Analytical Data Package Prepared For

CH2M Hill Plateau Remediation

Radiochemical Analysis By

TestAmerica TARL

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

Data Package Contains _____ Pages

Report Nbr: 56112

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W06563	I13-025	B2P3C9	J3E150420-1	M0VKH1AA	9M0VKH10	3149052
	I13-029	B2P8B0	J3E150421-1	M0VKJ1AA	9M0VKJ10	3149052
		B2P8B1	J3E150421-2	M0VKK1AA	9M0VKK10	3149052
	S13-006	B2PCK3	J3E150422-1	M0VKL1AA	9M0VKL10	3149052
	I13-029	B2P8J5	J3E150423-1	M0VKM1AA	9M0VKM10	3149052
	I13-023	B2P1Y5	J3E160446-1	M0V341AA	9M0V3410	3149051
	S13-006	B2PCD7	J3E220426-1	M0W931AA	9M0W9310	3149052
	I13-029	B2P8H3	J3E220428-1	M0XAK1AA	9M0XAK10	3149052
		B2P8H9	J3E220428-2	M0XAL1AA	9M0XAL10	3149052
	I13-015	B2NBD2	J3E220429-1	M0XAM1AA	9M0XAM10	3149052
	S13-006	B2PB73	J3E230418-1	M0XH41AA	9M0XH410	3149052
		B2PB74	J3E230418-2	M0XH51AA	9M0XH510	3149052

Comments:

JULY 12, 2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

TestAmerica Laboratories, Inc.

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

July 12, 2013

Attention: Scot Fitzgerald

SAF Number	:	I13-015, I13-023, I13-025, I13-029, S13-006
Date SDG Closed	:	May 28, 2013
Number of Samples	:	Twelve (12)
Sample Type	:	Water
SDG Number	:	W06563
Data Deliverable	:	30-Day / Summary

CASE NARRATIVE

I. Introduction

Between May 13, 2013 and May 23, 2013, twelve 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
B2P3C9	M0VKH	5/13/13	WATER
B2P8B0	M0VKJ	5/13/13	WATER
B2P8B1	M0VKK	5/13/13	WATER
B2PCK3	M0VKL	5/14/13	WATER
B2P8J5	M0VKM	5/14/13	WATER
B2P1Y5	M0V34	5/16/13	WATER
B2PCD7	M0V93	5/20/13	WATER
B2P8H3	M0XAK	5/21/13	WATER
B2P8H9	M0XAL	5/21/13	WATER
B2NBD2	M0XAM	5/21/13	WATER
B2PB73	M0XH4	5/23/13	WATER
B2PB74	M0XH5	5/23/13	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 (B2P3C9) results are within contractual requirements.

Liquid Scintillation Counting
Carbon-14 by method RL-LSC-008:
The negative blank activity is greater than three times the TPU but well below the CRDL. Except as noted, the LCS, batch blank, samples and sample duplicate (B2P1Y5) results are within contractual requirements.

CH2M Hill Plateau Remediation Company
July 12, 2013

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.

7/12/2013 11:48:45 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 56112 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06563.Edd, h:\Reportdb\edd\FeadIV\Rad\56112.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:
9M0V3410	B2P1Y5		MW6-SBB-A1	I13-023	W06563					05/15/2013 09:54

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149051	C-14	14762-75-5	2.61E+01	pCi/L	7.2E+00	9.6E+00		1.51E+01	100.0	C14_LSC	7.50E-02	L	07/09/2013 20:24	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:
9M0VKH10	B2P3C9		MW6-SBB-A1	I13-025	W06563					05/13/2013 10:17

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149052	I-129	15046-84-1	-6.33E-02	pCi/L	1.3E-01	1.3E-01	U	1.99E-01	73.0	I129LL_SEP_LEPS	3.8576E+00	L	06/28/2013 16:23	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:
9M0VKJ10	B2P8B0		MW6-SBB-A1	I13-029	W06563					05/13/2013 11:21

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149052	I-129	15046-84-1	-3.72E-02	pCi/L	1.2E-01	1.2E-01	U	1.99E-01	85.7	I129LL_SEP_LEPS	3.8317E+00	L	06/28/2013 19:49	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:
9M0VKK10	B2P8B1		MW6-SBB-A1	I13-029	W06563					05/13/2013 11:21

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149052	I-129	15046-84-1	-6.01E-03	pCi/L	9.6E-02	9.6E-02	U	1.74E-01	85.9	I129LL_SEP_LEPS	3.8548E+00	L	06/28/2013 19:50	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:
9M0VKL10	B2PCK3		MW6-SBB-A1	S13-006	W06563					05/13/2013 14:00

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149052	I-129	15046-84-1	1.87E+00	pCi/L	3.6E-01	3.6E-01		2.39E-01	85.9	I129LL_SEP_LEPS	3.8176E+00	L	06/28/2013 23:42	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:
9M0VKM10	B2P8J5		MW6-SBB-A1	I13-029	W06563					05/13/2013 13:57

