Analytical Data Package Prepared For

CH2M Hill Plateau Remediation

Radiochemical Analysis By

TestAmerica Inc TARL

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Data Package Contains _____ Pages

Report Nbr: 56619

AUGUST 21, 2013

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W06584	S13-007	B2PLM5	J3G150418-1	M1C3M1AA	9M1C3M10	3204055
	A13-007	B2PK91	J3G150422-1	M1C3X1AA	9M1C3X10	3204055
	S13-007	B2PJV6	J3G170427-1	M1D791AA	9M1D7910	3204055
		B2PJW8	J3G170427-2	M1D8A1AA	9M1D8A10	3204055
	A13-007	B2PK65	J3G170428-1	M1D8D1AA	9M1D8D10	3204055
		B2PK67	J3G170428-2	M1D8E1AA	9M1D8E10	3204055
		B2PK71	J3G170428-3	M1D8F1AA	9M1D8F10	3204055
		B2PK73	J3G170428-4	M1D8G1AA	9M1D8G10	3204055
		B2PK75	J3G170428-5	M1D8H1AA	9M1D8H10	3204055
	S13-007	B2PJK6	J3G170430-1	M1D8K1AA	9M1D8K10	3204055
	A13-007	B2PK59	J3G180439-1	M1EJM1AA	9M1EJM10	3204055
		B2PK63	J3G180439-2	M1EJP1AA	9M1EJP10	3204055
	S13-007	B2PJ81	J3G180441-1	M1EJ81AA	9M1EJ810	3204056
		B2PJ36	J3G220445-1	M1FF91AA	9M1FF910	3204056
		B2PJM7	J3G220445-2	M1FGA1AA	9M1FGA10	3204055

Comments:

Report Nbr: 56619

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W06584	A13-007	B2PK53	J3G220446-1	M1FGC1AA	9M1FGC10	3204055
		B2PK55	J3G220446-2	M1FGD1AA	9M1FGD10	3204055
		B2PK61	J3G220446-3	M1FGE1AA	9M1FGE10	3204055
		B2PK69	J3G220446-4	M1FGF1AA	9M1FGF10	3204055
		B2PK77	J3G220446-5	M1FGG1AA	9M1FGG10	3204055

Comments:

AUGUST 21, 2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

CH2M Hill Plateau Remediation Company
P.O. Box 1600
Mail Stop – R3-60
Richland, WA 99352

August 21, 2013

Attention: Scot Fitzgerald

SAF Number	:	A13-007, S13-007
Date SDG Closed	:	July 18, 2013
Number of Samples	:	Twenty (20)
Sample Type	:	Water
SDG Number	:	W06584
Data Deliverable	:	30-Day / Summary

CASE NARRATIVE

I. Introduction

Between July 10, 2013 and July 18, 2013, twenty water samples were received at TestAmerica (TARL). Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the CH2M specific IDs:

CH2M ID#	TARL ID#	DATE OF RECEIPT	MATRIX
B2PLM5	M1C3M	7/10/13	WATER
B2PK91	M1C3X	7/11/13	WATER
B2PJV6	M1D79	7/15/13	WATER
B2PJW8	M1D8A	7/15/13	WATER
B2PK65	M1D8D	7/16/13	WATER
B2PK67	M1D8E	7/16/13	WATER
B2PK71	M1D8F	7/16/13	WATER
B2PK73	M1D8G	7/16/13	WATER
B2PK75	M1D8H	7/16/13	WATER
B2PJK6	M1D8K	7/16/13	WATER
B2PK59	M1EJM	7/17/13	WATER
B2PK63	M1EJP	7/17/13	WATER

B2PJ81	M1EJ8	7/17/13	WATER
B2PJ36	MAFF9	7/18/13	WATER
B2PJM7	MAFGA	7/18/13	WATER
B2PK53	MAFGC	7/18/13	WATER
B2PK55	MAFGD	7/18/13	WATER
B2PK61	MAFGE	7/18/13	WATER
B2PK69	MAFGF	7/18/13	WATER
B2PK77	MAFGG	7/18/13	WATER

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

During the bi-weekly phone call on January 9, 2013 TARL was notified that all groundwater samples received after January 1, 2013 will have a 30 day turnaround time regardless if the chain of custodies have a turn around time that is greater than 30 days.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Gamma Spectroscopy
Iodine-129 (LL) by method RL-GAM-002
Liquid Scintillation Counting
Carbon-14 by method RL-LSC-008

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Gamma Spectroscopy

Iodine-129 (LL) by method RL-GAM-002:

The LCS, batch blank, samples and sample duplicate (B2PLM5) results are within contractual requirements.

Liquid Scintillation Counting

Carbon-14 by method RL-LSC-008:

The LCS, batch blank, samples and sample duplicate (B2PJ81) results are within contractual requirements.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

Sandra Seger
Project Manager

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**TestAmerica Richland's SOP No.**
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/? n), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) ***u_c - Combined Uncertainty.***	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, ***u_c the combined uncertainty.*** The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC|MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the **Work Order** Number.
RER	The equation Replicate Error Ratio = (S-D)/[sqrt($TPUs^2$ + $TPUd^2$)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

8/21/2013 9:40:15 AM

TestAmerica Inc Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 56619 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06584.Edd, h:\Reportdb\edd\FeadIV\Rad\56619.Ed

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1C3M10	B2PLM5		MW6-SBB-A1	S13-007	W06584					07/09/2013 10:23

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	7.17E+00	pCi/L	9.3E-01	9.3E-01		2.58E-01	94.9	I129LL_SEP_LEPS	3.8115E+00	L	08/13/2013 16:41	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1C3X10	B2PK91		MW6-SBB-A1	A13-007	W06584					07/10/2013 12:11

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	-1.27E-02	pCi/L	1.1E-01	1.1E-01	U	1.84E-01	96.8	I129LL_SEP_LEPS	3.8456E+00	L	08/13/2013 20:33	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1D7910	B2PJV6		MW6-SBB-A1	S13-007	W06584					07/11/2013 12:30

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	2.21E+00	pCi/L	3.7E-01	3.7E-01		1.84E-01	92.4	I129LL_SEP_LEPS	3.9239E+00	L	08/13/2013 20:34	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1D8A10	B2PJW8		MW6-SBB-A1	S13-007	W06584					07/11/2013 13:34

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	1.89E-01	pCi/L	1.9E-01	1.9E-01	U	1.72E-01	92.4	I129LL_SEP_LEPS	3.9095E+00	L	08/13/2013 23:57	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1D8D10	B2PK65		MW6-SBB-A1	A13-007	W06584					07/16/2013 09:41

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	9.44E-02	pCi/L	9.3E-02	9.3E-02	U	1.83E-01	94.1	I129LL_SEP_LEPS	3.8929E+00	L	08/13/2013 23:58	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1D8E10	B2PK67		MW6-SBB-A1	A13-007	W06584					07/16/2013 11:40

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	2.61E-01	pCi/L	1.5E-01	1.5E-01		1.97E-01	94.1	I129LL_SEP_LEPS	3.8193E+00	L	08/14/2013 07:41	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1D8F10	B2PK71		MW6-SBB-A1	A13-007	W06584					07/16/2013 09:00

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	1.72E-01	pCi/L	1.5E-01	1.5E-01		1.59E-01	94.3	I129LL_SEP_LEPS	3.8518E+00	L	08/14/2013 07:43	I

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rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

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AUGUST 21, 2013

AUGUST 21, 2013

8/21/2013 9:40:15 AM

TestAmerica Inc Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 56619 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06584.Edd, h:\Reportdb\edd\FeadIV\Rad\56619.Ed

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1D8G10	B2PK73		MW6-SBB-A1	A13-007	W06584					07/16/2013 10:28

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	1.10E+00	pCi/L	3.1E-01	3.1E-01		1.89E-01	94.3	I129LL_SEP_LEPS	3.8312E+00	L	08/14/2013 11:44	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1D8H10	B2PK75		MW6-SBB-A1	A13-007	W06584					07/16/2013 12:21

