Matrix Spike and Method Summary Reports detail these relationships.
- * The SAS (Special Analytical Services) Number is a client or lab assigned code that reflects special processing for samples, such as rapid turn around. Counts of tests done are lists by SAS number since it is likely to affect prices.

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DATA SHEET

The Data Sheet Report shows all results and primary supporting information for one client sample or Method Blank. This report corresponds to both the CLP Inorganics and Organics Data Sheet.

The following notes apply to this report:

- * TEST is a code for the method used to measure an analyte. If the TEST is empty, no data is available; the analyte was not analyzed for.
- * The LAB SAMPLE ID and TEST uniquely identify work within the Summary Data Section of a Data Package. The Work Summary and Method Summary Reports further identify raw data that underlies this work.

The Method Summary Report for each TEST has method performance data, such as yield, for each Lab Sample ID and a list of procedures used in the method.

- * ERRORS can be labeled TOTAL or COUNT. TOTAL implies a preparation (non-counting method) error has been added, as square root of sum of squares, to the counting error denoted by COUNT. The preparation errors, which may vary by preparation batch, are shown on the Method Summary Report.
- * A RESULT can be 'N.R.' (Not Reported). This means the lab did this work but chooses not to report it now, possibly because it was reported at another time.
- * When reporting a Method Blank, a RESULT can be 'N.A.' (Not Applicable). This means there is no reported client sample work in the same preparation batch as the Blank's result. This is likely to occur when the Method Blank is associated with reanalyses of selected work for a few samples in the SDG.

The following qualifiers are defined by the DVD system:

- U The RESULT is less than the MDA (Minimum Detectable Activity).

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DATA SHEET

If the MDA is blank, the ERROR is used as the limit.

- J The RESULT is less than the RDL (Required Detection Limit) and no U qualifier is assigned.
 - B A Method Blank associated with this sample had a result without a U flag and, after correcting for possibly different aliquots, that result is greater than or equal to the MDA for this sample.
- Normally, B is not assigned if U is. When method blank subtraction is shown on this report, B flags are assigned based on the unsubtracted values while U's are assigned based on the subtracted ones. Both flags can be assigned in this case.
- For each sample result, all Method Blank results in the same preparation batch are compared. The Method Summary Report documents this and other QC relationships.
- L Some Lab Control Sample that QC's this sample had a low recovery. The lab can disable assignment of this qualifier.
 - H Similar to 'L' except the recovery was high.
 - P The RESULT is 'preliminary'.
 - X Some data necessary to compute the RESULT, ERROR or MDA was manually entered or modified.
 - 2 There were two or more results available for this analyte. The reported result may not be the same as in the raw data.

Other qualifiers are lab defined. Definitions should be in the SDG narrative.

The following values are underlined to indicate possible problems:

- * An MDA is underlined if it is bigger than its RDL.

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DATA SHEET

- * An ERROR is underlined if the 1.645 sigma counting error is bigger than both the MDA and the RESULT, implying that the MDA may not be a good estimate of the 'real' minimum detectable activity.
- * A negative RESULT is underlined if it is less than the negative of its 2 sigma counting ERROR.
- * When reporting a Method Blank, a RESULT is underlined if greater than its MDA. If the MDA is blank, the 2 sigma counting error is used in the comparison.

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LAB CONTROL SAMPLE

The Lab Control Sample Report shows all results, recoveries and primary supporting information for one Lab Control Sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. Refer to its Report Guide for details.
- * An amount ADDED is the lab's value for the actual amount spiked into this sample with its ERROR an estimate of the error of this amount.

An amount added is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is RESULT divided by ADDED expressed as a percent.
- * The first, computed limits for the recovery reflect:
 1. The error of RESULT, including that introduced by rounding the result prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.
 2. The error of ADDED.
 3. A lab specified, per analyte bias. The bias changes the center of the computed limits.
- * The second limits are protocol defined upper and lower QC limits for the recovery.
- * The recovery is underlined if it is outside either of these ranges.

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DUPLICATE

The Duplicate Report shows all results, differences and primary supporting information for one Duplicate and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Duplicate and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Duplicate has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * The RPD (Relative Percent Difference) is the absolute value of the difference of the RESULTS divided by their average expressed as a percent.

