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: 58567

| SDG Nbr | ORDER Nbr | CLIENT ID NUMBER | LOT Nbr | WORK ORDER | RPT DB ID | BATCH |
|---|---|---|---|---|---|---|
| W06650 | F13-002 | B2VPT9 | J4A150428-1 | M2VDP1AA | 9M2VDP10 | 4016033 |
| | | B2VPY7 | J4A150428-10 | M2VD21AA | 9M2VD210 | 4016033 |
| | | B2VR01 | J4A150428-11 | M2VD31AA | 9M2VD310 | 4016033 |
| | | B2VR05 | J4A150428-12 | M2VD41AA | 9M2VD410 | 4016033 |
| | | B2VR09 | J4A150428-13 | M2VD51AA | 9M2VD510 | 4016033 |
| | | B2VR13 | J4A150428-14 | M2VD61AA | 9M2VD610 | 4016033 |
| | | B2VR17 | J4A150428-15 | M2VD71AA | 9M2VD710 | 4016033 |
| | | B2VR21 | J4A150428-16 | M2VD81AA | 9M2VD810 | 4016033 |
| | | B2VR25 | J4A150428-17 | M2VD91AA | 9M2VD910 | 4016033 |
| | | B2VPV4 | J4A150428-2 | M2VDQ1AA | 9M2VDQ10 | 4016033 |
| | | B2VPV8 | J4A150428-3 | M2VDR1AA | 9M2VDR10 | 4016033 |
| | | B2VPW2 | J4A150428-4 | M2VDT1AA | 9M2VDT10 | 4016033 |
| | | B2VPW6 | J4A150428-5 | M2VDV1AA | 9M2VDV10 | 4016033 |
| | | B2VPX0 | J4A150428-6 | M2VDW1AA | 9M2VDW10 | 4016033 |
| | | B2VPX4 | J4A150428-7 | M2VDX1AA | 9M2VDX10 | 4016033 |

Comments:



JANUARY 28, 2014

# Report Nbr: 58567

| SDG Nbr | ORDER Nbr | CLIENT ID NUMBER | LOT Nbr | WORK ORDER | RPT DB ID | BATCH |
|---|---|---|---|---|---|---|
| W06650 | F13-002 | B2VPX8 | J4A150428-8 | M2VD01AA | 9M2VD010 | 4016033 |
| | | B2VPY2 | J4A150428-9 | M2VD11AA | 9M2VD110 | 4016033 |

**Comments:**



JANUARY 28, 2014

TestAmerica
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# Certificate of Analysis

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

January 28, 2014

Attention: Scot Fitzgerald

| | | |
|---|---|---|
| SAF Number | : | F13-002 |
| Date SDG Closed | : | January 15, 2014 |
| Number of Samples | : | Seventeen (17) |
| Sample Type | : | Water |
| SDG Number | : | W06650 |
| Data Deliverable | : | 15 Day / 15 Day Summary |

## CASE NARRATIVE

### I. Introductiou

On January 15, 2014, seventeen water samples were received at TestAmerica (TARL). Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the CH2M specific ID:

| CH2M ID# | TARL ID# | MATRIX | DATE OF RECEIPT |
|---|---|---|---|
| B2VPT9 | M2VDP | WATER | 1/15/14 |
| B2VPV4 | M2VDQ | WATER | 1/15/14 |
| B2VPV8 | M2VDR | WATER | 1/15/14 |
| B2VPW2 | M2VDT | WATER | 1/15/14 |
| B2VPW6 | M2VDV | WATER | 1/15/14 |
| B2VPX0 | M2VDW | WATER | 1/15/14 |
| B2VPX4 | M2VDX | WATER | 1/15/14 |
| B2VPX8 | M2VD0 | WATER | 1/15/14 |
| B2VPY2 | M2VD1 | WATER | 1/15/14 |
| B2VPY7 | M2VD2 | WATER | 1/15/14 |
| B2VR01 | M2VD3 | WATER | 1/15/14 |
| B2VR05 | M2VD4 | WATER | 1/15/14 |

| | | | |
|---|---|---|---|
| B2VR09 | M2VD5 | WATER | 1/15/14 |
| B2VR13 | M2VD6 | WATER | 1/15/14 |
| B2VR17 | M2VD7 | WATER | 1/15/14 |
| B2VR21 | M2VD8 | WATER | 1/15/14 |
| B2VR25 | M2VD9 | WATER | 1/15/14 |

## II. Sample Receipt

The samples were 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

## 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 RPD for the duplicate sample (B2VPT9) is greater than 20%. The sample and duplicate results are below the CRDL. Except as noted, the LCS, batch blank, samples and sample duplicate (B2VPT9) results are within contractual requirements.

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

Reviewed and approved:

Sandra Seger
Project Manager

## Drinking Water Method Cross References

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

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

## Uncertainty Estimation

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

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

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

## Report Definitions

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

*SKS

1/28/2014 1:00:00 PM

# TestAmerica Inc Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 58567 File Name: h:\Reportdb\edd\FeadIV\Rad\W06650.Edd, h:\Reportdb\edd\FeadIV\Rad\58567.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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VD010 | B2VPX8 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 09:35 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 6.61E-02 | pCi/L | 1.6E-01 | 1.6E-01 | U | 1.52E-01 | 96.8 | I129LL_SEP_LEPS | 3.8383E+00 | L | 01/27/2014 07:02 | 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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VD110 | B2VPY2 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 09:47 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | -2.06E-02 | pCi/L | 7.9E-02 | 7.9E-02 | U | 1.41E-01 | 95.4 | I129LL_SEP_LEPS | 3.8404E+00 | L | 01/27/2014 07:03 | 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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VD210 | B2VPY7 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 10:00 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 7.82E-02 | pCi/L | 1.0E-01 | 1.0E-01 | U | 1.95E-01 | 96.5 | I129LL_SEP_LEPS | 3.7766E+00 | L | 01/27/2014 10:28 | 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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VD310 | B2VR01 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 10:08 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | -1.25E-02 | pCi/L | 8.8E-02 | 8.8E-02 | U | 1.57E-01 | 95.1 | I129LL_SEP_LEPS | 3.7758E+00 | L | 01/27/2014 10:28 | 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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VD410 | B2VR05 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 10:20 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 3.51E-02 | pCi/L | 1.0E-01 | 1.0E-01 | U | 1.93E-01 | 93.2 | I129LL_SEP_LEPS | 3.8033E+00 | L | 01/27/2014 13:52 | 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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VD510 | B2VR09 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 10:32 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | -3.96E-02 | pCi/L | 9.3E-02 | 9.3E-02 | U | 1.61E-01 | 93.2 | I129LL_SEP_LEPS | 3.8016E+00 | L | 01/27/2014 13:53 | 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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VD610 | B2VR13 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 11:38 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 1.10E-03 | pCi/L | 1.0E-01 | 1.0E-01 | U | 1.83E-01 | 90.8 | I129LL_SEP_LEPS | 3.7852E+00 | L | 01/27/2014 17:20 | I |

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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.