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	3.46E+00	pCi/L	5.1E-01	5.1E-01		1.92E-01	94.1	I129LL_SEP_LEPS	3.8668E+00	L	08/14/2013 11:46	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1D8K10	B2PJK6		MW6-SBB-A1	S13-007	W06584					07/15/2013 11:03

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	2.56E+00	pCi/L	3.9E-01	3.9E-01		2.43E-01	95.4	I129LL_SEP_LEPS	3.8844E+00	L	08/14/2013 16:35	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1EJ810	B2PJ81		MW6-SBB-A1	S13-007	W06584					07/17/2013 11:57

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204056	C-14	14762-75-5	-6.16E-01	pCi/L	7.1E+00	9.6E+00	U	1.69E+01	100.0	C14_LSC	7.54E-02	L	08/05/2013 20:14	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1EJM10	B2PK59		MW6-SBB-A1	A13-007	W06584					07/16/2013 13:48

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	2.93E+00	pCi/L	4.7E-01	4.7E-01		2.36E-01	100.3	I129LL_SEP_LEPS	3.7943E+00	L	08/14/2013 16:37	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1EJP10	B2PK63		MW6-SBB-A1	A13-007	W06584					07/16/2013 13:14

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	1.55E-01	pCi/L	1.6E-01	1.6E-01	U	1.69E-01	100.0	I129LL_SEP_LEPS	3.8806E+00	L	08/14/2013 20:14	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1FF910	B2PJ36		MW6-SBB-A1	S13-007	W06584					07/17/2013 13:07

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204056	C-14	14762-75-5	-3.34E+00	pCi/L	7.0E+00	9.5E+00	U	1.69E+01	100.0	C14_LSC	7.54E-02	L	08/05/2013 22:16	I

TestAmerica Inc

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

2

8/21/2013 9:40:15 AM

TestAmerica Inc Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 56619 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06584.Edd, h:\Reportdb\edd\FeadIV\Rad\56619.Ed

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1FGA10	B2PJM7		MW6-SBB-A1	S13-007	W06584					07/18/2013 11:49

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	1.08E+00	pCi/L	2.6E-01	2.6E-01		1.94E-01	104.9	I129LL_SEP_LEPS	3.7795E+00	L	08/14/2013 20:15	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1FGC10	B2PK53		MW6-SBB-A1	A13-007	W06584					07/18/2013 08:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	-5.27E-02	pCi/L	9.1E-02	9.1E-02	U	1.54E-01	100.8	I129LL_SEP_LEPS	3.8365E+00	L	08/14/2013 23:56	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1FGD10	B2PK55		MW6-SBB-A1	A13-007	W06584					07/18/2013 11:42

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	4.32E-01	pCi/L	1.9E-01	1.9E-01		1.40E-01	104.3	I129LL_SEP_LEPS	3.8875E+00	L	08/14/2013 23:57	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1FGE10	B2PK61		MW6-SBB-A1	A13-007	W06584					07/18/2013 12:36

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	5.70E-01	pCi/L	2.3E-01	2.3E-01		1.79E-01	102.2	I129LL_SEP_LEPS	3.7602E+00	L	08/15/2013 07:29	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1FGF10	B2PK69		MW6-SBB-A1	A13-007	W06584					07/18/2013 08:14

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	5.75E-01	pCi/L	1.7E-01	1.7E-01		1.55E-01	101.1	I129LL_SEP_LEPS	3.8854E+00	L	08/15/2013 07:31	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9M1FGG10	B2PK77		MW6-SBB-A1	A13-007	W06584					07/18/2013 13:17

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3204055	I-129	15046-84-1	3.01E+00	pCi/L	4.5E-01	4.5E-01		2.22E-01	101.1	I129LL_SEP_LEPS	3.887E+00	L	08/15/2013 11:43	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Wednesday, August 21, 2013

TestAmerica Inc QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06584.Edd, h:\Reportdb\edd\FeadIV\Rad\56619.Ed

Lab Sample Id: M1FPJ1AB
Client Id: NA
Moisture/Solids%*:

Sdg/Rept Nbr: W06584 56619
Matrix: WATER WATER
QC Type: BLK

Collection Date: 07/09/2013 10:23
Sample On Date:
Received Date: 07/10/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AW	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
3204055	I-129	-6.33E-03	pCi/L	8.1E-02	U	1.48E-01	91.1		I129LL_SEP_L	3.9998E+00	08/15/2013				D
BLK	15046-84-1			8.1E-02						L	11:44				

AUGUST 21, 2013

TestAmerica Inc
rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

1

Wednesday, August 21, 2013

TestAmerica Inc QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06584.Edd, h:\Reportdb\edd\FeadIV\Rad\56619.Ed

Lab Sample Id: M1FPK1AB **Sdg/Rept Nbr:** W06584 56619 **Collection Date:** 07/17/2013 11:57

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 07/17/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AY	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
3204056	C-14	-7.92E-01	pCi/L	9.6E+00	U	1.69E+01	100.0		C14_LSC	7.53E-02	08/05/2013				D
BLK	14762-75-5			7.1E+00						L	23:17				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Wednesday, August 21, 2013

TestAmerica Inc QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06584.Edd, h:\Reportdb\edd\FeadIV\Rad\56619.Ed

Lab Sample Id: M1FPJ1CS **Sdg/Rept Nbr:** W06584 56619 **Collection Date:** 07/09/2013 10:23

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 07/10/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AX	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
3204055	I-129	8.89E+00	pCi/L	1.1E+00		2.78E-01	99.2	9.64E+00	I129LL_SEP_L	3.9714E+00	08/15/2013			70	D
BS	15046-84-1			1.1E+00				92.3		L	16:40			130	

AUGUST 21, 2013

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Wednesday, August 21, 2013

TestAmerica Inc QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06584.Edd, h:\Reportdb\edd\FeadIV\Rad\56619.Ed

Lab Sample Id: M1FPK1CS **Sdg/Rept Nbr:** W06584 56619 **Collection Date:** 07/17/2013 11:57

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 07/17/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AZ	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
3204056	C-14	4.96E+02	pCi/L	4.4E+01		1.71E+01	100.0	4.93E+02	C14_LSC	7.48E-02	08/06/2013			70	D
BS	14762-75-5			1.7E+01				100.8		L	00:19			130	

AUGUST 21, 2013

TestAmerica Inc
rptFeadRadEdd v3.68

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Wednesday, August 21, 2013

TestAmerica Inc QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06584.Edd, h:\Reportdb\edd\FeadIV\Rad\56619.Ed

Lab Sample Id: M1C3M1CR **Sdg/Rept Nbr:** W06584 56619 **Collection Date:** 07/09/2013 10:23

Client Id: B2PLM5 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 07/10/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S13-007	MW6-SBB-A19981								AU	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
3204055	I-129	7.25E+00	pCi/L	8.6E-01		2.46E-01	95.1		I129LL_SEP_L	3.8204E+00	08/13/2013	1.0	0.1		D
DUP	15046-84-1	7.17E+00		8.6E-01						L	16:42	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

AUGUST 21, 2013

Wednesday, August 21, 2013

TestAmerica Inc QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06584.Edd, h:\Reportdb\edd\FeadIV\Rad\56619.Ed

Lab Sample Id: M1EJ81CR **Sdg/Rept Nbr:** W06584 56619 **Collection Date:** 07/17/2013 11:57

Client Id: B2PJ81 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 07/17/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
S13-007	MW6-SBB-A19981								AV	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
3204056	C-14	6.91E+00	pCi/L	9.9E+00	U	1.70E+01	100.0		C14_LSC	7.50E-02	08/05/2013	239.2	1.1		D
DUP	14762-75-5	-6.16E-01		7.4E+00						L	21:15	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

