



July 24, 2015

Mr. Scot Fitzgerald
CH2MHill Plateau Remediation Company
MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352

Re: CHPRC SAF F15-027
Work Order: 374988
SDG: GEL374988

Dear Mr. Fitzgerald:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 12, 2015. This revised data report has been prepared and reviewed in accordance with GEL's standard operating procedures. Per client P&D, this data package was corrected to correctly report Total Beta Radiostrontium.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4505.

Sincerely,

Heather Shaffer
Project Manager

Purchase Order: 303581 - C05
Chain of Custody: F15-027-004, F15-027-011, F15-027-015, F15-027-017, F15-027-023, F15-027-025,
F15-027-028, F15-027-030, F15-027-032, F15-027-033, F15-027-035, F15-027-037, F15-027-039, F15-027-041
and F15-027-043
Enclosures



Table of Contents

Sample Issue Resolution.....	1
Case Narrative.....	3
Chain of Custody and Supporting Documentation.....	6
Data Review Qualifier Definitions.....	28
Laboratory Certifications.....	31
Metals Analysis.....	110
Case Narrative.....	111
Sample Data Summary.....	116
Quality Control Summary.....	132
General Chem Analysis.....	135
Case Narrative.....	136
Sample Data Summary.....	141
Quality Control Summary.....	157
Miscellaneous.....	160
Radiological Analysis.....	162
Sample Data Summary.....	183
Quality Control Data.....	334

Sample Issue Resolution

Problem and Discrepancy Report**GEL****SDG GEL374988****07/13/15**

The data package has the following issues:

The data report (both electronic and hardcopy) report the Sr as Sr-90 however for this data set the samples need to have Sr reported as Total beta radiostrontium (Sr-RAD) instead of Sr-90.

The method name for I-129 is reported as I-129 LL in both the hard copy and edd. Low level Iodine was not requested. The requested analysis was for I129_SEP_LEPS_GS: COMMON

Resolution: *Provide correction.*

Lab Response:

The lab will correct the hard copy and the EDD.

Provide a resolution to each issue noted on the report

Page 1 of 1

SAMPLE ISSUE RESOLUTION

SIR NUM	SIR15-436
REV NUM	0
DATE INITIATED	8/27/2015

SAMPLE EVENT INFORMATION

SAF NUM(S) F15-027

OPERABLE UNIT(S) 100-KR-2

PROJECT(S) 100-KE FSB

SAMPLE EVENT TITLE(S) Characterization Boreholes in UPR-100-K-1 and 1116-KE-3 Waste Sites

LABORATORY GEL Laboratories, LLC

SAMPLING INFORMATION

NUMBER OF SAMPLES 6

SAMPLE NUMBERS B30RF5, B30RF7, B30RF9, B30RH4, B30RH8, B30RJ0

SAMPLE MATRIX SOIL

COLLECTION DATE 6/8/2015 - 6/8/2015

SDG NUM GEL374988

ISSUE BACKGROUND

CLASS Chain of Custody Issue (Field)

TYPE Incorrect Relinquish/Receipt Date/Time

DESCRIPTION COC # F15-027-032, SAMPLE B30RF9.
COC # F15-027-030, SAMPLE B30RF7.
COC # F15-027-028, SAMPLE B30RF5.
COC # F15-027-037, SAMPLE B30RH4.
COC # F15-027-041, SAMPLE B30RH8.
COC # F15-027-043, SAMPLE B30RJ0.
INCORRECT RELINQUISH/RECEIPT DATE.

DISPOSITION

DESCRIPTION DOCUMENT AND CLOSE.

JUSTIFICATION FIELD SAMPLING REPORTS FROM TRVL-15-037 MATCH SAMPLE DATE ON COC, THEREFORE THE RELINQUISHED BY DATE STAMP IS INCORRECT.
DOCUMENT AND CLOSE.

SUBMITTED BY: Bruce Hey DATE: 08/20/2015
ACCEPTED BY: Kirsten Killand DATE: 08/27/2015

Case Narrative

Per client P&D, this data package was corrected to correctly report Total Beta Radiostrontium.