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149052	I-129	15046-84-1	-1.83E-02	pCi/L	9.8E-02	9.8E-02	U	1.74E-01	84.1	I129LL_SEP_LEPS	3.8682E+00	L	06/28/2013 23:44	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:
9M0W9310	B2PCD7		MW6-SBB-A1	S13-006	W06563					05/20/2013 10:52

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149052	I-129	15046-84-1	-3.89E-02	pCi/L	1.2E-01	1.2E-01	U	2.00E-01	88.4	I129LL_SEP_LEPS	3.8537E+00	L	07/01/2013 19:25	I

U Qual - Analyzed for, but the result is less than tbe 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

JULY 12, 2013

7/12/2013 11:48:45 AM

TestAmerica Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 56112 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06563.Edd, h:\Reportdb\edd\FeadIV\Rad\56112.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:
9M0XAK10	B2P8H3		MW6-SBB-A1	I13-029	W06563					05/20/2013 10:03

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149052	I-129	15046-84-1	3.30E-01	pCi/L	2.0E-01	2.0E-01		1.54E-01	92.7	I129LL_SEP_LEPS	3.8915E+00	L	07/01/2013 19:26	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:
9M0XAL10	B2P8H9		MW6-SBB-A1	I13-029	W06563					05/20/2013 14:54

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149052	I-129	15046-84-1	6.47E-01	pCi/L	2.1E-01	2.1E-01		2.02E-01	89.2	I129LL_SEP_LEPS	3.8666E+00	L	07/01/2013 23:21	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:
9M0XAM10	B2NBD2		MW6-SBB-A1	I13-015	W06563					05/20/2013 11:47

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149052	I-129	15046-84-1	6.14E-01	pCi/L	2.3E-01	2.3E-01		1.90E-01	91.6	I129LL_SEP_LEPS	3.8674E+00	L	07/01/2013 23:22	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:
9M0XH410	B2PB73		MW6-SBB-A1	S13-006	W06563					05/22/2013 07:15

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149052	I-129	15046-84-1	2.63E-02	pCi/L	1.0E-01	1.0E-01	U	1.87E-01	87.8	I129LL_SEP_LEPS	3.8498E+00	L	07/02/2013 09:51	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:
9M0XH510	B2PB74		MW6-SBB-A1	S13-006	W06563					05/22/2013 12:36

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
3149052	I-129	15046-84-1	3.99E+00	pCi/L	5.7E-01	5.7E-01		1.99E-01	94.3	I129LL_SEP_LEPS	3.6421E+00	L	07/02/2013 09:53	I

U Qual - Analyzed for, bnt 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.

Friday, July 12, 2013

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06563.Edd, h:\Reportdb\edd\FeadIV\Rad\56112.Ed

Lab Sample Id:	M00KP1AB	**Sdg/Rept Nbr:**	W06563	56112	**Collection Date:** 07/11/2013
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 05/16/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AM	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
3149051	C-14	-1.35E+01	pCi/L	7.9E+00	U	1.51E+01	100.0		C14_LSC	7.51E-02	07/09/2013				D
BLK	14762-75-5			5.8E+00						L	22:26				

JULY 12, 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.

Friday, July 12, 2013

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIV\Rad\W06563.Edd, h:\Reportdb\edd\FeadIV\Rad\56112.Ed

Lab Sample Id:	M00KQ1AB	**Sdg/Rept Nbr:**	W06563	56112	**Collection Date:** 05/13/2013 10:17
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BLK		**Received Date:** 05/13/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AO	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
3149052	I-129	-3.39E-03	pCi/L	1.0E-01	U	1.78E-01	91.9		I129LL_SEP_L	3.9255E+00	07/02/2013				D
BLK	15046-84-1			1.0E-01						L	13:53				

JULY 12, 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.

Friday, July 12, 2013

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06563.Edd, h:\Reportdb\edd\FeadIV\Rad\56112.Ed

Lab Sample Id:	M00KP1CS	**Sdg/Rept Nbr:**	W06563	56112	**Collection Date:** 07/11/2013
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 05/16/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AN	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
3149051	C-14	4.80E+02	pCi/L	4.2E+01		1.52E+01	100.0	4.81E+02	C14_LSC	7.49E-02	07/09/2013			70	D
BS	14762-75-5			1.6E+01				99.7		L	23:27			130	

JULY 12, 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.

Friday, July 12, 2013

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06563.Edd, h:\Reportdb\edd\FeadIV\Rad\56112.Ed

Lab Sample Id:	M00KQ1CS	**Sdg/Rept Nbr:**	W06563	56112	**Collection Date:** 05/13/2013 10:17
Client Id:	NA	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	BS		**Received Date:** 05/13/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AP	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
3149052	I-129	1.00E+01	pCi/L	1.2E+00		2.70E-01	92.0	9.86E+00	I129LL_SEP_L	3.9494E+00	07/02/2013			70	D
BS	15046-84-1			1.2E+00				101.6		L	13:55			130	

JULY 12, 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.