I



JANUARY 28, 2014

*1/28/2014 1:00:00 PM*

# TestAmerica Inc Report

**Lab Code:** TARL

**FormNbr:** R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 58567 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06650.Edd, h:\Reportdb\edd\FeadIV\Rad\58567.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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VD710 | B2VR17 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 11:48 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 3.54E-01 | pCi/L | 1.8E-01 | 1.8E-01 | | 1.85E-01 | 91.1 | I129LL_SEP_LEPS | 3.8098E+00 | L | 01/27/2014 17:22 | 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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VD810 | B2VR21 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 11:48 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 4.88E-01 | pCi/L | 2.4E-01 | 2.4E-01 | | 2.33E-01 | 94.3 | I129LL_SEP_LEPS | 3.8193E+00 | L | 01/27/2014 20:46 | I |

| Lab Sample Id: | Client Id: | Test User | Contract Nbr | SAF Nbr | Sdg Nbr: | QC Type: | Moisture/ Solids%*: | Distilled Volume | Sample On Date: | Collection Date: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VD910 | B2VR25 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 12:00 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 2.86E-01 | pCi/L | 1.6E-01 | 1.6E-01 | | 1.62E-01 | 94.1 | I129LL_SEP_LEPS | 3.8178E+00 | L | 01/27/2014 20:47 | 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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VDP10 | B2VPT9 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 11:13 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 1.29E-01 | pCi/L | 1.2E-01 | 1.2E-01 | U | 2.21E-01 | 86.2 | I129LL_SEP_LEPS | 3.8288E+00 | L | 01/24/2014 10:07 | 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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VDQ10 | B2VPV4 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 10:53 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 2.57E-01 | pCi/L | 1.3E-01 | 1.3E-01 | U | 2.54E-01 | 98.1 | I129LL_SEP_LEPS | 3.776E+00 | L | 01/24/2014 13:32 | 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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VDR10 | B2VPV8 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 11:04 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 3.21E-03 | pCi/L | 8.4E-02 | 8.4E-02 | U | 1.55E-01 | 94.3 | I129LL_SEP_LEPS | 3.8113E+00 | L | 01/24/2014 13:33 | I |

| Lab Sample Id: | Client Id: | Test User | Contract Nbr | SAF Nbr | Sdg Nbr: | QC Type: | Moisture/ Solids%*: | Distilled Volume | Sample On Date: | Collection Date: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VDT10 | B2VPW2 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 08:39 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | -5.34E-02 | pCi/L | 1.1E-01 | 1.1E-01 | U | 1.84E-01 | 92.4 | I129LL_SEP_LEPS | 3.7834E+00 | L | 01/24/2014 17:47 | I |

TestAmerica Inc

rptFeadRadSummaryEdd v3.48

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

*2*

*1/28/2014 1:00:00 PM*

# TestAmerica Inc Report

**Lab Code:** TARL

**FormNbr:** R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 58567 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06650.Edd, h:\Reportdb\edd\FeadIV\Rad\58567.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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VDV10 | B2VPW6 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 08:57 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 3.45E-01 | pCi/L | 1.5E-01 | 1.5E-01 | | 1.62E-01 | 95.4 | I129LL_SEP_LEPS | 3.8095E+00 | L | 01/24/2014 17:49 | 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: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VDW10 | B2VPX0 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 09:07 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | -1.38E-02 | pCi/L | 1.0E-01 | 1.0E-01 | U | 1.74E-01 | 95.7 | I129LL_SEP_LEPS | 3.7656E+00 | L | 01/24/2014 21:29 | I |

| Lab Sample Id: | Client Id: | Test User | Contract Nbr | SAF Nbr | Sdg Nbr: | QC Type: | Moisture/ Solids%*: | Distilled Volume | Sample On Date: | Collection Date: |
|---|---|---|---|---|---|---|---|---|---|---|
| 9M2VDX10 | B2VPX4 | F13-002 | MW6-SBB-A1 | F13-002 | W06650 | | | | | 01/15/2014 09:07 |

| Batch | Analyte | CAS# | Result | Unit | CntU 2S | TotU 2S | Qual | MDA | TrcYield | Method | Alq Size | Unit | Analy Date/Time | Act |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 15046-84-1 | 1.48E-01 | pCi/L | 1.2E-01 | 1.2E-01 | U | 1.61E-01 | 95.1 | I129LL_SEP_LEPS | 3.8081E+00 | L | 01/24/2014 21:30 | I |



JANUARY 28, 2014



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.

*Tuesday, January 28, 2014*

# TestAmerica Inc QC Blank Report

**Lab Code:** TARL

**FormNbr:** R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06650.Edd, h:\Reportdb\edd\FeadIV\Rad\58567.Ed

**Lab Sample Id:** M2VF91AB **Sdg/Rept Nbr:** W06650 58567 **Collection Date:** 01/15/2014 11:13

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

**Moisture/Solids%*:** **QC Type:** BLK **Received Date:** 01/15/2014

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp |
|---|---|---|---|---|---|---|---|---|---|---|
| | MW6-SBB-A19981 | | | | | | | | AS | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 7.27E-02 | pCi/L | 1.2E-01 | U | 2.19E-01 | 93.8 | | I129LL_SEP_L | 3.8182E+00 | 01/28/2014 | | | | D |
| BLK | 15046-84-1 | | | 1.2E-01 | | | | | | L | 01:25 | | | | |



JANUARY 28, 2014



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.

*Tuesday, January 28, 2014*

# TestAmerica Inc QC Control Sample Report

**Lab Code:** TARL

**FormNbr:** R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06650.Edd, h:\Reportdb\edd\FeadIV\Rad\58567.Ed

| | | | | | |
|---|---|---|---|---|---|
| **Lab Sample Id:** | M2VF91CS | **Sdg/Rept Nbr:** | W06650 | 58567 | **Collection Date:** 01/15/2014 11:13 |
| **Client Id:** | NA | **Matrix:** | WATER | WATER | **Sample On Date:** |
| **Moisture/Solids%*:** | | **QC Type:** | BS | | **Received Date:** 01/15/2014 |

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp |
|---|---|---|---|---|---|---|---|---|---|---|
| | MW6-SBB-A19981 | | | | | | | | AT | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | 9.36E+00 | pCi/L | 1.1E+00 | | 2.37E-01 | 92.8 | 9.87E+00 | I129LL_SEP_L | 3.9885E+00 | 01/28/2014 | | | 70 | D |
| BS | 15046-84-1 | | | 1.1E+00 | | | | 94.8 | | L | 01:27 | | | 130 | |

JANUARY 28, 2014





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 bas been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