AUGUST 21, 2013

AUGUST 21, 2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

8/20/2013 2:17:17 PM

Lot No., Due Date: J3G150418,J3G150422,J3G170427,J3G170428,J3G170430,J3G180439,J3G220445,J3G220446;
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 3204055; RGAMLEPS Gamma by LEPS
SDG, Matrix: W06584; WATER

1.0 COC

	Yes	No	N/A
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		

2.0 QC Batch

	Yes	No	N/A
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?	✓		

3.0 QC & Samples

	Yes	No	N/A
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		

4.0 Raw Data

	Yes	No	N/A
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?	✓		
4.4 Were spectra reviewed/meet contractual requirements?	✓		
4.5 Were raw counts reviewed for anomalies?	✓		

5.0 Other

	Yes	No	N/A
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level Lisa Antonsen Date 8/20/13

TestAmerica Richland
QAS_RADCALCv4.8.44

Page 1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 3204055

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis			
1. Are the sample yields within acceptance criteria?	✓		
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples			
1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other			
1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review: Sandra Seger Date: 8-21-13

LS-038B, Rev. 10, 9/07

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist
RADIOCHEMISTRY, First Level Review

8/9/2013 2:25:47 PM

Lot No., Due Date: J3G180441,J3G220445; 08/19/2013
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 3204056; RC14 C-14 by LSC
SDG, Matrix: W06584; WATER

	Yes	No	N/A
1.0 COC			
1.1 Is the ICOC page complete; includes all applicable analysis, dates, SOP numbers, and revisions?	✓		
2.0 QC Batch			
2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet?	✓		
2.2 Are the QC appropriate for the analysis included in the batch?	✓		
2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc?	✓		
2.4 Does the Worksheets include a Tracer Vial label for each sample?			✓
3.0 QC & Samples			
3.1 Is the blank results, yield, and MDA within contract limits?	✓		
3.2 Is the LCS result, yield, and MDA within contract limits?	✓		
3.3 Are the MS/MSD results, yields, and MDA within contract limits?			✓
3.4 Are the duplicate result, yields, and MDAs within contract limits?	✓		
3.5 Are the sample yields and MDAs within contract limits?	✓		
4.0 Raw Data			
4.1 Were results calculated in the correct units?	✓		
4.2 Were analysis volumes entered correctly?	✓		
4.3 Were Yields entered correctly?			✓
4.4 Were spectra reviewed/meet contractual requirements?			✓
4.5 Were raw counts reviewed for anomalies?	✓		
5.0 Other			
5.1 Are all nonconformances included and noted?			✓
5.2 Are all required forms filled out?	✓		
5.3 Was the correct methodology used?	✓		
5.4 Was transcription checked?	✓		
5.5 Were all calculations checked at a minimum frequency?			✓
5.6 Are worksheet entries complete and correct?	✓		

6.0 Comments on any No response:

First Level [signature] Date 8/9/13

TestAmerica Richland
QAS_RADCALCv4.8.44

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 3204056

Review Item	Yes (√)	No (√)	NA (√)
A. Sample Analysis 1. Are the sample yields within acceptance criteria?			✓
2. Is the sample Minimum Detectable Activity < the Contract Detection Limit?	✓		
3. Are the correct isotopes reported?	✓		
B. QC Samples 1. Is the Minimum Detectable Activity for the blank result ≤ the Contract Detection Limit?	✓		
2. Does the blank result meet the Contract criteria?	✓		
3. Is the blank result < the Contract Detection Limit?	✓		
4. Is the blank result > the Contract Detection Limit but the sample result < the Contract Detection Limit?			✓
5. Is the LCS recovery within contract acceptance criteria?	✓		
6. Is the LCS Minimum Detectable Activity ≤ the Contract Detection Limit?	✓		
7. Do the MS/MSD results and yields meet acceptance criteria?			✓
8. Do the duplicate sample results and yields meet acceptance criteria?	✓		
C. Other 1. Are all Non-conformances included and noted?			✓
2. Are all required forms filled out?	✓		
3. Was the correct methodology used?	✓		
4. Was transcription checked?	✓		
5. Were all calculations checked at a minimum frequency?	✓		
6. Were units checked?	✓		

Comments on any "No" response: _____

Second Level Review: Sandra Seger Date: 8-12-13

LS-038B, Rev. 10, 9/07

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S13-007-266**

Page 1 of 1

Collector	SCOTT KING	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S13-007	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, JULY 2013	**Logbook No.**	HNF-N-506 55 / 65	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	30 Days **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PLM5	N	W	JUL 09 2013	1023	1x20-mL P	Activity Scan	6 Months	None
B2PLM5	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MIC3M	6 Months	None

J3G150418
W06584

J3G150418

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
SCOTT KING	Scott King		JUL 09 2013 1420	SSU #1			JUL 09 2013 1420
SSU #1			7-10-13 0800	ARMcIntyre			7-10-13 0800
ARMcIntyre			7-10-13 1210	J. Bock	J. Bock	TALR	7-10-13 1210

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PRINTED O 6/5/2013

A-6004-842 (REV 2)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 7-10-13 | 1210 Container GM Screen Result: (Airlock) 20 cpm Initials [JB]
Sample GM Screen Result (Sample Receiving) 40 cpm Initials [JB]

Client: PGW SDG #: W06584 SAF #: S13-007 NA [JB]

Lot Number: J3G150418

Chain of Custody # S13-007-266

Shipping Container ID or Air Bill Number : hand de Liv. NA [SKS]

Samples received inside shipping container/cooler/box Yes [JB] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [JB]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [JB]
3. Cooler temperature: ~~3.8~~ SKS 7-15-13 NA [SKS]
4. Vermiculite/packing materials is NA [JB] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [JB] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1 x vial 20; 2 x 4LP
8. Sample holding times exceeded? NA [ ] Yes [ ] No [JB]
9. Samples have: ____tape ____hazard labels JB custody seals JB appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) JB I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
JB are in good condition ____are leaking ____are broken
JB have air bubbles (Only for samples requiring no head space) ____Other ____
12. Sample pH appropriate for analysis requested Yes [JB] No [ ] NA [ ]
(If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [JB]
14. Description of anomalies (include sample numbers): NA [JB]
15. Sample Location, Sample Collector Listed on COC? * Yes [JB] No [ ]
*For documentation only. No corrective action needed.
16. Additional Information: N/A

[ ] Client/Courier denied temperature check. SKS Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: Julie Beck Date: 7-10-13

Client Notification needed? Yes [ ] No [SKS] Date:
By:
Person contacted:

SKS No action necessary; process as is

Project Manager Sandra Segre Date 7-15-13

LS-023 Rev. 17, 05/13

Page 1 of 1

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **A13-007-020**

Page 1 of 1

Collector	SCOTT KING	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	A13-007	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	**Logbook No.**	HNF-N-506 55/67	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	Other	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK91	N	W	JUL 10 2013	1211	1x20-mL P	Activity Scan	6 Months	None
B2PK91	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON M1C3X	6 Months	None

J3G150422
W06584

J3G150422

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
SCOTT KING	Scott King		JUL 10 2013 1440	SSU #1			JUL 10 2013 1440
SSU #1			7-11-13 0800	ARMcIntyre			7-11-13 0800
ARMcIntyre			7-11-13 1110	J. Bock	J Bock	TALR	7-11-13 1110

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

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A-6004-842 (REV 2)

TestAmerica
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Sample Check-in List

Date/Time Received: ~~7-13~~ 7-11-13/1110 Container GM Screen Result: (Airlock) 40 cpm Initials [BS]
BS 7-11-13 Sample GM Screen Result (Sample Receiving) 20 cpm Initials [BS]

Client: PGW SDG #: WO65584 SAF #: A13-007 NA [ ]

Lot Number: J3G150422

Chain of Custody # A13-007-020

Shipping Container ID or Air Bill Number : hand del. NA [SKS]