If both RESULTS are less than their MDAs, no RPD is computed and a '-' is printed.

For an analyte, if the lab did work for both samples but has data for only one, the MDA from the sample with data is used as the other's result in the RPD.

- * The first, computed limit is the sum, as square root of sum of squares, of the errors of the results divided by the average result as a percent, hence the relative error of the difference rather than the error of the relative difference. The errors include those introduced by rounding the RESULTS prior to printing.

If this limit is labeled TOT, it includes the preparation error in the RESULTS. If labeled CNT, it does not.

This value reported for this limit is at most 999.

- * The second limit for the RPD is the larger of:
 1. A fixed percentage specified in the protocol.

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DUPLICATE

2. A protocol factor (typically 2) times the average MDA as a percent of the average result. This limit applies when the results are close to the MDAs.

- * The RPD is underlined if it is greater than either limit.
- * If specified by the lab, the second limit column is replaced by the Difference Error Ratio (DER), which is the absolute value of the difference of the results divided by the quadratic sum of their one sigma errors, the same errors as used in the first limit.

Except for differences due to rounding, the DER is the same as the RPD divided by the first RPD limit with the limit scaled to 1 sigma.

- * The DER is underlined if it is greater than the sigma factor, typically 2 or 3, shown in the header for the first RPD limit.

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MATRIX SPIKE

The Matrix Spike Report shows all results, recoveries and primary supporting information for one Matrix Spike and associated Original sample.

The following notes apply to this report:

- * All fields in common with the Data Sheet Report have similar usage. This applies both to the Spiked and Original sample data. Refer to the Data Sheet Report Guide for details.

If the Spike has data for a TEST and the lab did not do this test to the Original, the Original's RESULTS are underlined.

- * An amount ADDED is the lab's value for the actual amount spiked into the Spike sample with its ERROR an estimate of the error of this amount.

An amount is underlined if its ratio to the corresponding RDL is outside protocol specified limits.

- * REC (Recovery) is the Spike RESULT minus the Original RESULT divided by ADDED expressed as a percent.

- * The first, computed limits for the recovery reflect:

1. The errors of the two RESULTS, including those introduced by rounding them prior to printing.

If the limits are labeled (TOTAL), they include preparation error in the result. If labeled (COUNT), they do not.

2. The error of ADDED.

3. A lab specified, per analyte bias. The bias changes the center of the computed limits.

- * The second limits are protocol defined upper and lower QC limits

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MATRIX SPIKE

for the recovery.

These limits are left blank if the Original RESULT is more than a protocol defined factor (typically 4) times ADDED. This is a way of accounting for that when the spike is small compared to the amount in the original sample, the recovery is unreliable.

- * The recovery is underlined (out of spec) if it is outside either of these ranges.

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METHOD SUMMARY

The Method Summary Report has two tables. One shows up to five results measured using one method. The other has performance data for the method. There is one report for each TEST, as used on the Data Sheet Report.

The following notes apply to this report:

- * Each table is subdivided into sections, one for each preparation batch. A preparation batch is a group of aliquots prepared at roughly the same time in one work area of the lab using the same method.

There should be Lab Control Sample and Method Blank results in each preparation batch since this close correspondence makes the QC meaningful. Depending on lab policy, Duplicates need not occur in each batch since they QC sample dependencies such as matrix effects.

- * The RAW TEST column shows the test code used in the raw data to identify a particular analysis if it is different than the test code in the header of the report. This occurs in special cases due to method specific details about how the lab labels work.

The Lab Sample or Planchet ID combined with the (Raw) Test Code and Suffix uniquely identify the raw data for each analysis.

- * If a result is less than both its MDA and RDL, it is replaced by just 'U' on this report. If it is greater than or equal to the RDL but less than the MDA, the result is shown with a 'U' flag.

The J and X flags are as on the data sheet.

- * Non-U results for Method Blanks are underlined to indicate possible contamination of other samples in the preparation batch. The Method Blank Report has supporting data.
- * Lab Control Sample and Matrix Spike results are shown as: ok, No data, LOW or HIGH, with the last two underlined. 'No data'

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G U I D E , c o n t .

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M E T H O D S U M M A R Y

means no amount ADDED was specified. 'LOW' and 'HIGH' correspond to when the recovery is underlined on the Lab Control Sample or Matrix Spike Report. See these reports for supporting data.