*Tuesday, January 28, 2014*

# TestAmerica Inc QC Duplicate Report

**Lab Code:** TARL

**FormNbr:** R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06650.Edd, h:\Reportdb\edd\FeadIV\Rad\58567.Ed

**Lab Sample Id:** M2VDP1CR **Sdg/Rept Nbr:** W06650 58567 **Collection Date:** 01/15/2014 11:13

**Client Id:** B2VPT9 **Matrix:** WATER WATER **Sample On Date:**

**Moisture/Solids%*:** **QC Type:** DUP **Received Date:** 01/15/2014

| SAF Nbr | Contract Nbr | Test User | Case Nbr | SAS Nbr | Suffix | Decant | Distilled Volume | File Id | FSuffix | RTyp |
|---|---|---|---|---|---|---|---|---|---|---|
| F13-002 | 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4016033 | I-129 | -8.09E-02 | pCi/L | 8.5E-02 | U | 1.38E-01 | 95.7 | | I129LL_SEP_L | 3.8249E+00 | 01/24/2014 | 866.7 | 3.5 | | D |
| DUP | 15046-84-1 | 1.29E-01 | | 8.5E-02 | | | | | | L | 10:07 | 20.0 | 3 | | |



JANUARY 28, 2014



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

1/28/2014 10:44:37 AM

**Lot No., Due Date:** J4A150428; 01/30/2014
**Client, Site:** 108302; FLH HANFORD
**QC Batch No., Method Test:** 4016033; RGAMLEPS Gamma by LEPS
**SDG, Matrix:** W06650; 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 [signature] Date 1/28/14

TestAmerica Richland
QAS_RADCALCv4.8.44

Page 1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

# Data Review Checklist
## RADIOCHEMISTRY
### Second Level Review

**Batch Number:** 4016033

| Review Item | Yes (√) | No (√) | NA (√) |
|---|---|---|---|
| **A. Sample Analysis**<br>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**<br>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**<br>1. Are all Nonconformances (NCM) included and noted? | | | ✓ |
| 2. Was the correct methodology used? | ✓ | | |
| 3. Were units checked? | ✓ | | |

Comments on any "No" response: _____

Second Level Review: Sandra Sagen Date: 1-28-14

DR-001, Rev. 01, 10/30/2013

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-418 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR E. L. Kauer Fv (ten | COMPANY CONTACT EVANS, RT | TELEPHONE NO. 373-7924 | PROJECT COORDINATOR EVANS, RT | PRICE CODE 7C | DATA TURNAROUND |
| SAMPLING LOCATION 289TB, 299-W12-2, Valve V03-YE05 | PROJECT DESIGNATION 200W Pump & Treat - Extraction Well Water Sampling | | SAF NO. F13-002 | AIR QUALITY ☐ | 15 Days / 15 Days |
| ICE CHEST NO. | FIELD LOGBOOK NO. HNF-N- 491-9/100 | ACTUAL SAMPLE DEPTH N/A | COA 303111ES10 | METHOD OF SHIPMENT GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO. SEE PTR | | BILL OF LADING/AIR BILL NO. SEE PTR | | |

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

**POSSIBLE SAMPLE HAZARDS/ REMARKS**
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

**SPECIAL HANDLING AND/OR STORAGE**

| | |
|---|---|
| PRESERVATION | None |
| HOLDING TIME | 6 Months |
| TYPE OF CONTAINER | G/P |
| NO. OF CONTAINER(S) | 2 |
| VOLUME | 4L |
| SAMPLE ANALYSIS | I129LL_SEP_LE PS_GS_LL: COMMON; |

LOT # : J4A150428
SDG#: W06650
Due: 1/30/14

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VPT9 | WATER | 1-15-14 | 1113 | ✓ |

M2VDP

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM E. L. Kauer [signature] | DATE/TIME 1-15-14 1200 | RECEIVED BY/STORED IN Roy Shepard [signature] 1/15/14 | DATE/TIME 1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM Roy Shepard [signature] | DATE/TIME JAN 15 2014 1440 | RECEIVED BY/STORED IN J. Bock [signature] | DATE/TIME JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

**SPECIAL INSTRUCTIONS**
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL- 14- 030

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

PRINTED ON 12/30/2013

A-6003-618 (REV 2)

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-423 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Fulton | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C<br>AIR QUALITY ☐ | DATA TURNAROUND<br>15 Days / 15 Days |
| SAMPLING LOCATION<br>289TB, 299-W12-3, Valve V03-YE18 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | | |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N-491-9/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

| MATRIX* | POSSIBLE SAMPLE HAZARDS/ REMARKS | PRESERVATION | None |
|---|---|---|---|
| A=Air<br>DL=Drum Liquids<br>DS=Drum Solids<br>L=Liquid<br>O=Oil<br>S=Soil<br>SE=Sediment<br>T=Tissue<br>V=Vegetation<br>W=Water<br>WI=Wipe<br>X=Other | Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. | HOLDING TIME | 6 Months |
| | | TYPE OF CONTAINER | G/P |
| | | NO. OF CONTAINER(S) | 2 |
| | | VOLUME | 4L |
| | SPECIAL HANDLING AND/OR STORAGE | SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL; COMMON; |

LOT# J4A150428
SDG# W06650
Due 1/30/14

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VPV4 | WATER | 1-15-14 | 1053 | ✓ |

M2VDQ

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | | SPECIAL INSTRUCTIONS |
|---|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard | DATE/TIME<br>1-15-14 1200 | ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>J. Bock TAL | DATE/TIME<br>JAN 15 2014 1440 | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | |

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)



JANUARY 28, 2014

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-427 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Ku / Kau | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C<br>AIR QUALITY ☐ | DATA TURNAROUND<br>15 Days / 15 Days |
| SAMPLING LOCATION<br>289TB, 299-W12-4, Valve V03-YE19 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | | |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N-491-9/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

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

**POSSIBLE SAMPLE HAZARDS/ REMARKS**
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

**SPECIAL HANDLING AND/OR STORAGE**

| | |
|---|---|
| PRESERVATION | None |
| HOLDING TIME | 6 Months |
| TYPE OF CONTAINER | G/P |
| NO. OF CONTAINER(S) | 2 |
| VOLUME | 4L |
| SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL: COMMON; |

LOT# J4A150428
SDG# W06650
Due 1/30/14

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VPV8 | WATER | 1-15-14 | 1104 | ✓ |

M2VDR

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard | DATE/TIME<br>1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>J. Bock | DATE/TIME<br>JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

**SPECIAL INSTRUCTIONS**
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL-14-030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)



JANUARY 28, 2014

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-431 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR E. L. Kauer Fulton | COMPANY CONTACT EVANS, RT | TELEPHONE NO. 373-7924 | PROJECT COORDINATOR EVANS, RT | PRICE CODE 7C | DATA TURNAROUND |
| SAMPLING LOCATION 289TC, 299-W15-225, Valve V03-YE01 | PROJECT DESIGNATION 200W Pump & Treat - Extraction Well Water Sampling | | SAF NO. F13-002 | AIR QUALITY ☐ | 15 Days / 15 Days |
| ICE CHEST NO. | FIELD LOGBOOK NO. HNF-N-491-5/100 | ACTUAL SAMPLE DEPTH N/A | COA 303111ES10 | METHOD OF SHIPMENT GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO. SEE PTR | | BILL OF LADING/AIR BILL NO. SEE PTR | | |