**General Narrative
for
CH2MHill Plateau Remediation Company
CHPRC SAF F15-027
SDG: GEL374988**

July 24, 2015

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt

The sample(s) arrived at GEL Laboratories, LLC, Charleston, South Carolina on June 12, 2015, for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Items of Note All efforts were made by the lab to meet any short hold times. Samples that were analyzed outside of the initial hold time but still within 2X hold time will be noted in the lab case narrative and DER

Sample Identification

The laboratory received the following samples:

<u>Laboratory Identification</u>	<u>Sample Description</u>
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9
374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2

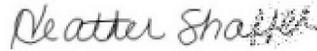
Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

Data Package

The enclosed data package contains the following sections: General Narrative, Chain of Custody and Supporting Documentation, and data from the following fractions: General Chemistry, Metals and Radiochemistry.

This package, to the best of my knowledge, is in compliance with the SOW, both technically and for completeness, including a full description of, explanation of, and corrective actions for, any and all deviations, from either the analyses requested or the case narrative requested. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager (or designee) and the laboratory's client services representative as verified by their signatures on this report.



Heather Shaffer
Project Manager

Chain of Custody and Supporting Documentation

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-037	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE COS JCH 6/11/15
SAMPLING LOCATION C8796, Interval 19		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	DATA TURNAROUND 7 Days / 30 Days JCH 6/11/15	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-645-3 Pg. 7	ACTUAL SAMPLE DEPTH 54.4 563 ft	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		PRESERVATION None	374988	
		HOLDING TIME None				
		TYPE OF CONTAINER P				
		NO. OF CONTAINER(S) 1				
		VOLUME 125mL				
		SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RH3	SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RH4	SOIL	6-9-15	12:55	✓		

September 14, 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 1445	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 1445	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; 0.192 KG'S TRVL-15-037	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1800		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM [Signature]	DATE/TIME	RECEIVED BY/STORED IN M. Kusko [Signature]	DATE/TIME 6-10-15 0910		
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	

REV 2

CH2Mhill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-023	PAGE 1 OF 1
COLLECTOR <i>Brotherton</i>		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE <i>COB SH</i>	DATA TURNAROUND <i>30 Days / 30 Days</i>
SAMPLING LOCATION C8796, Interval 12		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	<i>Just what</i>
ICE CHEST NO. <i>GWS-343</i>		FIELD LOGBOOK NO. <i>HNF-N-645-3 p3</i>	ACTUAL SAMPLE DEPTH <i>48.138.6 ft.</i>	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. <i>5716</i>		BILL OF LADING/AIR BILL NO. <i>TT38 1332 2444</i>		
MATRIX* A=Air DL=Drum L=Liquids DS=Drum S=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 are 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 None	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1	VOLUME 125mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RD9		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS		374988		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RF0	SOIL	<i>5-18-15</i>	<i>1344</i>	<input checked="" type="checkbox"/>		

September 14, 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>Brotherton</i>	DATE/TIME <i>5-18-15 1430</i>	RECEIVED BY/STORED IN <i>SSU #2</i>	DATE/TIME <i>5-18-15 1430</i>	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON;	
RELINQUISHED BY/REMOVED FROM <i>SSU #2</i>	DATE/TIME <i>JUN 11 2015 1000</i>	RECEIVED BY/STORED IN <i>E.L. Kauor/CHPRC</i>	DATE/TIME <i>JUN 11 2015 1000</i>		
RELINQUISHED BY/REMOVED FROM <i>E.L. Kauor/CHPRC</i>	DATE/TIME <i>JUN 11 2015 1130</i>	RECEIVED BY/STORED IN <i>B.E. Briggs/CHPRC</i>	DATE/TIME <i>JUN 11 2015 1130</i>		
RELINQUISHED BY/REMOVED FROM <i>B.E. Briggs/CHPRC</i>	DATE/TIME <i>JUN 11 2015 1400</i>	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM <i>Perp</i>	DATE/TIME	RECEIVED BY/STORED IN <i>M. Kristae Wilkins</i>	DATE/TIME <i>6-12-15 0940</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