- * Duplicate sample results are shown as: ok, No data, or OUT, with the last two underlined. 'No data' means there was no original sample data found for this duplicate. 'OUT' corresponds to when the RPD is underlined on the Duplicate Report. See this report for supporting data.
- * If the MDA column is labeled 'MAX MDA', there was more than one result measured by the reported method and the MDA shown is the largest MDA. If not all these results have the same RDL, the MAX MDA reflects only those results with RDL equal to the smallest one.

MDAs are underlined if greater than the printed RDL.
- * Aliquots are underlined if less than the nominal value specified for the method.
- * Preparation factors are underlined if greater than the nominal value specified for the method.
- * Dilution factors are underlined if greater than the nominal value specified for the method.
- * Residues are underlined if outside the range specified for the method. Residues are not printed if yields are.
- * Yields, which may be gravimetric, radiometric or some type of recovery depending on the method, are underlined if outside the range specified for the method.
- * Efficiencies are underlined if outside the range specified for the method. Efficiencies are detector and geometry dependent so this test is only approximate.

R E P O R T G U I D E S

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S U M M A R Y D A T A S E C T I O N

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- * Count times are underlined if less than the nominal value specified for the method.
- * Resolutions (as FWHM; Full Width at Half Max) are underlined if greater than the method specified limit.
- * Tracer drifts are underlined if their absolute values are greater than the method specified limit. Tracer drifts are not printed if percent moistures are.
- * Days Held are underlined if greater than the holding time specified in the protocol.
- * Analysis dates are underlined if before their planchet's preparation date or, if a limit is specified, too far after it.

For some methods, ratios as percentages and error estimates for them are computed for pairs of results. A ratio column header like '1+3' means the ratio of the first result column and the third result column.

Ratios are not computed for Lab Control Sample, Method Blank or Matrix Spike results since their matrices are not necessarily similar to client samples'.

The error estimate for a ratio of results from one planchet reflects only counting errors since other errors should be correlated. For a ratio involving different planchets, if QC limits are computed based on total errors, the error for the ratio allows for the preparation errors for the planchets.

The ratio is underlined (out of spec) if the absolute value of its difference from the nominal value is greater than its error estimate. If no nominal value is specified, this test is not done.

For Gross Alpha or Gross Beta results, there may be a column showing the sum of other Alpha or Beta emitters. This sum includes all relevant

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results in the DVD database, whether reported or not. Results in the sum are weighted by a particles/decay value specified by the lab for each relevant analyte. Results less than their MDA are not included. No sums are computed for Lab Control, Method Blank or Matrix Spike samples since their various planchets may not be physically related.

If a ratio of total isotopic to Gross Alpha or Beta is shown, the error for the ratio reflects both the error in the Gross result and the sum, as square root of sum of squares, of the errors in the isotopic results.

For total elemental uranium or thorium results, there may be a column showing the total weight computed from associated isotopic results. Ignoring results less than their MDAs, this is a weighted sum of the isotopic results. The weights depend on the molecular weight and half-life of each isotope so as to convert activities (decays) to weight (atoms).

If a ratio of total computed to measured elemental uranium or thorium is shown, the error for the ratio reflects the errors in all the measurements.

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COLLECTOR NCO Sampler <i>Mou/er</i>	COMPANY CONTACT Trent, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE 7N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION B-C6353-S	PROJECT DESIGNATION Aquifer Tube Installation Sampling and Analysis in the 200-PO-1 OU (Shore)	<i>H3986 (7214)</i>	SAF NO. F08-086	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>GRP-08-06</i>	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA 122588ES10	METHOD OF SHIPMENT FEDERAL EXPRESS	

SHIPPED TO Eberline Services	OFFSITE PROPERTY NO. See PTR <i>22520</i>	BILL OF LADING/AIR BILL NO. See PTR <i>7993-7996-3565</i>
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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 Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	None	HNO3 to pH <2	HNO3 to pH <2
		TYPE OF CONTAINER	G/P	G/P	G/P
		NO. OF CONTAINER(S)	4	1	1
		VOLUME	1000mL	1000mL	1000mL
SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	Iodine-129;	Isotopic Protactinium;	Selenium-79;	
		<i>031850</i>	<i>031850</i>	<i>031850</i>	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1TRL0	WATER	9/23/08	1030	-	-	-							