Friday, July 12, 2013

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06563.Edd, h:\Reportdb\edd\FeadIV\Rad\56112.Ed

Lab Sample Id:	M0V341CR	**Sdg/Rept Nbr:**	W06563	56112	**Collection Date:** 07/11/2013
Client Id:	B2P1Y5	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 05/16/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I13-023	MW6-SBB-A19981								AQ	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
3149051	C-14	2.04E+01	pCi/L	9.2E+00		1.51E+01	100.0		C14_LSC	7.55E-02	07/09/2013	24.5	0.9		D
DUP	14762-75-5	2.61E+01		7.0E+00						L	21:25	20.0	3		

JULY 12, 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.

Friday, July 12, 2013

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06563.Edd, h:\Reportdb\edd\FeadIV\Rad\56112.Ed

Lab Sample Id:	M0VKH1CR	**Sdg/Rept Nbr:**	W06563	56112	**Collection Date:** 05/13/2013 10:17
Client Id:	B2P3C9	**Matrix:**	WATER	WATER	**Sample On Date:**
Moisture/Solids%*:		**QC Type:**	DUP		**Received Date:** 05/13/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
I13-025	MW6-SBB-A19981								AR	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
3149052	I-129	8.69E-02	pCi/L	1.0E-01	U	1.83E-01	83.0		I129LL_SEP_L	3.8438E+00	06/28/2013	1274.0	2.1		D
DUP	15046-84-1	-6.33E-02		1.0E-01						L	16:25	20.0	3		

JULY 12, 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.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/3/2013 9:45:10 AM

Lot No., Due Date: J3E150420,J3E150421,J3E150422,J3E150423,J3E220426,J3E220428,J3E220429,J3E230418;
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 3149052; RGAMLEPS Gamma by LEPS
SDG, Matrix: W06563; 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 Lisa Anderson Date 7/3/13

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 3149052

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 Leger Date: 7-10-13

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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review/Verification Checklist

RADIOCHEMISTRY, First Level Review

7/11/2013 10:37:06 AM

Lot No., Due Date: J3E160446; 06/27/2013
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 3149051; RC14 C-14 by LSC
SDG, Matrix: W06563; 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:
NCM 10-23883

First Level _____ **Date** 7/11/13

TestAmerica Richland
QAS_RADCALCv4.8.44

Page 1

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
Second Level Review

Batch Number: 3149051

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: See NCM 10-23883

Second Level Review: Sandra Logan Date: 7-12-13

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

Clouseau Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-23883**
NCM Initiated By: Tom Mcginnis
Date Opened: 07/11/2013
Date Closed:

Classification: **Deficiency**
Status: **PMREVIEW**
Production Area: Environmental - Sep
Tests: C-14 by LSC
Lot #'s (Sample #'s): J3E160446 (1), J3E290000 (51),
QC Batches: 3149051,

Nonconformance: Other (describe in detail)
Subcategory: Other (explanation required)

Problem Description / Root Cause

Name	Date	Description
Tom Mcginnis	07/11/2013	The negative blank activity is greater than three times the TPU but well below the CRDL. Batch results meet acceptance criteria.

Corrective Action

Name	Date	Corrective Action
Tom Mcginnis	07/11/2013	The PM was notified of the batch deficiency.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Date Printed: 7/11/2013

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-025-010
		Page 1 of 1

Collector	SCOTT KING	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	I13-025	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	2ZP1, MAY 2013	Logbook No.	HNF-N-506 55/37	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	CERCLA	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 ☐

200 Area 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
B2P3C9	N	W	MAY 13 2013	1017	1x20-mL P	Activity Scan	6 Months	None
B2P3C9	N	W	✓	✓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MOVKH	6 Months	None

J3E150420
W06563
Due

J3E150420

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
SCOTT KING	Scott King		MAY 13 2013 1405	J. Bock	Jbock	TALL	MAY 13 2013 1405
Relinquished By			Date/Time	Received By			Date/Time
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 3/21/2013

A-6004-842 (REV 2)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 5-13-13 / 1405 Container GM Screen Result: (Airlock) .4 Initials [ ]
Sample GM Screen Result (Sample Receiving) .4 Initials [ ]

Client: PGW SDG #: W06563 SAF #: I13-025 NA [ ]

Lot Number: J3E150420

Chain of Custody # I13-025-010

Shipping Container ID or Air Bill Number : hand de Civ. 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 [ ]
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 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 17, then 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: [signature] Date: 5-13-13

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

[SKS] No action necessary; process as is

Project Manager [signature] Date 5-15-13

LS-023 Rev. 16, 02/13

Page 1 of 1

TestAmerica

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-029-009 Page 1 of 1

Collector	SCOTT KING	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	I13-029	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2ZP1, JUNE 2013	**Logbook No.**	HNF-N-506 55/37	**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	CERCLA	**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 ☐

200 Area 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
B2P8B0	N	W	MAY 13 2013	1121	1x20-mL P	Activity Scan	6 Months	None
B2P8B0	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MOVKJ	6 Months	None

J3E150421
W06563
Due

J3E150421

Page 22 of 47

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	SCOTT KING		MAY 13 2013 1405	J. Bock	Bock	TALA	MAY 13 2013 1405
Relinquished By			Date/Time	Received By			Date/Time
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 4/17/2013