Samples received inside shipping container/cooler/box Yes [BS] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [BS]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [BS]
3. Cooler temperature: ~~4.0~~ °C SKS 7-15-13 NA [BS]
4. Vermiculite/packing materials is NA [BS] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [BS] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1 x Vial 20; 2 x 4Lp
8. Sample holding times exceeded? NA [ ] Yes [ ] No [BS]
9. Samples have: ____ tape ____ hazard labels BS custody seals BS appropriate sample labels
10. Matrix: ____ A (FLT, Wipe, Solid, Soil) BS I (Water) ____ S (Air, Niosh 7400) ____ T (Biological, Ni-63)
11. Samples:
    BS are in good condition ____ are leaking ____ are broken
    ____ have air bubbles (Only for samples requiring no head space) ____ Other ____
12. Sample pH appropriate for analysis requested Yes [BS] No [ ] NA [ ]
    (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [BS]
14. Description of anomalies (include sample numbers): NA [BS]
15. Sample Location, Sample Collector Listed on COC? * Yes [BS] No [ ]
    *For documentation only. No corrective action needed.
16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [SKS] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: [signature] Date: 7-11-13

Client Notification needed? Yes [ ] No [SKS] Date: ____
By: ____
Person contacted: ____

[SKS] No action necessary; process as is

Project Manager [signature] Date 7-15-13

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-007-098 Page 1 of 1

Collector	L.D. Wall CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	SURV, JULY 2013	Logbook No.	HNF-N-506 54 / 84	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PJV6	N	W	JUL 1 1 2013	1230	1x20-mL P	Activity Scan	6 Months	None
B2PJV6	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON m1D79	6 Months	None

J3G170427
W06584

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	L.D. Wall	L.D. Wall	JUL 1 1 2013 1445	SSU-1			JUL 1 1 2013 1445
SSU-1			7-15-13 1200				7-15-13 1200
			7-15-13 1303			J. Bock	7-15-13 1303

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

AUGUST 21, 2013

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-007-102 Page 1 of 1

Collector	L.D. Wall CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	SURV, JULY 2013	Logbook No.	HNF-N-506 54 / 84+85	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PJW8	N	W	JUL 11 2013	1334	1x20-mL P	Activity Scan	6 Months	None
B2PJW8	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MID8A	6 Months	None

J3G170427
WO6584

J3G170427

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	L.D. Wall		JUL 11 2013 1445	SSU-1			JUL 11 2013 1445
SSU-1		7-15-13	1200			7-15-13	1200
Ed Kauer		7-15-13	1303	J. Beck		TALK	7-15-13 1303

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

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A-6004-842 (REV 2)

AUGUST 21, 2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 7-15-13 | 1303 Container GM Screen Result: (Airlock) 80 cpm Initials[ ]
Sample GM Screen Result (Sample Receiving) _____ cpm Initials[ ]

Client: PGW SDG #: WD6584 SAF #: S13-007 NA [ ]

Lot Number: J3G170427

Chain of Custody # S13-007-098; 102

Shipping Container ID or Air Bill Number : hand delivered NA [ ]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: _____ °C NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 2
7. Containers received: 2 x vial 20; 4 x 4L
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: _____tape _____hazard labels _____custody seals _____appropriate sample labels
10. Matrix: _____A (FLT, Wipe, Solid, Soil) _____I (Water) _____S (Air, Niosh 7400) _____T (Biological, Ni-63)
11. Samples:
    _____are in good condition _____are leaking _____are broken
    _____have air bubbles (Only for samples requiring no head space) _____Other _____
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
    (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ] _____
15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
    *For documentation only. No corrective action needed.
16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: Jordan Bach Date: 7-15-13

Client Notification needed? Yes [ ] No [ ] Date: _____
By: _____
Person contacted: _____

[ ] No action necessary; process as is

Project Manager Sandra Seyer Date 7/22/13

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Page 1 of 1

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A13-007-007
		Page 1 of 1

Collector	Robert Crow	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	A13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	Logbook No.	HNF-N-506 54 / 86	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	Other	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK65	N	W	JUL 16 2013	0941	1x20-mL P	Activity Scan	6 Months	None
B2PK65	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MIDSD	6 Months	None

J3G170428
W06584

J3G170428

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Robert Crow	R Crow		JUL 16 2013 1300	Brothers			JUL 16 2013 1300
Brothers			7-16-13 1340	Tom McGinnis			7-16-13 1340

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

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A-6004-842 (REV 2)

AUGUST 21, 2013

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **A13-007-008**

Collector	Robert Crow	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	A13-007	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	**Logbook No.**	HNF-N-506 54/86	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	Other	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK67	N	W	JUL 16 2013	1140	1x20-mL P	Activity Scan	6 Months	None
B2PK67	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MIDSE	6 Months	None

J3G170428
W06584

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Robert Crow	R Crow		JUL 16 2013 1300	Brotherton	Brotherton		JUL 16 2013 1300
Brotherton	Brotherton		7-16-13 1340	Tom McGinnis	Tom McGinnis	TMP	7-16-13 1340

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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AUGUST 21, 2013

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A13-007-010 Page 1 of 1

Collector	SCOTT KING	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	A13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	Logbook No.	HNF-N-506 55/71	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	Other	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK71	N	W	JUL 16 2013	0900	1x20-mL P	Activity Scan	6 Months	None
B2PK71	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON m1D8F	6 Months	None

J3G170428
W06584

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
SCOTT KING			JUL 16 2013 1300	BROTHERTON			JUL 16 2013 1300
BROTHERTON			7-16-13 1340	TOM DMCGINNIS			7-16-13 1340

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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AUGUST 21, 2013

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A13-007-011 Page 1 of 1

Collector	SCOTT KING	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	A13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	Logbook No.	HNF-N-506 55 / 71	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	Other	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK73	N	W	JUL 16 2013	1028	1x20-mL P	Activity Scan	6 Months	None
B2PK73	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MID86	6 Months	None

J3G1042V
WD6584

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
SCOTT KING			JUL 16 2013 1300		J.W. BROTHERTON		JUL 16 2013 1300
Relinquished By			Date/Time	Received By			Date/Time
BROTHERTON			7-16-13 1340	TOM DM'GINNIS			7/16-13 1340
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

AUGUST 21, 2013

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A13-007-012 Page 1 of 1

Collector	SCOTT KING	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	A13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	Logbook No.	HNF-N-506 55/71	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	Other	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK75	N	W	JUL 16 2013	1221	1x20-mL P	Activity Scan	6 Months	None
B2PK75	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MIDSH	6 Months	None

J36170428
W06584

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	SCOTT KING		JUL 16 2013 1300		BROTHERTON		JUL 16 2013 1300
Relinquished By			Date/Time	Received By			Date/Time
	BROTHERTON		7-16-13 1340		TOM DMCGINNIS		7-16-13 1340
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	=	Soil	DS	=	Drum Solids
SE	=	Sediment	DL	=	Drum Liquids
SO	=	Solid	T	=	Tissue
SL	=	Sludge	WI	=	Wipe
W	=	Water	L	=	Liquid
O	=	Oil	V	=	Vegetation
A	=	Air	X	=	Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PRINTED ON 5/29/2013

A-6004-842 (REV 2)

AUGUST 21, 2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 7-16-13 1340 Container GM Screen Result: (Airlock) 40 cpm Initials[TM]
Sample GM Screen Result (Sample Receiving) 40 cpm Initials[TM]

Client: PGW SDG #: W0L6584 SAF #: A13-007 NA [ ]

Lot Number: J3G170428

Chain of Custody # A13-007-007; 008; 011; 010; 012

Shipping Container ID or Air Bill Number : Hand Delivered NA [TM]