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

**POSSIBLE SAMPLE HAZARDS/ REMARKS**
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

**SPECIAL HANDLING AND/OR STORAGE**

| | |
|---|---|
| PRESERVATION | None |
| HOLDING TIME | 6 Months |
| TYPE OF CONTAINER | G/P |
| NO. OF CONTAINER(S) | 2 |
| VOLUME | 4L |
| SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL: COMMON; |

lot# J4A150428
SDG# W06650
Due 1/30/14

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VPW2 | WATER | 1-15-14 | 0839 | ✓ |

M2VDT

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM E. L. Kauer | DATE/TIME 1-15-14 1200 | RECEIVED BY/STORED IN Roy Shepard | DATE/TIME 1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM Roy Shepard | DATE/TIME JAN 15 2014 1440 | RECEIVED BY/STORED IN J. Cole | DATE/TIME JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

**SPECIAL INSTRUCTIONS**
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL- 14- 030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)

JANUARY 28, 2014

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-435 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR E. L. Kauer E. L. Kauer | COMPANY CONTACT EVANS, RT | TELEPHONE NO. 373-7924 | PROJECT COORDINATOR EVANS, RT | PRICE CODE 7C | DATA TURNAROUND |
| SAMPLING LOCATION 289TC, 299-W14-20, Valve V03-YE02 | PROJECT DESIGNATION 200W Pump & Treat - Extraction Well Water Sampling | | SAF NO. F13-002 | AIR QUALITY ☐ | 15 Days / 15 Days |
| ICE CHEST NO. | FIELD LOGBOOK NO. HNF-N-491-8/100 | ACTUAL SAMPLE DEPTH N/A | COA 303111ES10 | METHOD OF SHIPMENT GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO. SEE PTR | | BILL OF LADING/AIR BILL NO. SEE PTR | | |

| MATRIX* | POSSIBLE SAMPLE HAZARDS/ REMARKS | | |
|---|---|---|---|
| A=Air<br>DL=Drum Liquids<br>DS=Drum Solids<br>L=Liquid<br>O=Oil<br>S=Soil<br>SE=Sediment<br>T=Tissue<br>V=Vegetation<br>W=Water<br>WI=Wipe<br>X=Other | Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. | PRESERVATION | None |
| | | HOLDING TIME | 6 Months |
| | | TYPE OF CONTAINER | G/P |
| | | NO. OF CONTAINER(S) | 2 |
| | | VOLUME | 4L |
| | SPECIAL HANDLING AND/OR STORAGE | SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL: COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VPW6 | WATER | 1-15-14 | 0857 | ✓ |

M2VDV

lot # J4A150428
SDG W06650
Due 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM E. L. Kauer | DATE/TIME 1-15-14 1200 | RECEIVED BY/STORED IN Roy Shepard | DATE/TIME 1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME JAN 15 2014 1440 | RECEIVED BY/STORED IN J. Bock | DATE/TIME JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL- 14- 030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)



JANUARY 28, 2014

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-439 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR E. L. Kauer Fulton | COMPANY CONTACT EVANS, RT | TELEPHONE NO. 373-7924 | PROJECT COORDINATOR EVANS, RT | PRICE CODE 7C | DATA TURNAROUND |
| SAMPLING LOCATION 289TC, 299-W14-73, Valve V03-YE03 | PROJECT DESIGNATION 200W Pump & Treat - Extraction Well Water Sampling | | SAF NO. F13-002 | AIR QUALITY ☐ | 15 Days / 15 Days |
| ICE CHEST NO. | FIELD LOGBOOK NO. HNF-N- 491-9/100 | ACTUAL SAMPLE DEPTH N/A | COA 303111ES10 | METHOD OF SHIPMENT GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO. SEE PTR | | BILL OF LADING/AIR BILL NO. SEE PTR | | |

| MATRIX* | POSSIBLE SAMPLE HAZARDS/ REMARKS | | |
|---|---|---|---|
| A=Air<br>DL=Drum Liquids<br>DS=Drum Solids<br>L=Liquid<br>O=Oil<br>S=Soil<br>SE=Sediment<br>T=Tissue<br>V=Vegetation<br>W=Water<br>WI=Wipe<br>X=Other | Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. | PRESERVATION | None |
| | | HOLDING TIME | 6 Months |
| | | TYPE OF CONTAINER | G/P |
| | | NO. OF CONTAINER(S) | 2 |
| | | VOLUME | 4L |
| | SPECIAL HANDLING AND/OR STORAGE | SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL: COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VPX0 | WATER | 1-15-14 | 0907 | ✓ |

M2VDW

1/15/14

Lot J4A150428
SDG W06650
Due 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM E. L. Kauer [signature] | DATE/TIME 1-15-14 1200 | RECEIVED BY/STORED IN Roy Shepard [signature] | DATE/TIME 1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM Roy Shepard [signature] | DATE/TIME JAN 15 2014 1440 | RECEIVED BY/STORED IN J. Bock [signature] | DATE/TIME JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL- 14- 030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-443 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Fulton | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C<br>AIR QUALITY ☐ | DATA TURNAROUND<br>15 Days / 15 Days |
| SAMPLING LOCATION<br>289TC, 299-W11-50, Valve V03-YE06 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | | |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N- 491-9/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

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

**POSSIBLE SAMPLE HAZARDS/ REMARKS**
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

**SPECIAL HANDLING AND/OR STORAGE**

| | |
|---|---|
| PRESERVATION | None |
| HOLDING TIME | 6 Months |
| TYPE OF CONTAINER | G/P |
| NO. OF CONTAINER(S) | 2 |
| VOLUME | 4L |
| SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL: COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VPX4 | WATER | 1-15-14 | 0907 | ✓ |

LOT J4A150428
DDG ~~W06550~~ W06650
cpn 1/15/14
Due 1/30/14

~~M2VDV~~
m2VDX JB 1-15-14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer [signature] | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard | DATE/TIME<br>1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard [signature] | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>J.Bock [signature] TALR | DATE/TIME<br>JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

**SPECIAL INSTRUCTIONS**
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL- 14- 030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-447 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Fulton | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C<br>AIR QUALITY ☐ | DATA TURNAROUND<br>15 Days / 15 Days |
| SAMPLING LOCATION<br>289TC, 299-W11-90, Valve V03-YE07 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | | |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N-491-9/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

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

**POSSIBLE SAMPLE HAZARDS/ REMARKS**
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

**SPECIAL HANDLING AND/OR STORAGE**

| | |
|---|---|
| PRESERVATION | None |
| HOLDING TIME | 6 Months |
| TYPE OF CONTAINER | G/P |
| NO. OF CONTAINER(S) | 2 |
| VOLUME | 4L |
| SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL; COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VPX8 | WATER | 1-15-14 | 0935 | ✓ |