REV 2

11 of 343

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-025	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE COS OH JLK 6/11/15	DATA TURNAROUND 30 Days / 30 Days JLK 6/11/15
SAMPLING LOCATION C8796, Interval 13	PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343	FIELD LOGBOOK NO. HNF-N-645-3/7	ACTUAL SAMPLE DEPTH 49.5 50.5 ft.		COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wide X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	None		374988	
		HOLDING TIME	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
		VOLUME	125mL			
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RF1		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RF2	SOIL	6-8-15	09:36			

September 14, 2015

REV 2

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UISO_IE_PRECIP_AEA: COMMON; 0.223 KG. TRVL-15-037	
D.L. Floyd/CHPRC	MAY 08 2015	SSU #2	MAY 08 2015		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
540 ER	JUN 11 2015 1000	E.L. Kauer/CHPRC	JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
E.L. Kauer/CHPRC	JUN 11 2015 1130	B.E. Briggs/CHPRC	JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	0.223 KG. TRVL-15-037	
B.E. Briggs/CHPRC	JUN 11 2015 1400	FEDEX			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
Ray		M. Kin... 6-12-15 0910			
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	

12 of 343

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-028	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE LOS SH JH 6/16/15	DATA TURNAROUND 30 Days / 30 Days JH 6/16/15
SAMPLING LOCATION C8796, Interval 14 REQ		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-N-645-3 / 5116	ACTUAL SAMPLE DEPTH 49.5 - 51 ft.	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are not regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION None	HOLDING TIME None	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1	VOLUME 125mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RF4		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RF5	SOIL	6-8-15	09:49			

374988

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 235	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 1255	SPECIAL INSTRUCTIONS TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; TRVL 15- 037 0.198 KG'S	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN M.K. [Signature]	DATE/TIME 6-12-15 0900		
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		

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-004	PAGE 1 OF 1
COLLECTOR D. Brotherton		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE C05 SH or 6/15/15
SAMPLING LOCATION C8796, Interval 2		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	DATA TURNAROUND 30 Days - 30 ^{sect} Days ^{weeks} 7 Days / 7 Days	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-N-645-3p2	ACTUAL SAMPLE DEPTH 27.5 - 28.5 ft	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. T738 1332 2444		
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 are 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 None	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1	
	SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RB8	VOLUME 125mL	SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS	374988		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RB9	SOIL	5-12-15	0808	✓		

September 14, 2015

14 of 343

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; WT ^{MO} 5-12-15 196.6 .1966 Kg TRVL-15-037	
D.W. Brotherton/CHPRC	5-12-15 0933	SSU #2	5-12-15 0933		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
SSU #2	JUN 11 2015 1400	E.L. Kauer/CHPRC	JUN 11 2015 1600		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
E.L. Kauer/CHPRC	JUN 11 2015 1130	B.E. Briggs/CHPRC	JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
B.E. Briggs/CHPRC	JUN 11 2015 1400	FEDEX			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
		M. Kinsten/CHPRC	6-11-15 0910		
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	

REV 2

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-030	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE C05 SH JUL 6/11/15	DATA TURNAROUND 30-Days / 30-Days with 6/11/15
SAMPLING LOCATION C8796, Interval 15		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. MNFN-645-3/2	ACTUAL SAMPLE DEPTH 50.5 51.4 ft	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5116		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	None	374988		
		HOLDING TIME	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
		VOLUME	125mL			
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RF6		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RF7	SOIL	6-8-15	10:04			

September 14, 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 06 2015 1235	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 1235	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; TRVL-15-037 0-204 KG'S	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauor/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauor/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	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	