Samples received inside shipping container/cooler/box Yes [TM] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [TM]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [TM]
3. Cooler temperature: _____ °C NA [TM]
4. Vermiculite/packing materials is NA [TM] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [TM] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 5
7. Containers received: 5 x Vial 20; 10 x 4Lp
8. Sample holding times exceeded? ~~NA [TM]~~ SKS 7/22/13 Yes [ ] No [SKS]
9. Samples have: ____tape ____hazard labels TM custody seals TM appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) TM (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
    TM are in good condition ____are leaking ____are broken
    ____have air bubbles (Only for samples requiring no head space) ____Other ____
12. Sample pH appropriate for analysis requested Yes [B] No [ ] NA [ ]
    (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [TM]
14. Description of anomalies (include sample numbers): NA [TM]
15. Sample Location, Sample Collector Listed on COC? * Yes [TM] No [ ]
    *For documentation only. No corrective action needed.
16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [TM] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: TM BMS Date: 7/16/13

Client Notification needed? Yes [ ] No [SKS] Date: _____
By: _____
Person contacted: _____

[SKS] No action necessary, process as is

Project Manager Sandra Segen Date 7/22/13

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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S13-007-091**

Page 1 of 1

Collector	F. M. Hall	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	S13-007	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, JULY 2013	**Logbook No.**	HNF-N-506 56/81	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PJK6	N	W	7/15/13	1103	1x20-mL P	Activity Scan	6 Months	None
B2PJK6	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MIDSK	6 Months	None

J3G170430
W06584

J3G170430

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
F. M. Hall	[signature]		JUL 15 2013 1400	SSU #1			JUL 15 2013 1400
SSU #1			7-16-13 0850	ARMcIntyre	[signature]		7-16-13 0850
ARMcIntyre	[signature]		7-16-13 0945	J Bock	J Bock	TALK	7-16-13 0945

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

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A-6004-842 (REV 2)

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Sample Check-in List

Date/Time Received: 7-16-13 / 0945 Container GM Screen Result: (Airlock) 60 cpm Initials [B]
Sample GM Screen Result (Sample Receiving) 40 cpm Initials [B]

Client: PGW SDG #: W0L6584 SAF #: 513-007 NA [ ]

Lot Number: J3G170430

Chain of Custody # 513-007-091

Shipping Container ID or Air Bill Number : hand de Liv. NA [SKS]

Samples received inside shipping container/cooler/box ~~Yes [B]~~ [B] 7-16-13 Continue with 1 through 4. Initial appropriate response.
No [B] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [B]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [B] [B] 7-16-13
3. Cooler temperature: _____ °C NA SKS
4. Vermiculite/packing materials is NA [SKS] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [B] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1 x vial 20; 2 x 4L
8. Sample holding times exceeded? NA [ ] Yes [ ] No [B]
9. Samples have: ____tape ____hazard labels [B] custody seals [B] appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) [B] I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
    [B] are in good condition ____are leaking ____are broken
    [B] have air bubbles (Only for samples requiring no head space) ____Other _____
12. Sample pH appropriate for analysis requested Yes [B] No [ ] NA [ ]
    (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [B]
14. Description of anomalies (include sample numbers): NA [B]
15. Sample Location, Sample Collector Listed on COC? * Yes [B] No [ ]
    *For documentation only. No corrective action needed.
16. Additional Information: 2 bottles - carried by hand.

[ ] Client/Courier denied temperature check. [N/A] Client/Courier unpack cooler.
N/A see #16 SKS 7/22/13

Sample Check-in List completed by Sample Custodian:
Signature: Jane Beck Date: 7-16-13

Client Notification needed? Yes [ ] No [SKS] Date: _____
By: _____
Person contacted: _____

[N/A] No action necessary; process as is

Project Manager Sandra Segler Date 7/22/13

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A13-007-004 Page 1 of 1

Collector	SCOTT KING	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	A13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	Logbook No.	HNF-N-506 58 / 71	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	Other	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK59	N	W	JUL 16 2013	1348	1x20-mL P	Activity Scan	6 Months	None
B2PK59	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MIESM	6 Months	None

J3G180439
W06584

J3G180439

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	SCOTT KING	Scott King	JUL 16 2013 1455	SSU #1			JUL 16 2013 1455
Relinquished By			Date/Time	Received By			Date/Time
SSU #1			7/17/13 0730	J Aguilar			7/17/13 0730
Relinquished By			Date/Time	Received By			Date/Time
J Aguilar			7/17/13 0940	J. Bock/Bock		TALR	7-17-13 0940
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A13-007-006
		Page 1 of 1

Collector	Robert Crow	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	A13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	Logbook No.	HNF-N-506 54 / 86	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	Other	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK63	N	W	JUL 16 2013	1314	1x20-mL P	Activity Scan	6 Months	None
B2PK63	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MIEJP	6 Months	None

J3G180439
W06584

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Robert Crow	R Crow		JUL 16 2013 1428	SSU-1			JUL 16 2013 1428
SSU #1			7/17/13 0730	J. Aguilar			7/17/13 0730
J Aguilar			7/17/13 0940	J. Bock		TALL	7-17-13 0940
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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Sample Check-in List

Date/Time Received: 7-17-13 0940 Container GM Screen Result: (Airlock) 60 cpm Initials [ ]
Sample GM Screen Result (Sample Receiving) 20 cpm Initials [ ]

Client: PGW SDG #: W06584 SAF #: A13-007 NA [ ]

Lot Number: J3G180439

Chain of Custody # A13-007-004, 006

Shipping Container ID or Air Bill Number : hand del. div. NA [ ]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: _____ °C NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 2
7. Containers received: 2 x vial 20, 4 x 4Lp
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: ____tape ____hazard labels ____custody seals ____appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) ____I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
    ____are in good condition ____are leaking ____are broken
    ____have air bubbles (Only for samples requiring no head space) ____Other _____
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
    (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ] _____
15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
    *For documentation only. No corrective action needed.
16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: Jule Bock Date: 7-17-13

Client Notification needed? Yes [ ] No [ ] Date: _____
By: _____
Person contacted: _____

[ ] No action necessary, process as is

Project Manager Sandra Segen Date 7-22-13

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-007-083 Page 1 of 1

Collector	SCOTT KING	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	SURV, JULY 2013	Logbook No.	HNF-N-506 56/84	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PJ81	N	W	JUL 17 2013	1157	1x20-mL P	Activity Scan	6 Months	None
B2PJ81	N	W	↓	↓	2x1-L G/P	C14_LSC: COMMON M1E58	6 Months	None

J3G180441
SDG-W06584
~~W06566~~ 7-18-13

J3G180441

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
SCOTT KING	Scott King	JUL 17 2013 1230	Christine Aguilar	Christine Aguilar	JUL 17 2013 1230
Christine Aguilar	Christine Aguilar	7-17-2013 1323	J. Bock	J. Bock TALA	7-17-2013 1323
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

AUGUST 21, 2013

AUGUST 21, 2013

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Sample Check-in List

Date/Time Received: 7-17-13 | 1323 Container GM Screen Result: (Airlock) 20 cpm Initials [ ]
Sample GM Screen Result (Sample Receiving) 20 cpm Initials [ ]

Client: PGW SDG #: W06584 SAF #: S13-007 NA [ ]

Lot Number: J3K180441

Chain of Custody # S13-007-083

Shipping Container ID or Air Bill Number : hand delv. NA [ ]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: _____ °C NA [ ]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 1
7. Containers received: 1 x vial 20; 2 x ~~4oz~~ LP 7-17-13
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: ____ tape ____ hazard labels ____ custody seals ____ appropriate sample labels
10. Matrix: ____ A (FLT, Wipe, Solid, Soil) ____ I (Water) ____ S (Air, Niosh 7400) ____ T (Biological, Ni-63)
11. Samples:
____ are in good condition ____ are leaking ____ are broken
____ have air bubbles (Only for samples requiring no head space) ____ Other _____
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
(If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ]
15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
*For documentation only. No corrective action needed.
16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: _____ Date: 7-17-13

Client Notification needed? Yes [ ] No [ ] Date: _____
By: _____
Person contacted: _____