M2VD0

6T J4A150428
SDG W06650
Due 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard | DATE/TIME<br>1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>J Bock Bock TALK | DATE/TIME<br>JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

**SPECIAL INSTRUCTIONS**
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL-14-030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-451 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Fu / Ford | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C<br>AIR QUALITY ☐ | DATA TURNAROUND<br>15 Days / 15 Days |
| SAMPLING LOCATION<br>289TC, 299-W17-3, Valve V03-YE09 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | | |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N-491-5/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

| MATRIX* | POSSIBLE SAMPLE HAZARDS/ REMARKS | | |
|---|---|---|---|
| A=Air<br>DL=Drum Liquids<br>DS=Drum Solids<br>L=Liquid<br>O=Oil<br>S=Soil<br>SE=Sediment<br>T=Tissue<br>V=Vegetation<br>W=Water<br>WI=Wipe<br>X=Other | Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. | PRESERVATION | None |
| | | HOLDING TIME | 6 Months |
| | | TYPE OF CONTAINER | G/P |
| | | NO. OF CONTAINER(S) | 2 |
| | | VOLUME | 4L |
| | SPECIAL HANDLING AND/OR STORAGE | SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL: COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VPY2 | WATER | 1-15-14 | 0947 | ✓ |

M2VD1

Lot J4A150428
SDG W06650
Due 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard | DATE/TIME<br>1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>J. Bock | DATE/TIME<br>JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL- 14- 030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)



JANUARY 28, 2014

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-456 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Fulton | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C | DATA TURNAROUND |
| SAMPLING LOCATION<br>289TC, 299-W17-2, Valve V03-YE10 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | AIR QUALITY ☐ | 15 Days / 15 Days |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N-491-9/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

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

**POSSIBLE SAMPLE HAZARDS/ REMARKS**
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

**SPECIAL HANDLING AND/OR STORAGE**

| | |
|---|---|
| PRESERVATION | None |
| HOLDING TIME | 6 Months |
| TYPE OF CONTAINER | G/P |
| NO. OF CONTAINER(S) | 2 |
| VOLUME | 4L |
| SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL: COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VPY7 | WATER | 1-15-14 | 1000 | ✓ |

M2VD2

LOT J4A150428
DDG W06650
Due 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer [signature] | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard [signature] | DATE/TIME<br>1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard [signature] | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>J. Bock [signature] TALR | DATE/TIME<br>JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

**SPECIAL INSTRUCTIONS**
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL 14- 030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-460 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Full Kauer | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C<br>AIR QUALITY ☐ | DATA TURNAROUND<br>15 Days / 15 Days |
| SAMPLING LOCATION<br>289TC, 299-W11-49, Valve V03-YE12 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | | |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N-491-9/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

| MATRIX* | POSSIBLE SAMPLE HAZARDS/ REMARKS | | |
|---|---|---|---|
| A=Air<br>DL=Drum Liquids<br>DS=Drum Solids<br>L=Liquid<br>O=Oil<br>S=Soil<br>SE=Sediment<br>T=Tissue<br>V=Vegetation<br>W=Water<br>WI=Wipe<br>X=Other | Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. | PRESERVATION | None |
| | | HOLDING TIME | 6 Months |
| | | TYPE OF CONTAINER | G/P |
| | | NO. OF CONTAINER(S) | 2 |
| | | VOLUME | 4L |
| | SPECIAL HANDLING AND/OR STORAGE | SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL: COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VR01 | WATER | 1-15-14 | 1008 | ✓ |

M2VD3

LOT J4A150428
DG W06650
Due 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | | SPECIAL INSTRUCTIONS |
|---|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard | DATE/TIME<br>1-15-14 1200 | ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>J. Bock TIAL | DATE/TIME<br>JAN 15 2014 1440 | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME | |

TRVL 14- 030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)



JANUARY 28, 2014

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-464 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Fulton | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C<br>AIR QUALITY ☐ | DATA TURNAROUND<br>15 Days / 15 Days |
| SAMPLING LOCATION<br>289TC, 299-W14-21, Valve V03-YE15 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | | |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N-491-8/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

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

**POSSIBLE SAMPLE HAZARDS/ REMARKS**
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

**SPECIAL HANDLING AND/OR STORAGE**

| | |
|---|---|
| PRESERVATION | None |
| HOLDING TIME | 6 Months |
| TYPE OF CONTAINER | G/P |
| NO. OF CONTAINER(S) | 2 |
| VOLUME | 4L |
| SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL; COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VR05 | WATER | 1-15-14 | 1020 | ✓ |

M2VD4

lot J4A150428
SDG W06650
Due 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer | DATE/TIME<br>1-15-14 1210 | RECEIVED BY/STORED IN<br>Roy Shepard | DATE/TIME<br>1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>J. Lock | DATE/TIME<br>JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

**SPECIAL INSTRUCTIONS**
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL-14-030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)

JANUARY 28, 2014

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-468 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Fulton | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C<br>AIR QUALITY ☐ | DATA TURNAROUND<br>15 Days / 15 Days |
| SAMPLING LOCATION<br>289TC, 299-W11-92, Valve V03-YE16 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | | |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N- 491-9/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

| MATRIX* | POSSIBLE SAMPLE HAZARDS/ REMARKS | | |
|---|---|---|---|
| A=Air<br>DL=Drum Liquids<br>DS=Drum Solids<br>L=Liquid<br>O=Oil<br>S=Soil<br>SE=Sediment<br>T=Tissue<br>V=Vegetation<br>W=Water<br>WI=Wipe<br>X=Other | Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. | PRESERVATION | None |
| | | HOLDING TIME | 6 Months |
| | | TYPE OF CONTAINER | G/P |
| | | NO. OF CONTAINER(S) | 2 |
| | | VOLUME | 4L |
| | SPECIAL HANDLING AND/OR STORAGE | SAMPLE ANALYSIS | I129L1_SEP_LEPS_GS_LL: COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VR09 | WATER | 1-15-14 | 1032 | ✓ |

M2VD5

LOT J4A150428
SDG W06650
Due 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer [signature] | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard [signature] | DATE/TIME<br>1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard [signature] | DATE/TIME<br>JAN 15 2014 ~~1200~~ 1440 | RECEIVED BY/STORED IN<br>J. Bock / Bock TALR | DATE/TIME<br>JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL- 14- 030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-472 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Follow | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C | DATA TURNAROUND |
| SAMPLING LOCATION<br>289TF, 299-W22-90, Valve V03-YE21 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | AIR QUALITY ☐ | 15 Days / 15 Days |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N-491-8/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

| MATRIX* | POSSIBLE SAMPLE HAZARDS/ REMARKS | | |
|---|---|---|---|
| A=Air<br>DL=Drum Liquids<br>DS=Drum Solids<br>L=Liquid<br>O=Oil<br>S=Soil<br>SE=Sediment<br>T=Tissue<br>V=Vegetation<br>W=Water<br>WI=Wipe<br>X=Other | Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1. | PRESERVATION | None |
| | | HOLDING TIME | 6 Months |
| | | TYPE OF CONTAINER | G/P |
| | | NO. OF CONTAINER(S) | 2 |
| | | VOLUME | 4L |
| | SPECIAL HANDLING AND/OR STORAGE | SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL: COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | [redacted] |
|---|---|---|---|---|
| B2VR13 | WATER | 1-15-14 | 1138 | ✓ |

