

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: 57460

SDG Nbr	ORDER Nbr	CLIENT ID NUMBER	LOT Nbr	WORK ORDER	RPT DB ID	BATCH
W06570B	I13-025	B2P3C3	J3J100429-1	M17281AA	9M172810	3284037

Comments:



Certificate of Analysis

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

October 25, 2013

Attention: Scot Fitzgerald

SAF Number	:	I13-025
Date SDG Closed	:	October 10, 2013
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W06570B
Data Deliverable	:	15 Day / Summary

CASE NARRATIVE

On October 10, 2013 a request for reanalysis (Order Number: 130906TARL-R8012) of one water sample was received at TestAmerica for radiochemical analysis. Upon receipt, the sample was assigned the following laboratory ID numbers to correspond with the CH2M specific IDs:

<u>CH2M ID#</u>	<u>TARL ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
B2P3C3	M1728 (M008N)	WATER	10/10/13

II. Sample Receipt

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

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

CH2M Hill Plateau Remediation Company
October 25, 2013

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:

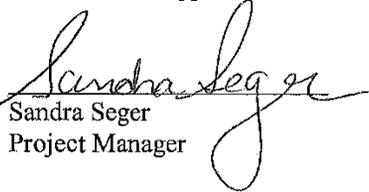
As instructed on the reanalysis order the remaining sample was used for one run at full volume with no duplicate.

The reanalysis results are within RER acceptance criteria.

The LCS, batch blank and samples 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, $R = \text{constants} * f(x,y,z,...)$. 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/\sqrt{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) <i>u_c - Combined Uncertainty.</i>	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, <i>u_c the combined uncertainty.</i> The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor CRDL (RL)	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations. 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/TotUncert	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.

Friday, October 25, 2013
 FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\Fead\Rad\W06570B.Edd, h:\Reportdb\edd\Fead\Rad\57460.E
 Lab Code: TARL

TestAmerica Inc QC Blank Report

Lab Sample Id: M177X1AB Sdg/Rept Nbr: W06570B 57460 Collection Date: 05/29/2013 12:16
 Client Id: NA Matrix: WATER WATER Sample On Date:
 Moisture/Solids%*: QC Type: BLK Received Date: 10/10/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RType
	MW6-SBB-A19981								AB	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 Type
3284037 BLK	I-129 15046-84-1	-8.01E-02	pCi/L	9.7E-02 9.7E-02	U	1.57E-01	95.4		I129LL_SEP_L	3.9988E+00	10/21/2013 17:10				D

TestAmerica Inc U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide. I
 rptFeadRadEdd v3.68 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, October 25, 2013

TestAmerica Inc QC Control Sample Report

Lab Code: TARL

FormNbr: R FormatType: FEAD VersionNbr: 05 File Name: h:\Reportdb\edd\FeadIVRad\W06570B.Edd, h:\Reportdb\edd\FeadIVRad\57460.E

Lab Sample Id: M177X1CS Sdg/Rept Nbr: W06570B 57460 Collection Date: 05/29/2013 12:16
 Client Id: NA Matrix: WATER WATER Sample On Date:
 Moisture/Solids%*: QC Type: BS Received Date: 10/10/2013

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	F Suffix	R Typ					
	MW6-SBB-A19981								AC	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/	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
3284037 BS	I-129 15046-84-1	8.64E+00	pCi/L	1.0E+00	1.0E+00	3.03E-01	94.2	1129LL_SEP_L	9.52E+00	1129LL_SEP_L	3.9994E+00	10/21/2013	20:34	70	D
								L	90.8					130	

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 Inc
 rpt\FeadRadEdd v3.68

Lot No., Due Date: J3J100429; 10/25/2013
Client, Site: 384868; A210440HANFORD HANFORD
QC Batch No., Method Test: 3284037; RGAMLEPS Gamma by LEPS
SDG, Matrix: W06570B; WATER