[ ] No action necessary; process as is

Project Manager Sandra Segar Date 7-22-13

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-007-079 Page 1 of 1

Collector	SCOTT KING	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	SURV, JULY 2013	Logbook No.	HNF-N-506 56 / 84 & 85	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PJ36	N	W	JUL 17 2013	1307	1x20-mL P	Activity Scan	6 Months	None
B2PJ36	N	W	↓	↓	2x1-L G/P	C14_LSC: COMMON M1FF9	6 Months	None

J3G220445
W006584

J3G220445

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
SCOTT KING	Scott King	JUL 17 2013 1415	SSU-1		JUL 17 2013 1415
SSU		7-18-13 1300	DW. BROTHERTON	DW Brotherton	7-18-13 1313
BROTHERTON	Brotherton	7-18-13 1415	J. Beck	J. Beck TALL	7-18-13 1415

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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AUGUST 21, 2013

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-007-094 Page 1 of 1

Collector	DAVE FLOYD	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	S13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	SURV, JULY 2013	Logbook No.	HNF-N-506 57/28	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	SURV	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PJM7	N	W	JUL 18 2013	1149	1x20-mL P	Activity Scan	6 Months	None
B2PJM7	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MLFGA	6 Months	None

J36220445
WO6584

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DAVE FLOYD			JUL 18 2013 1345	CHPRC	MA White		JUL 18 2013 1345
CHPRC	MA White		JUL 18 2013 1415	TALR	J. Beck		JUL 18 2013 1415

Matrix *

S	= Soil	DS	= Drum Solids		
SE	= Sediment	DL	= Drum Liquids		
SO	= Solid	T	= Tissue		
SL	= Sludge	WI	= Wipe		
W	= Water	L	= Liquid		
O	= Oil	V	= Vegetation		
A	= Air	X	= Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

AUGUST 21, 2013

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Sample Check-in List

Date/Time Received: 7-18-13 / 1415 Container GM Screen Result: (Airlock) 40 cpm Initials [ ]
Sample GM Screen Result (Sample Receiving) 40 cpm Initials [ ]

Client: PGW SDG #: W06584 SAF #: S13-007 NA [ ]

Lot Number: J3G220445

Chain of Custody # S13-007-079; 094

Shipping Container ID or Air Bill Number : [illegible] NA [SKS]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: _____ °C NA [SKS]
4. Vermiculite/packing materials is NA [SKS] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 2
7. Containers received: 2 x Vial 20; 4 x 4Lp; 2 x Lp
   7-22-13
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: ____tape ____hazard labels ____custody seals ____appropriate sample labels
10. Matrix: ____A (FLT, Wipe, Solid, Soil) ____I (Water) ____S (Air, Niosh 7400) ____T (Biological, Ni-63)
11. Samples:
    ____are in good condition ____are leaking ____are broken
    ____have air bubbles (Only for samples requiring no head space) ____Other _____
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
    (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ] _____
15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
    *For documentation only. No corrective action needed.
16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: [illegible] Date: 7-18-13

Client Notification needed? Yes [ ] No [SKS] Date: _____
By: _____
Person contacted: _____

[SKS] No action necessary; process as is

Project Manager [illegible] Date 7-23-13

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A13-007-001
		Page 1 of 1

Collector	DAVE FLOYD	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	A13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	Logbook No.	HNF-N-506 57 / 28	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	Other	Priority:	30 Days PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK53	N	W	JUL 18 2013	0845	1x20-mL P	Activity Scan	6 Months	None
B2PK53	N	W	JUL 18 2013	0845	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON M1FGC	6 Months	None

J3G220446
W06584

J3G220446

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DAVE FLOYD			JUL 18 2013 1345	MA White CHPRC	MA White		JUL 18 2013 1345
MA White CHPRC	MA White		JUL 18 2013 1415	J. Bock		TACR	JUL 18 2013 1415

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A13-007-002 Page 1 of 1

Collector	F. M. Hall	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	A13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	Logbook No.	HNF-N-506 54/89	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	Other	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK55	N	W	7/18/13	1142	1x20-mL P	Activity Scan	6 Months	None
B2PK55	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MIFGD	6 Months	None

J3G220446
W06584

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
F. M. Hall			JUL 18 2013 1345	MA White CHPRC	MA White		JUL 18 2013 1345
MA White CHPRC	MA White		JUL 18 2013 1415	J. Beck	J. Beck	TACK	JUL 18 2013 1415
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil		DS	= Drum Solids	
SE	= Sediment		DL	= Drum Liquids	
SO	= Solid		T	= Tissue	
SL	= Sludge		WI	= Wipe	
W	= Water		L	= Liquid	
O	= Oil		V	= Vegetation	
A	= Air		X	= Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time 7-18-13

PRINTED ON 5/29/2013

A-6004-842 (REV 2)

AUGUST 21, 2013

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **A13-007-005**

Page 1 of 1

Collector	DAVE FLOYD	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	509-376-4650
SAF No.	A13-007	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	**Logbook No.**	HNF-N-506 57/29	**Ice Chest No.**	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	Other	**Priority:**	**30 Days** **PRIORITY**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK61	N	W	JUL 18 2013	1236	1x20-mL P	Activity Scan	6 Months	None
B2PK61	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MIFGE	6 Months	None

J36220446
W06584

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DAVE FLOYD	[signature]	[signature]	JUL 18 2013 1345	MA White CHPRC	MA White		JUL 18 2013 1345
MA White CHPRC	MA White		JUL 18 2013 1415	J. Bock	J. Bock	TALK	JUL 18 2013 1415

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PRINTED ON 5/29/2013

A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A13-007-009 Page 1 of 1

Collector	F. M. Hall	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	A13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	Logbook No.	HNF-N-506 54/89	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	Other	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK69	N	W	7/18/13	0814	1x20-mL P	Activity Scan	6 Months	None
B2PK69	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MIFLF	6 Months	None

J3G220446
W06584

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
F. M. Hall			JUL 18 2013 1345	MA White CHPRC			JUL 18 2013 1345
MA White CHPRC			JUL 18 2013 1415	J. Bock			JUL 18 2013 1415

Matrix *

S = Soil		DS = Drum Solids	
SE = Sediment		DL = Drum Liquids	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

AUGUST 21, 2013

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # A13-007-013
		Page 1 of 1

Collector	F. M. Hall	Contact/Requester	Karen Waters-Husted	Telephone No.	509-376-4650
SAF No.	A13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	LLWMA(1,4)-PA, JULY 2013	Logbook No.	HNF-N-506 54 190	Ice Chest No.	N/A
Shipped To (Lab)	TestAmerica Incorporated, Richland	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	Other	Priority: 30 Days	PRIORITY	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2PK77	N	W	7/18/13	1317	1x20-mL P	Activity Scan	6 Months	None
B2PK77	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MIFGG	6 Months	None

J3L220446
W06584

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	F. M. Hall		JUL 18 2013 1345		MA White CHPRC		JUL 18 2013 1345
Relinquished By	MA White CHPRC		JUL 18 2013 1415	Received By	J. Bock		JUL 18 2013 1415
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil		DS	= Drum Solids	
SE	= Sediment		DL	= Drum Liquids	
SO	= Solid		T	= Tissue	
SL	= Sludge		WI	= Wipe	
W	= Water		L	= Liquid	
O	= Oil		V	= Vegetation	
A	= Air		X	= Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PRINTED ON 5/29/2013

A-6004-842 (REV 2)

AUGUST 21, 2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 7-18-13 / 1415 Container GM Screen Result: (Airlock) 40 cpm Initials [ ]
Sample GM Screen Result (Sample Receiving) 40 cpm Initials [ ]

Client: PGW SDG #: W06586 6584 7-22-13 SAF #: A13-007 NA [ ]

Lot Number: J3G220446

Chain of Custody # A13-007-001; 002; 005; 009; 013; ~~014; 015; 016; 017; 051~~ 7-22-13

Shipping Container ID or Air Bill Number : [illegible] NA [SKS]