A-6004-842 (REV 2)

JULY 12, 2013

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-029-010
		Page 1 of 1

Collector	SCOTT KING	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	I13-029	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	2ZP1, JUNE 2013	Logbook No.	HNF-N-506 55 / 37	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	CERCLA	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 ☐

200 Area 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
B2P8B1	N	W	MAY 13 2013	1121	1x20-mL P	Activity Scan	6 Months	None
B2P8B1	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MOVKK	6 Months	None

J3E150421
W06563
Due

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
SCOTT KING	Scott King		MAY 13 2013 1405	J. Bock	J. Bock	TALR	MAY 13 2013 1405
Relinquished By			Date/Time	Received By			Date/Time
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 4/17/2013

A-6004-842 (REV 2)

JULY 12, 2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 5-13-13 | 1405 Container GM Screen Result: (Airlock) .4 Initials [ ]
Sample GM Screen Result (Sample Receiving) .4 Initials [ ]

Client: PBW SDG #: 480563 SAF #: I13-029 NA [ ]

Lot Number: J3615O4121

Chain of Custody # I13-029-009, 010

Shipping Container ID or Air Bill Number : Hand Deliv. 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 4oz
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 17, then 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: Jamie Roach Date: 5-13-13

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

[ ] No action necessary; process as is

Project Manager Sandra Lagarde Date 5-15-13

TestAmerica

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JULY 12, 2013

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-006-461
		Page 1 of 1

Collector	Mitzi White	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	S13-006	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, JUNE 2013	**Logbook No.**	HNF-N-506 54 / 76	**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
B2PCK3	N	W	5/13/13	1400	1x20-mL P	Activity Scan	6 Months	None
B2PCK3	N	W	5/13/13	1400	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MONKL	6 Months	None

J3E150422
W06563
Dw

J3E150422

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Mitzi White	Mitzi White	Mitzi White	MAY 13 2013 1500	SSU-1			MAY 13 2013 1500
SSU-1			MAY 14 2013 0730	DW Brotherton		Dw Brotherton	MAY 14 2013 0730
DW Brotherton		Dw Brotherton	MAY 14 2013 1115	J. Jack Jack TALR			MAY 14 2013 1115

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 4/17/2013

A-6004-842 (REV 2)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 5-14-13 / 1115 Container GM Screen Result: (Airlock) .6 Initials [BS]
Sample GM Screen Result (Sample Receiving) .4 Initials [BS]

Client: PGW SDG #: W06563 SAF #: S13-006 NA [ ]

Lot Number: J3E150422

Chain of Custody # S13-006-461

Shipping Container ID or Air Bill Number : hand deliv. 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: _____ °C 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
    [BS] 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 17, then 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. [BS] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: [signature] Date: 5-14-13

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

[SKS] No action necessary; process as is

Project Manager [signature] Date 5-15-13

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TestAmerica

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-029-019
		Page 1 of 1

Collector	SCOTT KING	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	113-029	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2ZP1, JUNE 2013	**Logbook No.**	HNF-N-506 55 / 37	**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	CERCLA	**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 ☐

200 Area 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
B2P8J5	N	W	MAY 13 2013	1357	1x20-mL P	Activity Scan	6 Months	None
B2P8J5	N	W			2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MOVKm	6 Months	None

J3E150423
4006563
Due

J3E150423

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
SCOTT KING	Scott King	MAY 13 2013 1445	SSU #1		MAY 13 2013 1445
SSU-1		MAY 14 2013 0730	DW Brotherton	DW Brotherton	MAY 14 2013 0730
DW Brotherton	DW Brotherton	MAY 14 2013 1115	J. Rock	J. Rock TALR	MAY 14 2013 1115

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 4/17/2013

A-6004-842 (REV 2)

JULY 12, 2013

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THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 5-14-13/1115 Container GM Screen Result: (Airlock) .6 Initials [ ]
Sample GM Screen Result (Sample Receiving) .4 Initials [ ]

Client: PBW SDG #: WO6563 SAF #: I13-029 NA [ ]

Lot Number: J3E150423

Chain of Custody # I13-029-019

Shipping Container ID or Air Bill Number : hand deliv. 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 4 oz
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 17, then 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: 5-14-13

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

[ ] No action necessary, process as is

Project Manager Sandra Segee Date 5-15-13

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-023-072
		Page 1 of 1

Collector	SCOTT KING	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	I13-023	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	100KR4, MAY 2013	**Logbook No.**	HNF-N-506 53 / 40	**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	CERCLA	**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 ☐

100 Area 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
B2P1Y5	N	W	MAY 15 2013	0954	1x20-mL P	Activity Scan	6 Months	None
B2P1Y5	N	W	↓	↓	2x1-L G/P	C14_LSC: COMMON mOV34	6 Months	None