REV 2

15 of 343

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-041	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE 65 JUL 6/1/15	DATA TURNAROUND 7 -30 Days / 30 Days JUL 6/1/15
SAMPLING LOCATION C8796, Interval 22		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS343		FIELD LOGBOOK NO. HNF-N. 645-3 Pg. 7	ACTUAL SAMPLE DEPTH 64.6 67.6 ft.	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
MATRIX* A=Air DL=Drum L=Liquids DS=Drum S=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 are 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 None	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1	VOLUME 125mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RH7		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS		374988		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RH8	SOIL	6-8-15	13:22	✓		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 1445	RECEIVED BY/STORED IN SSU 2	DATE/TIME MAY 08 2015 1445	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_ETE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; TRVL-15-037 0.314 KG'S	
RELINQUISHED BY/REMOVED FROM SSU 2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN E.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1402	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM D.L. Floyd	DATE/TIME	RECEIVED BY/STORED IN M. Koston	DATE/TIME 6/27/15 0910		
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	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-043	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE COS JUL 6/11/15	DATA TURNAROUND -30 Days / 30 Days JUL 6/11/15
SAMPLING LOCATION C8796, Interval 23	PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343	FIELD LOGBOOK NO. HNF-N-645-3 Pg. 7	ACTUAL SAMPLE DEPTH 68.0 70.8 ft.		COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are not regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		PRESERVATION	None	374988	
			HOLDING TIME	None		
			TYPE OF CONTAINER	P		
			NO. OF CONTAINER(S)	1		
			VOLUME	125mL		
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RH9		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RJ0	SOIL	6-9-15	13 40	✓		

September 14, 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; 0.208 KG-S TRVL 15- 037	
D.L. Floyd/CHPRC	MAY 08 2015 1445	SSU #2	MAY 08 2015 1445		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
SSU #2	JUN 11 2015 1000	E.L. Kauer/CHPRC	JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
E.L. Kauer/CHPRC	JUN 11 2015 1130	B.E. Briggs/CHPRC	JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
B.E. Briggs/CHPRC	JUN 11 2015 1400				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
	FEB 4	FEDEX			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
		M. K... ..	6-12-15 0900		
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	

REV 2

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-039	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE 65 JUL 6/15	DATA TURNAROUND 30 Days / 30 Days JUL 6/15
SAMPLING LOCATION C8796, Interval 20 REQ	PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. GWS343	FIELD LOGBOOK NO. HNF-645-3 pg. 7	ACTUAL SAMPLE DEPTH 56.2 59.0 ft		COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC	OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. T138 1332 2444			
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 are not regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	None			
		HOLDING TIME	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
		VOLUME	125mL			
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RH6		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RH6	SOIL	6-8-15	13:04	✓		

374988

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 1445	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 1445	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UI50_IE_PRECIP_AEA: COMMON;	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauert/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauert/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM [Signature]	DATE/TIME	RECEIVED BY/STORED IN [Signature]	DATE/TIME 6-12-15 0910		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	0.189 KG'S TRVL 15- 037	
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-032	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE COS off JUL 6/15/15	DATA TURNAROUND 7 Days / 38 Days off 6/15/15
SAMPLING LOCATION C8796, Interval 16 REQ		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-N 645-3 / >	ACTUAL SAMPLE DEPTH 51.4 52.8 ft.	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	None		374988	
		HOLDING TIME	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
		VOLUME	125mL			
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RF8		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RF9	SOIL	6-8-15	10:14	J		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 00	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 1235	SPECIAL INSTRUCTIONS TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON;	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1200		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1408	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM Fedex	DATE/TIME	RECEIVED BY/STORED IN M. Kinslow	DATE/TIME 6-12-15 0910		
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 15-037 0.193 KG ²⁵	
LABORATORY SECTION	RECEIVED BY			TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DISPOSED BY	DATE/TIME

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-017	PAGE 1 OF 1
COLLECTOR D.W. Brotherton/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE CAS BH JUL 6/11/15	DATA TURNAROUND 30 Days / 30 Days JUL 6/11/15
SAMPLING LOCATION C8796, Interval 9	PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. GWS-343	FIELD LOGBOOK NO. HNF-N-645-3/4	ACTUAL SAMPLE DEPTH 39.5-41.1	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS		ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5714		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are 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	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
		VOLUME	125mL			
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RD3		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RD4	SOIL	5-19-15	03 5-19-15 0953 6913	✓		