Samples received inside shipping container/cooler/box Yes [ ] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [ ]
3. Cooler temperature: _____ °C NA [SKS]
4. Vermiculite/packing materials is NA [SKS] Wet [ ] Dry [ ]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [ ] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): ~~10~~ 5
7. Containers received: ~~10~~ 5 x vial 20; ~~20~~ 10 x 4 LP 7-22-13
8. Sample holding times exceeded? NA [ ] Yes [ ] No [ ]
9. Samples have: ____ tape ____ hazard labels ____ custody seals ____ appropriate sample labels
10. Matrix: ____ A (FLT, Wipe, Solid, Soil) ____ I (Water) ____ S (Air, Niosh 7400) ____ T (Biological, Ni-63)
11. Samples:
    ____ are in good condition ____ are leaking ____ are broken
    ____ have air bubbles (Only for samples requiring no head space) ____ Other _____
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [ ]
    (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
14. Description of anomalies (include sample numbers): NA [ ] _____
15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [ ]
    *For documentation only. No corrective action needed.
16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [SKS] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: [illegible] Date: 7-18-13

Client Notification needed? Yes [ ] No [SKS] Date: _____
By: _____
Person contacted: _____

[SKS] No action necessary; process as is

Project Manager [illegible] Date 7-23-13

LS-023 Rev. 17, 05/13

Page 1 of 1

PGW

8/13/2013 4:05:19 PM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

AnalyDueDate: 08/19/2013

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

Sep1 DT/Tm Tech:

Sep2 DT/Tm Tech:

Prep Tech: ,SannohS

Batch: 3204055 WATER pCi/L
SEQ Batch, Test: None All Tests: 3204055 BNTB,

PM, Quote: SS , 57671

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 M1C3M-1-AA J3G150418-1-SAMP 07/09/2013 10:23			3811.50g,in	3811.50g	ITA13204 07/19/13			35.1mg	1200	L4	2001	8/13/13 ae	
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 1.21E-03 uCi/Sa	Beta: -2.56E-04 uCi/Sa	
2 M1C3M-1-AC-X J3G150418-1-DUP 07/09/2013 10:23			3820.40g,in	3820.40g	ITA13205 07/19/13			35.2mg		L5	2002		
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 1.21E-03 uCi/Sa	Beta: -2.56E-04 uCi/Sa	
3 M1C3X-1-AA J3G150422-1-SAMP 07/10/2013 12:11			3845.60g,in	3845.60g	ITA13206 07/19/13			35.8mg		L4	2353		
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 1.99E-03 uCi/Sa	Beta: -8.53E-04 uCi/Sa	
4 M1D79-1-AA J3G170427-1-SAMP 07/11/2013 12:30			3923.90g,in	3923.90g	ITA13207 07/19/13			34.2mg		L5	2354		
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 7.45E-04 uCi/Sa	Beta: -1.33E-02 uCi/Sa	
5 M1D8A-1-AA J3G170427-2-SAMP 07/11/2013 13:34			3909.50g,in	3909.50g	ITA13208 07/19/13			34.2mg		L4	0317		
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 5.22E-04 uCi/Sa	Beta: -1.31E-02 uCi/Sa	
6 M1D8D-1-AA J3G170428-1-SAMP 07/16/2013 09:41			3892.90g,in	3892.90g	ITA13209 07/19/13			34.8mg		L5	0318		
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 5.09E-04 uCi/Sa	Beta: -1.36E-02 uCi/Sa	
7 M1D8E-1-AA J3G170428-2-SAMP 07/16/2013 11:40			3819.30g,in	3819.30g	ITA13210 07/19/13			34.8mg		L4	1101	8/14/13 HE	
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3					Scr:	Alpha: 7.39E-04 uCi/Sa	Beta: -1.46E-02 uCi/Sa	

8/13/2013 4:05:20 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 08/19/2013

Sep1 DT/Tm Tech:

Batch: 3204055 WATER pCi/L PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,SannohS

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
8 M1D8F-1-AA J3G170428-3-SAMP 07/16/2013 09:00			3851.80g,in	3851.80g	ITA13211 07/19/13			34.9mg	200	L5	1103	8/14/13HC	
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha: 1.21E-03 uCi/Sa		Beta: -1.35E-02 uCi/Sa	
9 M1D8G-1-AA J3G170428-4-SAMP 07/16/2013 10:28			3831.20g,in	3831.20g	ITA13212 07/19/13			34.9mg		L4	1504	8/14/13 JS HC	
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha: 2.35E-03 uCi/Sa		Beta: -1.56E-02 uCi/Sa	
10 M1D8H-1-AA J3G170428-5-SAMP 07/16/2013 12:21			3866.80g,in	3866.80g	ITA13213 07/19/13			34.8mg		L5	1506	8/14/13 JS HC	
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha: 1.75E-03 uCi/Sa		Beta: -1.47E-02 uCi/Sa	
11 M1D8K-1-AA J3G170430-1-SAMP 07/15/2013 11:03			3884.40g,in	3884.40g	ITA13214 07/19/13			35.3mg		L4	1955	8/14/13 mO	
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha: 2.52E-03 uCi/Sa		Beta: -1.34E-02 uCi/Sa	
12 M1EJM-1-AA J3G180439-1-SAMP 07/16/2013 13:48			3794.30g,in	3794.30g	ITA13215 07/19/13			37.1mg		L5	1957		
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha: 2.29E-03 uCi/Sa		Beta: -1.41E-02 uCi/Sa	
13 M1EJP-1-AA J3G180439-2-SAMP 07/16/2013 13:14			3880.60g,in	3880.60g	ITA13216 07/19/13			37.0mg		L4	2334		
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha: 4.69E-04 uCi/Sa		Beta: -1.29E-02 uCi/Sa	
14 M1FGA-1-AA J3G220445-2-SAMP 07/18/2013 11:49			3779.50g,in	3779.50g	ITA13217 07/19/13			38.8mg		L5	2335		
			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha: 3.76E-04 uCi/Sa		Beta: -1.37E-04 uCi/Sa	

AUGUST 21, 2013

8/13/2013 4:05:21 PM

Sample Preparation/Analysis

Balance Id:1120482733

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Pipet #: _____

AnalyDueDate: 08/19/2013

Sep1 DT/Tm Tech:

Batch: 3204055 WATER pCi/L PM, Quote: SS , 57671

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: ,SannohS

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
15 M1FGC-1-AA J3G220446-1-SAMP 07/18/2013 08:45			3836.50g,in AmtRec: 1XVIAL20;2X4LP	3836.50g #Containers: 3	ITA13218 07/19/13			37.3mg	200	L4	0316	8/14/13	Scr: Alpha: 4.41E-04 uCi/Sa Beta: -2.22E-04 uCi/Sa
16 M1FGD-1-AA J3G220446-2-SAMP 07/18/2013 11:42			3887.50g,in AmtRec: 1XVIAL20;2X4LP	3887.50g #Containers: 3	ITA13219 07/19/13			38.6mg		L5	0317		Scr: Alpha: 9.77E-05 uCi/Sa Beta: 1.19E-04 uCi/Sa
17 M1FGE-1-AA J3G220446-3-SAMP 07/18/2013 12:36			3760.20g,in AmtRec: 1XVIAL20;2X4LP	3760.20g #Containers: 3	ITA13220 07/19/13			37.8mg		L4	1049	8/15/13 HC	Scr: Alpha: 9.73E-04 uCi/Sa Beta: 2.05E-04 uCi/Sa
18 M1FGF-1-AA J3G220446-4-SAMP 07/18/2013 08:14			3885.40g,in AmtRec: 1XVIAL20;2X4LP	3885.40g #Containers: 3	ITA13221 07/19/13			37.4mg		L5	1051	8/15/13 HC	Scr: Alpha: -2.72E-04 uCi/Sa Beta: 1.06E-03 uCi/Sa
19 M1FGG-1-AA J3G220446-5-SAMP 07/18/2013 13:17			3887.00g,in AmtRec: 1XVIAL20;2X4LP	3887.00g #Containers: 3	ITA13222 07/19/13			37.4mg		L4	1503	8/15/13 HC	Scr: Alpha: 5.48E-04 uCi/Sa Beta: -1.37E-04 uCi/Sa
20 M1FPJ-1-AA-B J3G230000-55-BLK 07/24/2013 09:14 pd			3999.80g,in AmtRec:	3999.80g #Containers: 1	ITA13223 07/19/13			33.7mg		L5	1504		Scr: Alpha: Beta:
21 M1FPJ-1-AC-C J3G230000-55-LCS 07/24/2013 09:14 pd			3971.40g,in AmtRec:	3971.40g #Containers: 1	ISD1574 07/19/13			37.3mg		L4	2000	8/15/13	Scr: Alpha: Beta:

AUGUST 21, 2013

8/13/2013 4:05:22 PM

Sample Preparation/Analysis

BN I-129 Prp/Sep GAM002
TB Gamma by LEPD
5I CLIENT: HANFORD

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 08/19/2013

Sep1 DT/Tm Tech:

Batch: 3204055 pCi/L
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: NortonJ,SannohS

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments: M1FPJ-BLK "Comments P-13-00178",S-13-00041,P-12-00571,S-13-00068,S-12-00193,S-12-00141,P-13-00358,S-12-00061

```
All Clients for Batch:
   384868, CH2M Hill Plateau Remediation Company      Pacific Northwest National Lab,  SS , 57671

M1C3M1AA-SAMP Constituent List:
  I-129        RDL:0.50E+00    pCi/L     LCL:        UCL:        RPD:
M1FPJ1AA-BLK:
  I-129        RDL:0.50E+00    pCi/L     LCL:        UCL:        RPD:
M1FPJ1AC-LCS:
  I-129        RDL:5           pCi/L     LCL:70      UCL:130     RPD:20

M1C3M1AA-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
M1FPJ1AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
M1FPJ1AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

8/20/2013 2:14:05 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/20/2012, 8/25/2013, Batch: '3204055', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
3204055						
AC		Rev1C	SannohS	7/30/2013 7:24:12		
SC			rogersa	IsBatched	7/24/2013 9:12:23 AM	ICOC_RADCALC v4.8.49
SC			SannohS	InPrep	7/30/2013 7:24:12 AM	RL-GAM-002 REVISION 3
SC			NortonJ	InSep1	8/12/2013 10:27:26 AM	RL-GAM-002 REVISION 3
SC			DawkinsO	InCnt1	8/13/2013 4:38:27 PM	RL-CI-007 REVISION 3
SC			DawkinsO	CalcC	8/16/2013 11:48:51 PM	RL-CI-007 REVISION 3
SC			antonsonl	Rev1C	8/20/2013 2:13:50 PM	RL-DR-001 Rev 2
AC			NortonJ	8/12/2013 10:27:26		
AC			DawkinsO	8/13/2013 4:38:27 PM		
AC			DawkinsO	8/16/2013 11:48:51		
AC			antonsonl	8/20/2013 2:13:50 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5

ICOCFractions v4.8.44

8/5/2013 11:17:47 AM

Sample Preparation/Analysis

384868, CH2M Hill Plateau Remediation Company
, Pacific Northwest National Lab

5S C-14 Prp/Sep LSC008
S3 Carbon-14 by Liquid Scint
5I CLIENT: HANFORD

Balance Id:

Pipet #: _____

AnalyDueDate: 08/19/2013

Sep1 DT/Tm Tech:

Batch: 3204056 WATER pCi/L
SEQ Batch, Test: None All Tests: 3204056 5SS3,

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

Prep Tech: ,WindischT

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 **M1EJ8-1-AA** J3G180441-1-SAMP 07/17/2013 11:57			75.40g,in	75.40g	AmtRec: 1XVIAL20;2XLP	#Containers: 3			Scr:	Alpha: 1.61E-04 uCi/Sa		Beta: -3.34E-03 uCi/Sa	
2 **M1EJ8-1-AC-X** J3G180441-1-DUP 07/17/2013 11:57			75.00g,in	75.00g	AmtRec: 1XVIAL20;2XLP	#Containers: 3			Scr:	Alpha: 1.61E-04 uCi/Sa		Beta: -3.34E-03 uCi/Sa	
3 **M1FF9-1-AA** J3G220445-1-SAMP 07/17/2013 13:07			75.40g,in	75.40g	AmtRec: 1XVIAL20;2XLP	#Containers: 3			Scr:	Alpha: -2.77E-06 uCi/Sa		Beta: 9.38E-05 uCi/Sa	
4 **M1FPK-1-AA-B** J3G230000-56-BLK 07/24/2013 09:14 pd			75.30g,in	75.30g	AmtRec:	#Containers: 1			Scr:	Alpha:		Beta:	
5 **M1FPK-1-AC-C** J3G230000-56-LCS 07/24/2013 09:14 pd			74.80g,in	74.80g	AmtRec:	CSB1291 07/30/13,pd 11/08/12,r #Containers: 1			Scr:	Alpha:		Beta:	
6 **M1FPK-1-AD-BN** J3G230000-56-IBLK 07/24/2013 09:14 pd					AmtRec:	#Containers: 1			Scr:	Alpha:		Beta:	

TestAmerica Richland Wa.

Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1
pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added

ISV - Insufficient Volume for Analysis

WO Cnt: 6
Prep_SamplePrep v4.8.61

AUGUST 21, 2013

8/5/2013 11:17:49 AM

Sample Preparation/Analysis

5S C-14 Prp/Sep LSC008
S3 Carbon-14 by Liquid Scint
5I CLIENT: HANFORD

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

AnalyDueDate: 08/19/2013

Batch: 3204056 **pCi/L**
SEQ Batch, Test: None

Work Ord, Lot, Sample Date	Total Amt/Unit	Total Acidified/Unit	Initial Aliquot Amt/Unit	Adj Aliq Amt (Un-Acidified)	QC Tracer Prep Date	Tracer Yield	Dish Size	Ppt or Geometry	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments:

All Clients for Batch:
384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671

M1EJ81AA-SAMP Constituent List:

C-14	RDL:2.00E+02	pCi/L	LCL:70	UCL:130	RPD:20
M1FPK1AA-BLK:					
C-14	RDL:2.00E+02	pCi/L	LCL:	UCL:	RPD:
M1FPK1AC-LCS:					
C-14	RDL:200	pCi/L	LCL:70	UCL:130	RPD:20
M1FPK1AD-IBLK:					
C-14	RDL:2.00E+02	pCi/L	LCL:	UCL:	RPD:

M1EJ81AA-SAMP Calc Info:

Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
M1FPK1AA-BLK:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
M1FPK1AC-LCS:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B
M1FPK1AD-IBLK:				
Uncert Level (#s).: 2	Decay to SaDt: Y	Blk Subt.: N	Sci.Not.: Y	ODRs: B

AUGUST 21, 2013

8/9/2013 2:25:07 PM

ICOC Fraction Transfer/Status Report

ByDate: 8/9/2012, 8/14/2013, Batch: '3204056', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
3204056						
AC		**Rev1C**	**WindischT**	8/5/2013 12:26:02 PM		
SC			rogersa	IsBatched	7/24/2013 9:12:23 AM	ICOC_RADCALC v4.8.49
SC			WindischT	Sep1C	8/5/2013 12:26:02 PM	RL-LSC-008 REVISION 3
SC			NortonJ	InCnt1	8/5/2013 12:49:56 PM	RL-CI-005 REVISION 3
SC			CarnesH	CalcC	8/6/2013 2:39:26 PM	RL-CI-005 REVISION 3
SC			mcginnist	Rev1C	8/9/2013 2:25:00 PM	RL-DR-001 Rev 2
AC			**NortonJ**	8/5/2013 12:49:56 PM		
AC			**CarnesH**	8/6/2013 2:39:26 PM		
AC			**mcginnist**	8/9/2013 2:25:00 PM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 4

ICOCFractions v4.8.44