J3E160446
W06563
Due

J3E160446

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
	SCOTT KING	MAY 15 2013 1050	SSK +1		MAY 15 2013 1050
Relinquished By	SSU-1	5-16-13 0700	Received By	cm Aguilar Cm A	5-16-13 0700
Relinquished By	cm Aguilar Cm A	5-16-13 0845	Received By	Tom McGinnis	5-16-13 0845
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 3/21/2013

A-6004-842 (REV 2)

JULY 12, 2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 5/16/13 0845 Container GM Screen Result: (Airlock) ~~0.0~~ 0.5 5/16/13 Initials[ ]
Sample GM Screen Result (Sample Receiving) 0.5 Initials[ ]

Client: CH2MHill SDG #: W06563 SAF #: I13-023 NA [ ]

Lot Number: 53E160446

Chain of Custody # 113-023-072

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): 1
7. Containers received: 1x20mLP 2x1LP
8. Sample holding times exceeded? ~~NA [ ]~~ SKS 5-17-13 Yes [ ] No [SKS]
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 17, then 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: [signature] Date: 5/16/13

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

[SKS] No action necessary; process as is

Project Manager Sandra Segre Date 5-17-13

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Page 1 of 1

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-006-158
		Page 1 of 1

Collector	SCOTT KING	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	S13-006	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, JUNE 2013	**Logbook No.**	HNF-N-506 55 /42	**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
B2PCD7	N	W	MAY 2 0 2013	1052	1x20-mL P	Activity Scan	6 Months	None
B2PCD7	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MOV93	6 Months	None

J3E220425 426 5-22-13
W06563
Rec. 5-20-13
Du

J3E220426

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	SCOTT KING		MAY 2 0 2013 1355	J. Bark	J Bark	TALK	5-20-13 MAY 2 0 2013 1355
Relinquished By			Date/Time	Received By			Date/Time
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 4/17/2013

A-6004-842 (REV 2)

JULY 12, 2013

TestAmerica
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Sample Check-in List

Date/Time Received: 5-20-13 | 1355 Container GM Screen Result: (Airlock) .4 Initials [ ]
Sample GM Screen Result (Sample Receiving) .2 Initials [ ]

Client: PGW SDG #: W06563 SAF #: 513-006 NA [ ]

Lot Number: J3E220425426 5-22-13

Chain of Custody # 513-006-158

Shipping Container ID or Air Bill Number : hand deliv. 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 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 17, then 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: [signature] Date: 5-20-13

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

[✓] No action necessary; process as is

Project Manager Sandra Segee Date 5-23-13

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CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-029-017
		Page 1 of 1

Collector	Dan Woehle	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	I13-029	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2ZP1, JUNE 2013	**Logbook No.**	HNF-N-506 57/7	**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	CERCLA	**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 ☐

200 Area 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
B2P8H3	N	W	5-20-13	1003	1x20-mL P	Activity Scan	6 Months	None
B2P8H3	N	W	5-20-13	1003	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MONAK	6 Months	None

J3E220428Y
WO65163
Rec. 5-22-13

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Dan Woehle			MAY 20 2013 1545	SSU-1			MAY 20 2013 1545
Relinquished By			Date/Time	Received By			Date/Time
SSU-1			MAY 21 2013 0645	B.E. Briggs CHPRC			MAY 21 2013 0645
Relinquished By			Date/Time	Received By			Date/Time
B.E. Briggs CHPRC			MAY 21 2013 1135	J. Bock TAIC			MAY 21 2013 1135
Relinquished By			Date/Time	Received By			Date/Time
							5-21-13

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)

JULY 12, 2013

TestAmerica

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JULY 12, 2013

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-029-018 Page 1 of 1

Collector	Dan Woehle	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	I13-029	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2ZP1, JUNE 2013	**Logbook No.**	HNF-N-506 57/7	**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	CERCLA	**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 ☐

200 Area 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
B2P8H9	N	W	5-20-13	1454	1x20-mL P	Activity Scan	6 Months	None
B2P8H9	N	W	5-20-13	1454	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MOXAL	6 Months	None

J3E220428
WO6563

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Dan Woehle			MAY 2 0 2013 1545	SSU-1			MAY 2 0 2013 1545
SSU-1			MAY 2 1 2013 0645	B.E. Briggs CHPRC			MAY 2 1 2013 0645
B.E. Briggs CHPRC			MAY 2 1 2013 1135	J. Lock			MAY 2 1 2013 1135
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		

5-21-13

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
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 5-21-13 / 1135 Container GM Screen Result: (Airlock) .4 Initials [ ]
Sample GM Screen Result (Sample Receiving) .4 Initials [ ]

Client: PW SDG #: W06563 SAF #: I13-029 NA [ ]

Lot Number: J3E220428

Chain of Custody # I13-029-017, 018

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 4oz
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 17, then 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: 5-21-13

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

[ ] No action necessary; process as is

Project Manager Sandra Lagree Date 5-23-13

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Page 1 of 1

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # I13-015-023 Page 1 of 1

Collector	Dan Woehle	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	I13-015	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2ZP1, FEBRUARY 2013	**Logbook No.**	HNF-N-506 57 / 7	**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	CERCLA	**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 ☐