1.0 COC

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

2.0 QC Batch

2.1 Do the Summary/Detailed Reports include a calculated result for each sample listed on the QC Batch Sheet? Yes No N/A

2.2 Are the QC appropriate for the analysis included in the batch? Yes No N/A

2.3 Is the Analytical Batch Worksheet complete; includes as appropriate, volumes, count times, etc? Yes No N/A

2.4 Does the Worksheets include a Tracer Vial label for each sample? Yes No N/A

3.0 QC & Samples

3.1 Is the blank results, yield, and MDA within contract limits? Yes No N/A

3.2 Is the LCS result, yield, and MDA within contract limits? Yes No N/A

3.3 Are the MS/MSD results, yields, and MDA within contract limits? Yes No N/A

3.4 Are the duplicate result, yields, and MDAs within contract limits? Yes No N/A

3.5 Are the sample yields and MDAs within contract limits? Yes No N/A

4.0 Raw Data

4.1 Were results calculated in the correct units? Yes No N/A

4.2 Were analysis volumes entered correctly? Yes No N/A

4.3 Were Yields entered correctly? Yes No N/A

4.4 Were spectra reviewed/meet contractual requirements? Yes No N/A

4.5 Were raw counts reviewed for anomalies? Yes No N/A

5.0 Other

5.1 Are all nonconformances included and noted? Yes No N/A

5.2 Are all required forms filled out? Yes No N/A

5.3 Was the correct methodology used? Yes No N/A

5.4 Was transcription checked? Yes No N/A

5.5 Were all calculations checked at a minimum frequency? Yes No N/A

5.6 Are worksheet entries complete and correct? Yes No N/A

6.0 Comments on any No response:

First Level *Tra Antonson* Date *10/22/13*



THE LEADER IN ENVIRONMENTAL TESTING

Data Review Checklist
RADIOCHEMISTRY
 Second Level Review

Batch Number: 3284037

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 Lopez* Date: 10-25-13

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

OCTOBER 25, 2013

RECHECK, RECOUNT, OR REANALYSIS ORDER

10/10/2013

Order Number: 130906TARL-R8012

TestAmerica Incorporated, Richland
2800 George Washington Way
Richland, WA 99354

Sample Delivery Group:W06570

Sample(s):

Method Name:I129LL_SEP_LEPS_GS

Sample#: B2P3C3	Sample Date:5/29/2013 12:16:00 PM	SAF #:I13-025		
Lab Sample ID	RDR Action Start Date	Constituent	Action	TAT (Hardcopy/EDD)
9M008N10	9/6/2013 11:30:58 AM	Iodine-129	RECHECK	15 Days / 15 Days
9M008N10	10/10/2013 2:11:00 PM	Iodine-129	REANALYZE	15 Days / 15 Days
Special Instructions:	Please use remaining sample for one run at full volume with no duplicate. SLF 10/10/2013			

W06570B
Rev'd 10-10-13
Due 10-25-13

J3J100429
minas



J3J100429

Deliver Report Results to:CHPRC
P.O. Box 1600
Richland, WA 99352
C/O Mr.Scot Fitzgerald

Seger, Sandra

From: Fitzgerald, Scot L [Scot_L_Fitzgerald@rl.gov]
Sent: Thursday, October 10, 2013 2:11 PM
To: Seger, Sandra
Cc: Ayres, Doris E; Douglas, James G (Jim); Evans, Robert T; Faught, William R; Fitzgerald, Scot L; Todak, David; Trent, Stephen J; Waters-husted, Karen S
Subject: Request for Recheck, or Reanalysis Order / R8012 SAF I13-025
Attachments: RDR8012_LabOrder.rtf

See Attachment

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # 113-025-009	
Collector F. M. Hall	Contact/Requester Karen Waters-Husted	Telephone No. 376-4650	Page 1 of 1				
SAF No. 113-025	Sampling Origin Hanford Site	Purchase Order/Charge Code 300071ES20					
Project Title 2ZP1, MAY 2013	Logbook No. HNF-N-506-56/66	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	Offsite Property No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.1 (1990/1993)		SPECIAL INSTRUCTIONS 200 Area Generator Knowledge Information Form applies. The CACN for all analytical work at WSCR is 401647.		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2P3C3	N	5/29/13	1216	1x20-mL P	Activity Scan	6 Months	None
B2P3C3	N	5/29/13	↓	2x4-L GIP	1129LL_SEP_LEPS_GS_LL: COMMON	6 Months	None

335310404
 W065N0
 335100439
 W065N0B
 minax

Relinquished By F. M. Hall	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time MAY 29 2013 1500	Received By SSU-1	Print SSU-1 #1	Sign <i>[Signature]</i>	Date/Time MAY 29 2013 1500
Relinquished By SSU-1	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 5/30/13 1600	Received By Dave Field/COSSO	Print Dave Field/COSSO	Sign <i>[Signature]</i>	Date/Time 5/30/13 1600
Relinquished By Dave Field/COSSO	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 5/30/13 0950	Received By J. Beck/Jack Tall	Print J. Beck/Jack Tall	Sign <i>[Signature]</i>	Date/Time 5/30/13 0950
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By Date/Time			

A-6004-842 (REV 2)



Sample Check-in List

Date/Time Received: 5-30-13/0950 Container GM Screen Result: (Airlock) .5 cpm Initials [B]]
Sample GM Screen Result (Sample Receiving) .4 cpm Initials [B]]

Client: Plw SDG #: W06570 SAF #: I13-025 NA []

Lot Number: J3E310409

Chain of Custody # I13-025-008, I13-025-009

Shipping Container ID or Air Bill Number: Dumd d.d.v. NA [X]]

Samples received inside shipping container/cooler/box Yes [B]] 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 [B]]
- 2. Custody Seals dated and signed? Yes [] No [] No Custody Seal [B]]
- 3. Cooler temperature: _____ °C NA [B]]
- 4. Vermiculite/packing materials is NA [B]] 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): 2
- 7. Containers received: 2 x vial 20; 4 x 4LP