374988

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.W. Brotherton/CHPRC	DATE/TIME 5-19-15 0930	RECEIVED BY/STORED IN SSU #2	DATE/TIME 5-19-15 0930	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; 1129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON;	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM [Signature]	DATE/TIME	RECEIVED BY/STORED IN M. Kistow	DATE/TIME 6-11-15 0910		
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-15-037	
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-033	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE LOS SH out 6/11/15
SAMPLING LOCATION C8796, Interval 16 DUP REQ		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	DATA TURNAROUND 30 Days / 30 Days out 6/11/15	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. 645-312	ACTUAL SAMPLE DEPTH 51.4 52.8 ft	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are 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 None		
				TYPE OF CONTAINER P		
				NO. OF CONTAINER(S) 1		
				VOLUME 125mL		
		SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RHO	SOIL	6-8-15	10:14	J		

374988

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UISO_IE_PRECIP_AEA: COMMON; TRVL-15-037 0.198 KG	
D.L. Floyd/CHPRC	MAY 08 2015 1235	SSV #2	MAY 08 2015 1235		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
SSV #2	JUN 11 2015 1000	E.L. Kauer/CHPRC	JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
E.L. Kauer/CHPRC	JUN 11 2015 1130	B.E. Briggs/CHPRC	JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
B.E. Briggs/CHPRC	JUN 11 2015 1400	FEDEX			
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	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-035	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE <i>COS</i> <i>Just balls</i>	DATA TURNAROUND 30 Days / 30 Days <i>Just balls</i>
SAMPLING LOCATION C8796, Interval 18		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>EW5-343</i>		FIELD LOGBOOK NO. <i>HNF-N-645-3 Pg. 7</i>	ACTUAL SAMPLE DEPTH <i>53-1 54.5 ft.</i>	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. <i>5716</i>		BILL OF LADING/AIR BILL NO. <i>7738 1332 2444</i>		
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are 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	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
		VOLUME	125mL			
	SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RH1	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RH2	SOIL	6-8-15	10:37			

374988

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 12:55	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 12:55	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; TRVL 15- 037 0.188 KG	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 10:00	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 10:00		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 11:20	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 11:20		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM <i>1084</i>	DATE/TIME	RECEIVED BY/STORED IN <i>M. Kinser</i>	DATE/TIME 6-12-15 09:00		
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	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-011	PAGE 1 OF 1
COLLECTOR D.W. Brotherton/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE COS SH Jett 6/11/15	DATA TURNAROUND 30 Days / 30 Days Jett 6/11/15
SAMPLING LOCATION C8796, Interval 6		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-N-645-3/4	ACTUAL SAMPLE DEPTH 33.5-34.9 ft	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are 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 None	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1
	SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RC6	VOLUME 125mL	SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RC7	SOIL	5-19-15	0820			

374988

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.W. Brotherton/CHPRC	DATE/TIME 5-19-15 0930	RECEIVED BY/STORED IN SSU #2	DATE/TIME 5-19-15 0930	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; TRVL-15-037	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1006		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1120		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM FedEx	DATE/TIME	RECEIVED BY/STORED IN M. Kingston	DATE/TIME 6-12-15 0910		
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		

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-015	PAGE 1 OF 1
COLLECTOR D.W. Brotherton/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE COS SH JUL 16/15	DATA TURNAROUND 30 Days / 30 Days JUL 16/15
SAMPLING LOCATION C8796, Interval 8 SPT REQ		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-N-645-3/4	ACTUAL SAMPLE DEPTH 34.7-38.3 ft.	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid C=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 are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	None	374988		
		HOLDING TIME	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
	VOLUME	125mL				
SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RD2	SOIL	5-19-15	0853	✓		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON;	
D.W. Brotherton/CHPRC	JUN 11 2015 0930	SSU #2	5-19-15 0930		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
SSU #2	JUN 11 2015 1000	E.L. Kauer/CHPRC	JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
E.L. Kauer/CHPRC	JUN 11 2015 1130	E.L. Brogg/CHPRC	JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
E.L. Brogg/CHPRC	JUN 11 2015 1400	FEDEX			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL 15- 037	
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	