200 Area 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
B2NBD2	N	W	5-20-13	1147	1x20-mL P	Activity Scan	6 Months	None
B2NBD2	N	W	5-20-13	1147	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: I-129 (1) MOXAM	6 Months	None

J3E220429
W065563

J3E220429

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
Dan Woehle		MAY 20 2013 1545	SSU-1		MAY 20 2013 1545
SSU-1		MAY 21 2013 0645	B.E. Briggs CHPRC	B.E. Briggs	MAY 21 2013 0645
B.E. Briggs CHPRC	B.E. Briggs	MAY 21 2013 1135	J. Bock	J. Bock TALK	MAY 21 2013 1135

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 12/31/2012

A-6004-842 (REV 2)

JULY 12, 2013

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 5-21-13 / 1135 Container GM Screen Result: (Airlock) .4 Initials [ ]
Sample GM Screen Result (Sample Receiving) .6 Initials [ ]

Client: PGW SDG #: WO 6563 SAF #: I13-~~029~~ 015 NA [ ]
5-22-13

Lot Number: J3E220429

Chain of Custody # ~~I13-029-017~~ 5-22-13
I13-015-023

Shipping Container ID or Air Bill Number : hand deliv. 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 20-mL P, 2 X 4-L G/P
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 17, then 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: [signature] Date: 5-21-13

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

[ ] No action necessary; process as is

Project Manager [signature] Date 5-23-13

LS-023 Rev. 16, 02/13

Page 1 of 1

TestAmerica

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-006-151
		Page 1 of 1

Collector	Scott King	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	S13-006	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, JUNE 2013	**Logbook No.**	HNF-N-506 55 / 45	**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
B2PB73	N	W	MAY 2 2 2013	0715	1x20-mL P	Activity Scan	6 Months	None
B2PB73	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MOXH4	6 Months	None

J3E230418
WO65163

J3E230418

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Scott King	Scott King		MAY 2 2 2013 1530	SSC #1			MAY 2 2 2013 1530
Relinquished By			Date/Time	Received By			Date/Time
SSC #1		5-23-13	0915	Ed Kawa	Ed Kawa	5-23-13	0915
Relinquished By			Date/Time	Received By			Date/Time
Ed Kawa	Ed Kawa	5-23-13	1000	J. Sack	J. Sack TRACE	5-23-13	1000
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 4/17/2013

A-6004-842 (REV 2)

JULY 12, 2013

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # S13-006-152
		Page 1 of 1

Collector	SCOTT KING	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	S13-006	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, JUNE 2013	**Logbook No.**	HNF-N-506 50 / 45	**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
B2PB74	N	W	MAY 2 2 2013	1234	1x20-mL P	Activity Scan	6 Months	None
B2PB74	N	W	↓	↓	2x4-L G/P	I129LL_SEP_LEPS_GS_LL: COMMON MONTHS	6 Months	None

J3E245 5-23-13
J3E230418
W0165163

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	SCOTT KING	Scott King	MAY 2 2 2013 1530	SSU #1			MAY 2 2 2013 1530
Relinquished By	SSU #1		5-23-13 0915	Received By	Ed Kaun	Ed Kaun	5-23-13 0915
Relinquished By	Ed Kaun	Ed Kaun	5-23-13 1000	Received By	J. Bock	J. Bock TRLR	5-23-13 1000
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 4/17/2013

A-6004-842 (REV 2)

JULY 12, 2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 5-23-13 | 1000 Container GM Screen Result: (Airlock) .10 Initials[ ]
Sample GM Screen Result (Sample Receiving) .5 Initials[ ]

Client: PLW SDG #: WO6563 SAF #: 513-006 NA [ ]

Lot Number: 336230418

Chain of Custody # 513-006. 151, 152

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 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 17, then 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: 5-23-13

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

[ ] No action necessary; process as is

Project Manager Sandra Leger Date 5-23-13

6/27/2013 8:58:23 AM

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: 06/27/2013

Sep1 DT/Tm Tech:

Batch: 3149052 **WATER** **pCi/L**
SEQ Batch, Test: None All Tests: 3149052 BNTB,