M2VD6

LOT J4A150428
DDG W06650
DUE 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard | DATE/TIME<br>1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>J. Lock | DATE/TIME<br>JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL- 14- 030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)



JANUARY 28, 2014

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-476 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Fulton | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C<br>AIR QUALITY ☐ | DATA TURNAROUND<br>15 Days / 15 Days |
| SAMPLING LOCATION<br>289TF, 299-W22-91, Valve V03-YE22 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | | |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N-491-9/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

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

**POSSIBLE SAMPLE HAZARDS/ REMARKS**
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

| | |
|---|---|
| PRESERVATION | None |
| HOLDING TIME | 6 Months |
| TYPE OF CONTAINER | G/P |
| NO. OF CONTAINER(S) | 2 |
| VOLUME | 4L |
| SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL: COMMON; |

**SPECIAL HANDLING AND/OR STORAGE**

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VR17 | WATER | 1-15-14 | 1148 | ✓ |

M2VD7

LOT J4A150428
SDG =W06650
Due 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer [signature] | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard [signature] | DATE/TIME<br>1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard [signature] | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>J. Bock [signature] | DATE/TIME<br>JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

**SPECIAL INSTRUCTIONS**
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL-14-030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-480 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Fulton | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7H | DATA TURNAROUND |
| SAMPLING LOCATION<br>289TF, 299-W22-91, Valve V03-YE22 DUP | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | AIR QUALITY ☐ | 30 Days / 30 Days |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N-495-E/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

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

**POSSIBLE SAMPLE HAZARDS/ REMARKS**
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

**SPECIAL HANDLING AND/OR STORAGE**

| | |
|---|---|
| PRESERVATION | None |
| HOLDING TIME | 6 Months |
| TYPE OF CONTAINER | G/P |
| NO. OF CONTAINER(S) | 2 |
| VOLUME | 4L |
| SAMPLE ANALYSIS | I129LL_SEP_LEPS_GS_LL: COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | [redacted] |
|---|---|---|---|---|
| B2VR21 | WATER | 1-15-14 | 1148 | ✓ |

M2VD8

lot J4A150428
SDG W06650
Due 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard | DATE/TIME<br>1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>J. Gock | DATE/TIME<br>JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

**SPECIAL INSTRUCTIONS**
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL-14-030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)



JANUARY 28, 2014

| CH2MHill Plateau Remediation Company | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | | | F13-002-484 | PAGE 1 OF 1 |
|---|---|---|---|---|---|
| COLLECTOR<br>E. L. Kauer Fulton | COMPANY CONTACT<br>EVANS, RT | TELEPHONE NO.<br>373-7924 | PROJECT COORDINATOR<br>EVANS, RT | PRICE CODE 7C<br>AIR QUALITY ☐ | DATA TURNAROUND<br>15 Days / 15 Days |
| SAMPLING LOCATION<br>289TF, 299-W22-92, Valve V03-YE23 | PROJECT DESIGNATION<br>200W Pump & Treat - Extraction Well Water Sampling | | SAF NO.<br>F13-002 | | |
| ICE CHEST NO. | FIELD LOGBOOK NO.<br>HNF-N-491-5/100 | ACTUAL SAMPLE DEPTH<br>N/A | COA<br>303111ES10 | METHOD OF SHIPMENT<br>GOVERNMENT VEHICLE | ORIGINAL |
| SHIPPED TO<br>TestAmerica Incorporated, Richland | OFFSITE PROPERTY NO.<br>SEE PTR | | BILL OF LADING/AIR BILL NO.<br>SEE PTR | | |

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

**POSSIBLE SAMPLE HAZARDS/ REMARKS**
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.

**SPECIAL HANDLING AND/OR STORAGE**

| | |
|---|---|
| PRESERVATION | None |
| HOLDING TIME | 6 Months |
| TYPE OF CONTAINER | G/P |
| NO. OF CONTAINER(S) | 2 |
| VOLUME | 4L |
| SAMPLE ANALYSIS | I129LL_SEP_LE PS_GS_LL: COMMON; |

| SAMPLE NO. | MATRIX* | SAMPLE DATE | SAMPLE TIME | |
|---|---|---|---|---|
| B2VR25 | WATER | 1-15-14 | 1200 | ✓ |

M2VD9

LOT J4A150428
SDG W06650
Due 1/30/14

| CHAIN OF POSSESSION | | SIGN/ PRINT NAMES | |
|---|---|---|---|
| RELINQUISHED BY/REMOVED FROM<br>E. L. Kauer | DATE/TIME<br>1-15-14 1200 | RECEIVED BY/STORED IN<br>Roy Shepard | DATE/TIME<br>1-15-14 1200 |
| RELINQUISHED BY/REMOVED FROM<br>Roy Shepard | DATE/TIME<br>JAN 15 2014 1440 | RECEIVED BY/STORED IN<br>Jack J. Bockthal | DATE/TIME<br>JAN 15 2014 1440 |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |
| RELINQUISHED BY/REMOVED FROM | DATE/TIME | RECEIVED BY/STORED IN | DATE/TIME |

**SPECIAL INSTRUCTIONS**
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF. TRVL14-030

TRVL- 14- 030

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

PRINTED ON 12/23/2013

A-6003-618 (REV 2)



JANUARY 28, 2014

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

# Sample Check-in List

Date/Time Received: 1-15-14 / 1440 JS 1-15-14 Container GM Screen Result: (Airlock) 60 cpm Initials [B]
Sample GM Screen Result (Sample Receiving) 80 cpm Initials [B]

Client: PWW FLH SDG #: W06650 SAF #: F13-002 NA [ ]

Lot Number: J4A150428

Chain of Custody # F13-002-418, 423, 427, 431, 435, 439, 443, 447, 451, 456, 460, 464, 468, 472, 476, 480, 484

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

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): 17
7. Containers received: 34 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 $HNO_3$ added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [B]
14. Description of anomalies (include sample numbers): NA [B]
15. Sample Location, Sample Collector Listed on COC? * Yes [B] No [ ]
    *For documentation only. No corrective action needed.
16. Additional Information: N/A

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

Sample Check-in List completed by Sample Custodian:
Signature: Julie Bock Date: 1-15-14

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

[SKS] No action necessary; process as is

Project Manager: Sandra Leger Date 1-15-14

LS-023 Rev. 17, 05/13

Page 1 of 1

1/24/2014 9:29:35 AM

# Sample Preparation/Analysis

Balance Id:1120482733

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

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

Pipet #: _____

**AnalyDueDate: 01/30/2014**

Sep1 DT/Tm Tech:

**Batch: 4016033 WATER pCi/L**
SEQ Batch, Test: None All Tests: 4016033 BNTB,

PM, Quote: SS , 29754

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 M2VDP-1-AA<br>J4A150428-1-SAMP<br>01/15/2014 11:13 | | | 3828.80g,in | 3828.80g | ITA13516<br>12/13/13 | | | 31.9mg | 200 | L4 | 1327 | 1/24/14 | |
| | | | AmtRec: 2X4LP | #Containers: 2 | | | | | Scr: | Alpha: 7.32E-05 uCi/Sa | | Beta: 5.88E-03 uCi/Sa | 1.2E-01L |
| 2 M2VDP-1-AC-X<br>J4A150428-1-DUP<br>01/15/2014 11:13 | | | 3824.90g,in | 3824.90g | ITA13517<br>12/13/13 | | | 35.4mg | | L5 | 1329 | | |
| | | | AmtRec: 2X4LP | #Containers: 2 | | | | | Scr: | Alpha: 7.32E-05 uCi/Sa | | Beta: 5.88E-03 uCi/Sa | 1.2E-01L |
| 3 M2VDQ-1-AA<br>J4A150428-2-SAMP<br>01/15/2014 10:53 | | | 3776.00g,in | 3776.00g | ITA13518<br>12/13/13 | | | 36.3mg | | L4 | 1652 | 1/24/14 | |
| | | | AmtRec: 2X4LP | #Containers: 2 | | | | | Scr: | Alpha: 2.61E-03 uCi/Sa | | Beta: 3.84E-03 uCi/Sa | |
| 4 M2VDR-1-AA<br>J4A150428-3-SAMP<br>01/15/2014 11:04 | | | 3811.30g,in | 3811.30g | ITA13519<br>12/13/13 | | | 34.9mg | | L5 | 1653 | | |
| | | | AmtRec: 2X4LP | #Containers: 2 | | | | | Scr: | Alpha: 4.36E-04 uCi/Sa | | Beta: 4.44E-03 uCi/Sa | 1.6E-01L |
| 5 M2VDT-1-AA<br>J4A150428-4-SAMP<br>01/15/2014 08:39 | | | 3783.40g,in | 3783.40g | ITA13520<br>12/13/13 | | | 34.2mg | | L4 | 2107 | 1/24/14 | |
| | | | AmtRec: 2X4LP | #Containers: 2 | | | | | Scr: | Alpha: 1.10E-03 uCi/Sa | | Beta: 2.82E-03 uCi/Sa | |
| 6 M2VDV-1-AA<br>J4A150428-5-SAMP<br>01/15/2014 08:57 | | | 3809.50g,in | 3809.50g | ITA13521<br>12/13/13 | | | 35.3mg | | L5 | 2109 | | |
| | | | AmtRec: 2X4LP | #Containers: 2 | | | | | Scr: | Alpha: 1.45E-03 uCi/Sa | | Beta: 2.05E-03 uCi/Sa | |
| 7 M2VDW-1-AA<br>J4A150428-6-SAMP<br>01/15/2014 09:07 | | | 3795.60g,in | 3795.60g | ITA13522<br>12/13/13 | | | 35.4mg | | L4 | 0049 | | |
| | | | AmtRec: 2X4LP | #Containers: 2 | | | | | Scr: | Alpha: 1.42E-03 uCi/Sa | | Beta: 3.50E-03 uCi/Sa | |

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

ISV - Insufficient Volume for Analysis

WO Cnt: 7
Prep_SamplePrep v4.8.65



JANUARY 28, 2014

1/24/2014 9:29:36 AM

# Sample Preparation/Analysis

Balance Id:1120482733

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

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

Pipet #: _____

**AnalyDueDate: 01/30/2014**

Sep1 DT/Tm Tech:

**Batch: 4016033 WATER pCi/L** PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,SannohS

| Work Ord, Lot, Sample Date | Total Amt/Unit | Total Acidified/Unit | Initial Aliquot Amt/Unit | Adj Aliq Amt (Un-Acidified) | QC Tracer Prep Date | Tracer Yield | Dish Size | Ppt or Geometry | Count Time Min | Detector Id | Count On \| Off (24hr) Circle | CR Analyst, Init/Date | Comments: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 M2VDX-1-AA<br>J4A150428-7-SAMP<br>01/15/2014 09:07 | | | 3808.10g,in<br>AmtRec: 2X4LP | 3808.10g<br>#Containers: 2 | ITA13523<br>12/13/13 | | | 35.2mg | 200 | L5 | 0050 | 1/24/1400 | |
| | | | | | | | | | | Scr: | Alpha: 1.99E-03 uCi/Sa | | Beta: 3.75E-03 uCi/Sa |
| 9 M2VD0-1-AA<br>J4A150428-8-SAMP<br>01/15/2014 09:35 | | | 3838.30g,in<br>AmtRec: 2X4LP | 3838.30g<br>#Containers: 2 | ITA13524<br>12/13/13 | | | 35.8mg | | L4 | 1022 | 1/27/14 | |
| | | | | | | | | | | Scr: | Alpha: 1.63E-03 uCi/Sa | | Beta: 2.90E-03 uCi/Sa |
| 10 M2VD1-1-AA<br>J4A150428-9-SAMP<br>01/15/2014 09:47 | | | 3840.40g,in<br>AmtRec: 2X4LP | 3840.40g<br>#Containers: 2 | ITA13525<br>12/13/13 | | | 35.3mg | | L5 | 1023 | | |
| | | | | | | | | | | Scr: | Alpha: 2.10E-03 uCi/Sa | | Beta: 3.84E-03 uCi/Sa |
| 11 M2VD2-1-AA<br>J4A150428-10-SAMP<br>01/15/2014 10:00 | | | 3776.60g,in<br>AmtRec: 2X4LP | 3776.60g<br>#Containers: 2 | ITA13526<br>12/13/13 | | | 35.7mg | | L4 | 1348 | 1/27/14 | |
| | | | | | | | | | | Scr: | Alpha: 2.52E-03 uCi/Sa | | Beta: 2.64E-03 uCi/Sa |
| 12 M2VD3-1-AA<br>J4A150428-11-SAMP<br>01/15/2014 10:08 | | | 3775.80g,in<br>AmtRec: 2X4LP | 3775.80g<br>#Containers: 2 | ITA13527<br>12/13/13 | | | 35.2mg | | L5 | 1348 | | |
| | | | | | | | | | | Scr: | Alpha: -1.33E-04 uCi/Sa | | Beta: 4.95E-03 uCi/Sa 1.5E-01L |
| 13 M2VD4-1-AA<br>J4A150428-12-SAMP<br>01/15/2014 10:20 | | | 3803.30g,in<br>AmtRec: 2X4LP | 3803.30g<br>#Containers: 2 | ITA13528<br>12/13/13 | | | 34.5mg | | L4 | 1712 | 1/27/14 | |
| | | | | | | | | | | Scr: | Alpha: 1.55E-04 uCi/Sa | | Beta: 3.16E-03 uCi/Sa |
| 14 M2VD5-1-AA<br>J4A150428-13-SAMP<br>01/15/2014 10:32 | | | 3801.60g,in<br>AmtRec: 2X4LP | 3801.60g<br>#Containers: 2 | ITA13529<br>12/13/13 | | | 34.5mg | | L5 | 1713 | | |
| | | | | | | | | | | Scr: | Alpha: 1.27E-03 uCi/Sa | | Beta: 3.58E-03 uCi/Sa |