- 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
[] 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 HNO₃ 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: w/v

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

Sample Check-in List completed by Sample Custodian:
Signature: [Signature] Date: 5-30-13

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

[B] No action necessary; process as is.
Project Manager: [Signature] Date: 5-31-13

Balance Id: 1120482733

Sample Preparation/Analysis

10/21/2013 2:33:20 PM
 384868, CH2M Hill Plateau Remediation Company
 , Pacific Northwest National Lab

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

Sep1 DT/Tm Tech:

Batch: 3284037 WATER pCi/L
 SEQ Batch, Test: None All Tests: 3284037 BNTB,

PM, Quote: SS, 57671

Sep2 DT/Tm Tech:

Prep Tech: Sannois

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 M1728-1-AA J3J100429-1-SAMP 05/29/2013 12:16	3890.20g	3890.20g	3890.20g	3890.20g	ITA13334 08/07/13			36.1mg	200	10/21/13	2028	10/21/1300	
2 M177X-1-AA-B J3J110000-37-BLK 10/14/2013 16:46 pd	3998.80g	3998.80g	3998.80g	3998.80g	ITA13335 08/07/13			35.3mg			L4 2030	10/21/1300	
3 M177X-1-AC-C J3J110000-37-LCS 10/14/2013 16:46 pd	3999.40g	3999.40g	3999.40g	3999.40g	ISD1592 10/09/13			35.4mg			L5 2353 10/21/1300	10/21/1300	

TestAmerica Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2 Page 1
 Richland Wa. pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added
 ISV - Insufficient Volume for Analysis
 Prep_SamplePrep v4.8.65
 WO Cnt: 3

10/21/2013 2:33:20 PM		Sample Preparation/Analysis		Balance Id:1120482733								
BN I-129 Prp/Sep GAM002		TB Gamma by LEPD		Pipet #:								
5I CLIENT: HANFORD		5I CLIENT: HANFORD		Sep1 DT/Tm Tech:								
AnalyseDate: 10/25/2013		pCi/L		Sep2 DT/Tm Tech:								
Batch: 3284037		Prep Tech: Norton,J,SannohS		Prep Tech: Norton,J,SannohS								
SEQ Batch, Test: None												
Work Ord. Lot, Sample Date	Total Amt/Unit	Total Amt/Unit	Initial Aliquot Amt/Unit	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:
<p>Comments: M177X-BLK "Comments P-13-00094",P-12-00571,S-13-00102,S-12-00193,S-13-00201,P-13-00289,P-13-00441,P-13-00358,S-12-00214</p>												
<p>All Clients for Batch: 384868, CH2M Hill Plateau Remediation Company Pacific Northwest National Lab, SS , 57671</p>												
<p>M17281AA-SAMP Constituent List: I-129 RDL:0.50E+00 pCi/L LCL: UCL: RPD: M177X1AA-BLK Constituent List: I-129 RDL:0.50E+00 pCi/L LCL: UCL: RPD: M177X1AC-LCS: I-129 RDL:5 pCi/L LCL:70 UCL:130 RPD:20 M17281AA-SAMP Calc Info: Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B M177X1AA-BLK Calc Info: Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B M177X1AC-LCS: Uncert Level (#s): 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B</p>												
TestAmerica	Key: In - Initial Amt, fi - Final Amt, di - Diluted Amt, s1 - Sep1, s2 - Sep2	Page 2		ISV - Insufficient Volume for Analysis		WO Cnt: 3		Prep_SamplePrep v4.8.65				
Richland Wa.	pd - Prep Dt, dc - Date Chg, r - Reference Dt, ec-Enrichment Cell, ct-Cocktailed Added											

OCTOBER 25, 2013

10/22/2013 3:22:33 PM

ICOC Fraction Transfer/Status Report

ByDate: 10/22/2012, 10/27/2013, Batch: '3284037', User: *ALL Order By DateTimeAccepting

Q Batch	Work Ord	CurStatus	Accepting	Comments
3284037				
AC	Rev1C	SannohS	10/15/2013 11:14:37	
SC		mcginnist	IsBatched	10/15/2013 7:50:45 AM
SC		SannohS	InPrep	10/15/2013 11:14:37 AM
SC		NortonJ	InSep1	10/21/2013 7:59:28 AM
SC		DawkinsO	InCnt1	10/21/2013 5:12:55 PM
SC		BullJ	CalcC	10/22/2013 2:43:16 PM
SC		antonsonl	Rev1C	10/22/2013 3:22:28 PM
AC		NortonJ		10/21/2013 7:59:28
AC		DawkinsO		10/21/2013 5:12:55
AC		BullJ		10/22/2013 2:43:16
AC		antonsonl		10/22/2013 3:22:28

AC: Accepting Entry; SC: Status Change

TestAmerica Richland

Richland Wa.

Page 1

Grp Rec Cnt: 5

ICOCFractions v4.8.44