PM, Quote: SS , 57671

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:
1 M0VKH-1-AA J3E150420-1-SAMP 05/13/2013 10:17			3857.60g,in AmtRec: 1XVIAL20;2X4LP	3857.60g #Containers: 3	ITA12988 04/25/13			27.0mg	200	L4 Scr:	1943 Alpha: 1.50E-03 uCi/Sa	6/28/13 DP Beta: -1.77E-03 uCi/Sa	
2 M0VKH-1-AC-X J3E150420-1-DUP 05/13/2013 10:17			3843.80g,in AmtRec: 1XVIAL20;2X4LP	3843.80g #Containers: 3	ITA12989 04/25/13			30.7mg	200	L5 Scr:	1945 Alpha: 1.50E-03 uCi/Sa	 Beta: -1.77E-03 uCi/Sa	
3 M0VKJ-1-AA J3E150421-1-SAMP 05/13/2013 11:21			3831.70g,in AmtRec: 1XVIAL20;2X4LP	3831.70g #Containers: 3	ITA12990 04/25/13			31.7mg	200	L4 Scr:	2309 Alpha: -6.35E-05 uCi/Sa	 Beta: 7.98E-04 uCi/Sa	
4 M0VKK-1-AA J3E150421-2-SAMP 05/13/2013 11:21			3854.80g,in AmtRec: 1XVIAL20;2X4LP	3854.80g #Containers: 3	ITA12991 04/25/13			31.8mg	200	L5 Scr:	2310 Alpha: 3.55E-04 uCi/Sa	 Beta: 3.55E-04 uCi/Sa	
5 M0VKL-1-AA J3E150422-1-SAMP 05/13/2013 14:00			3817.60g,in AmtRec: 1XVIAL20;2X4LP	3817.60g #Containers: 3	ITA12992 04/25/13			31.8mg	200	L4 Scr:	0302 Alpha: -1.62E-04 uCi/Sa	 Beta: 4.97E-03 uCi/Sa	1.4E-01L
6 M0VKM-1-AA J3E150423-1-SAMP 05/13/2013 13:57			3868.20g,in AmtRec: 1XVIAL20;2X4LP	3868.20g #Containers: 3	ITA12993 04/25/13			31.1mg	200	L5 Scr:	0304 Alpha: 4.21E-04 uCi/Sa	 Beta: 4.44E-04 uCi/Sa	D
7 M0W93-1-AA J3E220426-1-SAMP 05/20/2013 10:52			3853.70g,in AmtRec: 1XVIAL20;2X4LP	3853.70g #Containers: 3	ITA12994 04/25/13			32.7mg	200	4 Scr:	2245 Alpha: 6.25E-04 uCi/Sa	7/1/13 DP Beta: -5.12E-04 uCi/Sa	

JULY 12, 2013

6/27/2013 8:58:28 AM

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: 06/27/2013

Sep1 DT/Tm Tech:

Batch: 3149052 **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:
8 M0XAK-1-AA			3891.50g,in	3891.50g	ITA12995 04/25/13			34.3mg	200	L5	2246	7/1/13MD	
J3E220428-1-SAMP													
05/20/2013 10:03			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha: -5.24E-04 uCi/Sa		Beta: 2.05E-03 uCi/Sa	
9 M0XAL-1-AA			3866.60g,in	3866.60g	ITA12996 04/25/13			33.0mg	200	L4	0241		
J3E220428-2-SAMP													
05/20/2013 14:54			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha:		Beta:	
10 M0XAM-1-AA			3867.40g,in	3867.40g	ITA12997 04/25/13			33.9mg	200	L5	0242		
J3E220429-1-SAMP													
05/20/2013 11:47			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha: 1.39E-03 uCi/Sa		Beta: -8.55E-05 uCi/Sa	
11 M0XH4-1-AA			3849.80g,in	3849.80g	ITA12998 04/25/13			32.5mg	200	L4	1311	7/2/13HC	
J3E230418-1-SAMP													
05/22/2013 07:15			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha: 7.75E-04 uCi/Sa		Beta: -3.41E-04 uCi/Sa	
12 M0XH5-1-AA			3642.10g,in	3642.10g	ITA12999 04/25/13			34.9mg	200	L5	1313	7/2/13HC	
J3E230418-2-SAMP													
05/22/2013 12:36			AmtRec: 1XVIAL20;2X4LP		#Containers: 3				Scr:	Alpha: -2.28E-04 uCi/Sa		Beta: 2.82E-03 uCi/Sa	
13 M00KQ-1-AA-B			3925.50g,in	3925.50g	ITA13000 04/25/13			34.0mg	200	L4	1713	7/2/13HC	
J3E290000-52-BLK													
05/29/2013 12:31 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	
14 M00KQ-1-AC-C			3949.40g,in	3949.40g	ISD1561 03/26/13			34.6mg	200	L5	1715	7/2/13HC	
J3E290000-52-LCS													
05/29/2013 12:31 pd			AmtRec:		#Containers: 1				Scr:	Alpha:		Beta:	

JULY 12, 2013

6/27/2013 8:58:30 AM

Sample Preparation/Analysis

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

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 06/27/2013

Sep1 DT/Tm Tech:

Batch: 3149052 **pCi/L**
SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: HarbinsonD,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: M00KQ-BLK CommentsS-12-00228DHP-12-00571,P-13-00094,S-12-00282,P-13-00178,S-13-00041,S-12-00193,S-12-00141,P-13-00215,S-12-00061,

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

M0VKH1AA-SAMP Constituent List:
I-129 RDL:0.50E+00 pCi/L LCL: UCL: RPD:
M00KQ1AA-BLK:
I-129 RDL:0.50E+00 pCi/L LCL: UCL: RPD:
M00KQ1AC-LCS:
I-129 RDL:5 pCi/L LCL:70 UCL:130 RPD:20

M0VKH1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M00KQ1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M00KQ1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