Hammons, Jennifer L

From: Baechler, Michael A
Sent: Thursday, June 11, 2015 9:56 AM
To: Aguilar, Christina M; Aguilar, Juan R; Baechler, Michael A; Briggs, Barbara E; Brotherton, Donald W; Campbell, Karen M; Ellingsworth, Randy D; Hall, Frank M; Hammons, Jennifer L; Hinojosa, Pedro; Patterson, Kevin C; Stiles, Kyle K; Trent, Stephen J; Wall, Lesly D; White, Mitzi A
Subject: FW: Well 199-K-221 (C8796) Sample Shipping Authorization

One more fix, added I-8 split.

Michael A. Baechler

*Scientist, CHPRC, Contractor to the Department of Energy
Soil & Groundwater Remediation Project,
CHPRC Sample Management Office
(509) 373-4452 Office
(509) 539-3117 Cellular*



From: Baechler, Michael A
Sent: Thursday, June 11, 2015 9:13 AM
To: Aguilar, Christina M; Aguilar, Juan R; Baechler, Michael A; Briggs, Barbara E; Brotherton, Donald W; Campbell, Karen M; Ellingsworth, Randy D; Hall, Frank M; Hammons, Jennifer L; Hinojosa, Pedro; Patterson, Kevin C; Stiles, Kyle K; Trent, Stephen J; Wall, Lesly D; White, Mitzi A
Subject: FW: Well 199-K-221 (C8796) Sample Shipping Authorization

All,

Please substitute interval 8 below for interval 7 (I-7 not going to GEL). Sorry for the error.

C8796, Interval 8 REQ	40	SOIL	GRAB	---	---	B31F18	---	B30RD0 (RADSCREEN INCLUDED IN MAIN SAMPLE)	---	F15-027-014(222- S) F15-027-103(ESL)
C8796, Interval 8 SPT REQ	40	SOIL	GRAB	---	B30RD2	B31F19	---	---	---	F15-027-015(GEL) F15-027-104(ESL)

Thanks,

Michael A. Baechler

*Scientist, CHPRC, Contractor to the Department of Energy
Soil & Groundwater Remediation Project,
CHPRC Sample Management Office
(509) 373-4452 Office
(509) 539-3117 Cellular*



From: Baechler, Michael A

Sent: Thursday, June 11, 2015 9:09 AM

To: Aguilar, Christina M; Aguilar, Juan R; Baechler, Michael A; Briggs, Barbara E; Brotherton, Donald W; Campbell, Karen M; Ellingsworth, Randy D; Hall, Frank M; Hammons, Jennifer L; Hinojosa, Pedro; Patterson, Kevin C; Stiles, Kyle K; Trent, Stephen J; Wall, Lesly D; White, Mitzi A

Subject: Well 199-K-221 (C8796) Sample Shipping Authorization

All,

The samples listed below are authorized for transport as non-regulated material to onsite facilities and offsite laboratories.

LOCATION	EST_INT	MATRIX	METHOD	TARL	GEL	ESL	CRCF	222-S	FIELD	COC
C8796, Interval 1 REQ	26	SOIL	GRAB	---	---	B30RB5	---	B30RB6 (RADSCREEN INCLUDED IN MAIN SAMPLE)	---	F15-027- 001(ESL) F15-027- 002(222- S)
C8796, Interval 2	28	SOIL	GRAB	---	B30RB9	B31F12	B30RB8(RS)	---	---	F15-027- 003(CRCF) F15-027- 004(GEL) F15-027- 097(ESL) F15-027- 010(CRCF)
C8796, Interval 6	36	SOIL	GRAB	---	B30RC7	B31F16	B30RC6(RS)	---	---	F15-027- 011(GEL) F15-027- 101(ESL)
C8796, Interval 7	38	SOIL	GRAB	---	B30RC9	B31F17	B30RC8(RS)	---	---	F15-027- 012(CRCF) F15-027- 013(GEL) F15-027- 102(ESL)
C8796, Interval 9	42	SOIL	GRAB	---	B30RD4	B31F20	B30RD3(RS)	---	---	F15-027- 016(CRCF) F15-027- 017(GEL) F15-027- 105(ESL)
C8796, Interval 12	48	SOIL	GRAB	---	B30RF0	B31F23	B30RD9(RS)	---	---	F15-027- 022(CRCF) F15-027- 023(GEL) F15-027- 108(ESL)
C8796, Interval 13	50	SOIL	GRAB	---	B30RF2	B31F24	B30RF1(RS)	---	---	F15-027- 024(CRCF) F15-027- 025(GEL) F15-027- 109(ESL)