JANUARY 28, 2014

1/24/2014 9:29:37 AM

# Sample Preparation/Analysis

Balance Id:1120482733

108302, CH2M Hill Plateau Remediation DOE RL
, Waste Management Federal Servi

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

Pipet #: _____

AnalyDueDate: 01/30/2014

Sep1 DT/Tm Tech:

Batch: 4016033 WATER pCi/L PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech: ,SannohS

| Work Ord, Lot, Sample Date | Total Amt/Unit | Total Acidified/Unit | Initial Aliquot Amt/Unit | Adj Aliq Amt (Un-Acidified) | QC Tracer Prep Date | Tracer Yield | Dish Size | Ppt or Geometry | Count Time Min | Detector Id | Count On \| Off (24hr) Circle | CR Analyst, Init/Date | Comments: |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15 M2VD6-1-AA<br>J4A150428-14-SAMP<br>01/15/2014 11:38 | | | 3785.20g,in<br>AmtRec: 2X4LP | 3785.20g<br>#Containers: 2 | ITA13530<br>12/13/13 | | | 33.6mg | 200 | L4 | 2040 | 1/27/1400 | Scr: Alpha: 4.96E-04 uCi/Sa Beta: 3.16E-03 uCi/Sa |
| 16 M2VD7-1-AA<br>J4A150428-15-SAMP<br>01/15/2014 11:48 | | | 3809.80g,in<br>AmtRec: 2X4LP | 3809.80g<br>#Containers: 2 | ITA13531<br>12/13/13 | | | 33.7mg | | L5 | 2042 | | Scr: Alpha: 5.44E-04 uCi/Sa Beta: 2.99E-03 uCi/Sa |
| 17 M2VD8-1-AA<br>J4A150428-16-SAMP<br>01/15/2014 11:48 | | | 3819.30g,in<br>AmtRec: 2X4LP | 3819.30g<br>#Containers: 2 | ITA13532<br>12/13/13 | | | 34.9mg | | L4 | 0006 | | Scr: Alpha: 2.06E-03 uCi/Sa Beta: 2.13E-03 uCi/Sa |
| 18 M2VD9-1-AA<br>J4A150428-17-SAMP<br>01/15/2014 12:00 | | | 3817.80g,in<br>AmtRec: 2X4LP | 3817.80g<br>#Containers: 2 | ITA13533<br>12/13/13 | | | 34.8mg | | L5 | 0007 | | Scr: Alpha: 1.70E-04 uCi/Sa Beta: 4.78E-03 uCi/Sa 1.5E-01L |
| 19 M2VF9-1-AA-B<br>J4A160000-33-BLK<br>01/16/2014 10:13 pd | | | 3818.20g,in<br>AmtRec: | 3818.20g<br>#Containers: 1 | ITA13534<br>12/13/13 | | | 34.7mg | | L4 | 0445 | 1/28/1400 | Scr: Alpha: Beta: |
| 20 M2VF9-1-AC-C<br>J4A160000-33-LCS<br>01/16/2014 10:13 pd | | | 3988.50g,in<br>AmtRec: | 3988.50g<br>#Containers: 1 | ISD1618<br>10/10/13 | | | 34.9mg | | L5 | 0447 | | Scr: Alpha: Beta: |





JANUARY 28, 2014

1/24/2014 9:29:38 AM

# Sample Preparation/Analysis

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

Balance Id:1120482733

Pipet #: _____

AnalyDueDate: 01/30/2014

Sep1 DT/Tm Tech:

Batch: 4016033 pCi/L

SEQ Batch, Test: None

Sep2 DT/Tm Tech:

Prep Tech: NortonJ,SannohS

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

**Comments:** M2VF9-BLK "Comments P-12-00228",S-13-00328,S-14-00006,P-13-00420,S-13-00126,S-12-00214,S-13-00229,,,P-14-00028,P-13-00594

```
All Clients for Batch:
    108302, CH2M Hill Plateau Remediation DOE RL       Waste Management Federal Servi,  SS , 29754

M2VDP1AA-SAMP Constituent List:
  I-129        RDL:5.00E-01    pCi/L    LCL:        UCL:        RPD:
M2VF91AA-BLK:
  I-129        RDL:5.00E-01    pCi/L    LCL:        UCL:        RPD:
M2VF91AC-LCS:
  I-129        RDL:5           pCi/L    LCL:70      UCL:130     RPD:20

M2VDP1AA-SAMP Calc Info:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
M2VF91AA-BLK:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
M2VF91AC-LCS:
     Uncert Level (#s).: 2     Decay to SaDt: Y     Blk Subt.: N     Sci.Not.: Y     ODRs: B
```

JANUARY 28, 2014

1/28/2014 10:42:09 AM

# ICOC Fraction Transfer/Status Report

ByDate: 1/28/2013, 2/2/2014, Batch: '4016033', User: *ALL Order By DateTimeAccepting

| Q Batch | Work Ord | CurStatus | Accepting | | | Comments |
|---|---|---|---|---|---|---|
| **4016033** | | | | | | |
| *AC* | | **Rev1C** | **NortonJ** | 1/22/2014 8:16:24 | | |
| *SC* | | | campbellsc | IsBatched | 1/16/2014 10:21:43 AM | ICOC_RADCALC v4.8.49 |
| *SC* | | | NortonJ | InSep1 | 1/22/2014 8:16:24 AM | RL-GAM-002 REVISION 3 |
| *SC* | | | BullJ | InCnt1 | 1/24/2014 10:01:42 AM | RL-CI-007 REVISION 3 |
| *SC* | | | BullJ | CalcC | 1/28/2014 8:13:49 AM | RL-CI-007 REVISION 3 |
| *SC* | | | antonsonl | Rev1C | 1/28/2014 10:41:55 AM | RL-DR-001 Rev 4 |
| *AC* | | | **BullJ** | 1/24/2014 10:01:42 | | |
| *AC* | | | **BullJ** | 1/28/2014 8:13:49 | | |
| *AC* | | | **antonsonl** | 1/28/2014 10:41:55 | | |

*AC: Accepting Entry; SC: Status Change*

*TestAmerica Richland*

Richland Wa.

Page 1

Grp Rec Cnt: 4

ICOCFractions v4.8.44