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.	
<i>Silverson</i>	<i>9/23/08-1400</i>	<i>MO413 FRIDGE 2</i>	<i>9/23/08-1400</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>MO413 Fridge 2</i>	<i>9-24-08 0800</i>	<i>Dennolly</i>	<i>9-24-08 0800</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>Dennolly</i>	<i>9-24-08 1400</i>	<i>Paul Ex</i>			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>Paul Ex</i>		<i>Paul Ex</i>	<i>09/25/08 09:15</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F08-086-022	PAGE 1 OF 1							
COLLECTOR NCO Sampler <i>Rosanne/Trent White</i>		COMPANY CONTACT Trent, SJ		TELEPHONE NO. 373-5869		PROJECT COORDINATOR WIDRIG, DL		PRICE CODE 7N	DATA TURNAROUND 45 Days / 45 Days					
SAMPLING LOCATION C-C6356-S		PROJECT DESIGNATION Aquifer Tube Installation Sampling and Analysis in the 200-PO-1 OU (Skorel) <i>H3886 (7214)</i>			SAF NO. F08-086		AIR QUALITY <input type="checkbox"/>							
ICE CHEST NO. <i>GMP-04-03</i>		FIELD LOGBOOK NO. <i>HNF-W-451-3</i>		ACTUAL SAMPLE DEPTH		COA 122588ES10		METHOD OF SHIPMENT FEDERAL EXPRESS						
SHIPPED TO Eberline Services		OFFSITE PROPERTY NO. See PTR <i>22539</i>			BILL OF LADING/AIR BILL NO. See PTR <i>7911-4590-9732</i>									
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 Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)		PRESERVATION		None	HNO3 to pH <2	HNO3 to pH <2							
			TYPE OF CONTAINER		G/P	G/P	G/P							
			NO. OF CONTAINER(S)		4	1	1							
			VOLUME		1000mL	1000mL	1000mL							
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		Iodine-129;	Isotopic Protactinium;	Selenium-79;							
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	<i>03008</i>	<i>→</i>									
B1TRL1	WATER	<i>9-24-08</i>	<i>08:55</i>	✓	✓	✓								
CHAIN OF POSSESSION					SIGN/ PRINT NAMES					SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME				** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.				
<i>MA White to YMA White</i>		<i>9-24-08 1430</i>		<i>FED EX</i>										
<i>FED EX</i>				<i>HW</i>		<i>09/25/08 09:15</i>								
LABORATORY SECTION		RECEIVED BY			TITLE					DATE/TIME				
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD			DISPOSED BY					DATE/TIME				



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

SK 9/25/08

Client: F. HANFORD City MCHLAND State WA

Date/Time received 09/25/08 09:15 CoC No. FO8-086-009,022,023

Container I.D. No. GRP-08-06 Requested TAT (Days) 45 P.O. Received Yes [] No []

INSPECTION

1. Custody seals on shipping container intact? Yes [] No [] N/A []
2. Custody seals on shipping container dated & signed? Yes [] No [] N/A []
3. Custody seals on sample containers intact? Yes [] No [] N/A []
4. Custody seals on sample containers dated & signed? Yes [] No [] N/A []
5. Packing material is: Wet [] Dry []
6. Number of samples in shipping container: 3 Sample Matrix W
7. Number of containers per sample: 6 (Or see CoC _____)
8. Samples are in correct container Yes [] No []
9. Paperwork agrees with samples? Yes [] No []
10. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels []
11. Samples are: In good condition [] Leaking [] Broken Container [] Missing []
12. Samples are: Preserved [] Not preserved [] pH 1/7 Preservative _____
13. Describe any anomalies: _____

14. Was P.M. notified of any anomalies? Yes [] No [] Date _____

15. Inspected by [Signature] Date: 09/25/08 Time: 10:00

Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	Wipe	Customer Sample No.	Beta/Gamma cpm	Ion Chamber mR/hr	wipe
<u>All samples</u>	<u>260</u>						

Ion Chamber Ser. No. _____

Calibration date _____

Alpha Meter Ser. No. _____

Calibration date _____

Beta/Gamma Meter Ser. No. 100482

Calibration date 10 JUL 08