JULY 12, 2013

7/3/2013 9:36:59 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/3/2012, 7/8/2013, Batch: '3149052', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting			Comments
3149052						
AC		Rev1C	SannohS	6/3/2013 8:40:01 AM		
SC			mcginnist	IsBatched	5/29/2013 4:40:03 PM	ICOC_RADCALC v4.8.49
SC			SannohS	InPrep	6/3/2013 8:40:01 AM	RL-GPC-002 REVISION 3
SC			HarbinsonD	Sep2C	6/27/2013 8:59:37 AM	RL-GAM-002 REVISION 3
SC			NortonJ	InCnt1	6/27/2013 10:08:43 AM	RL-CI-007 REVISION 3
SC			NortonJ	InCnt1	6/27/2013 12:02:44 PM	RL-CI-007 REVISION 3
SC			DawkinsO	CalcC	7/3/2013 1:50:20 AM	RL-CI-007 REVISION 3
SC			AntonsonL	Rev1C	7/3/2013 9:36:45 AM	RL-DR-001 Rev 2
AC			HarbinsonD	6/27/2013 8:59:37		
AC			NortonJ	6/27/2013 10:08:43		
AC			NortonJ	6/27/2013 12:02:44		
AC			DawkinsO	7/3/2013 1:50:20 AM		
AC			AntonsonL	7/3/2013 9:36:45 AM		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 6

ICOCFractions v4.8.44

7/9/2013 10:48:00 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: 06/27/2013

Sep1 DT/Tm Tech:

Batch: 3149051 **WATER** **pCi/L**
SEQ Batch, Test: None All Tests: 3149051 5SS3,

PM, Quote: SS , 57671

Sep2 DT/Tm Tech:

Prep Tech: ,AshworthA

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 **M0V34-1-AA**			75.00g,in	75.00g									
J3E160446-1-SAMP													
05/15/2013 09:54			AmtRec: 1XVIAL20;2XLP	#Containers: 3					Scr:	Alpha: 5.01E-05 uCi/Sa		Beta: 2.22E-05 uCi/Sa	
2 **M0V34-1-AC-X**			75.50g,in	75.50g									
J3E160446-1-DUP													
05/15/2013 09:54			AmtRec: 1XVIAL20;2XLP	#Containers: 3					Scr:	Alpha: 5.01E-05 uCi/Sa		Beta: 2.22E-05 uCi/Sa	
3 **M00KP-1-AA-B**			75.10g,in	75.10g									
J3E290000-51-BLK													
05/29/2013 12:31 pd			AmtRec:	#Containers: 1					Scr:	Alpha:		Beta:	
4 **M00KP-1-AC-C**			74.90g,in	74.90g	CSB1276								
J3E290000-51-LCS					07/08/13,pd 11/08/12,r								
05/29/2013 12:31 pd			AmtRec:	#Containers: 1					Scr:	Alpha:		Beta:	
5 **M00KP-1-AD-BN**													
J3E290000-51-IBLK													
05/29/2013 12:31 pd			AmtRec:	#Containers: 1					Scr:	Alpha:		Beta:	

23883

JULY 12, 2013

7/9/2013 10:48:02 AM

Sample Preparation/Analysis

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

AnalyDueDate: 06/27/2013

Batch: 3149051 **pCi/L**
SEQ Batch, Test: None

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

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

M0V341AA-SAMP Constituent List:

C-14	RDL:2.00E+02	pCi/L	LCL:70	UCL:130	RPD:20
M00KP1AA-BLK:					
C-14	RDL:2.00E+02	pCi/L	LCL:	UCL:	RPD:
M00KP1AC-LCS:					
C-14	RDL:200	pCi/L	LCL:70	UCL:130	RPD:20
M00KP1AD-IBLK:					
C-14	RDL:2.00E+02	pCi/L	LCL:	UCL:	RPD:

M0V341AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M00KP1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M00KP1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
M00KP1AD-IBLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

JULY 12, 2013

7/11/2013 10:16:54 AM

ICOC Fraction Transfer/Status Report

ByDate: 7/11/2012, 7/16/2013, Batch: '3149051', User: *ALL Order By DateTimeAccepting

Q	Batch	Work Ord	CurStatus	Accepting			Comments
3149051							
AC			**Rev1C**	**WindischT**	7/9/2013 11:48:36		
SC				ashwortha	IsBatched	6/7/2013 8:48:56 AM	ICOC_RADCALC v4.8.49
SC				WindischT	Sep1C	7/9/2013 11:48:36 AM	RL-LSC-008 REVISION 3
SC				NortonJ	InCnt1	7/9/2013 12:54:04 PM	RL-CI-005 REVISION 3
SC				DawkinsO	CalcC	7/11/2013 2:39:09 AM	RL-CI-005 REVISION 3
SC				mcginnist	Rev1C	7/11/2013 10:16:34 AM	RL-DR-001 Rev 2
AC				**NortonJ**	7/9/2013 12:54:04 PM		
AC				**DawkinsO**	7/11/2013 2:39:09		
AC				**mcginnist**	7/11/2013 10:16:34		

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

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Grp Rec Cnt: 4

ICOCFractions v4.8.44