C8796, Interval 14 REQ	52	SOIL	GRAB	---	B30RF5	B30RF3	B30RF4(RS)	---	---	F15-027-026(ESL) F15-027-027(CRCF) F15-027-028(GEL)
C8796, Interval 15	54	SOIL	GRAB	---	B30RF7	B31F25	B30RF6(RS)	---	---	F15-027-029(CRCF) F15-027-030(GEL) F15-027-110(ESL)
C8796, Interval 16 REQ	56	SOIL	GRAB	---	B30RF9	B31F26	B30RF8(RS)	---	---	F15-027-031(CRCF) F15-027-032(GEL) F15-027-111(ESL)
C8796, Interval 16 DUP REQ	56	SOIL	GRAB	---	B30RH0	B31F27	---	---	---	F15-027-033(GEL) F15-027-112(ESL)
C8796, Interval 17 REQ	59	WATER	GRAB	B30T09	B30RP1	---	B30RP0(RS)	---	B30RT4	F15-028-001(CRCF) F15-028-002(GEL) F15-028-025
C8796, Interval 18	58	SOIL	GRAB	---	B30RH2	B31F28	B30RH1(RS)	---	---	F15-027-034(CRCF) F15-027-035(GEL) F15-027-113(ESL)
C8796, Interval 19	60	SOIL	GRAB	---	B30RH4	B31F29	B30RH3(RS)	---	---	F15-027-036(CRCF) F15-027-037(GEL) F15-027-114(ESL)
C8796, Interval 20 REQ	62	SOIL	GRAB	---	B30RH6	B31F30	B30RH5(RS)	---	---	F15-027-038(CRCF) F15-027-039(GEL) F15-027-115(ESL)

C8796, Interval 21 REQ	70	WATER	GRAB	B30RP6	B30RP7	---	B30RP5(RS)	---	B30RT6	F15-028- 006(CRCF) F15-028- 007(GEL) F15-028- 008(TARL)
C8796, Interval 22	66	SOIL	GRAB	---	B30RHB	B31F31	B30RH7(RS)	---	---	F15-027- 040(CRCF) F15-027- 041(GEL) F15-027- 116(ESL)
C8796, Interval 23	68	SOIL	GRAB	---	B30R30	B31F32	B30RH9(RS)	---	---	F15-027- 042(CRCF) F15-027- 043(GEL) F15-027- 117(ESL)

Thanks,

Michael A. Baechler

Scientist, CH2RC, Contractor to the Department of Energy

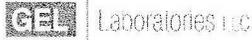
Soil & Groundwater Remediation Project,

CH2RC Sample Management Office

(509) 373-4452 Office

(509) 539-3117 Cellular





SAMPLE RECEIPT & REVIEW FORM

Client:		SDG/AR/COC/Work Order: 374988
Received By: MK		Date Received: 6-12-15
Suspected Hazard Information	Yes No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0
Classified Radioactive II or III by RSO?		If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		
Package, COC, and/or Samples marked as beryllium or asbestos containing?		If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: ice bags Blue ice Dry ice None Other (describe) all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: ESD32015330 Secondary Temperature Device Serial # (if Applicable):
3 Chain of custody documents included with shipment?				
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 Do Low Level Perchlorate samples (EPA 6850) have headspace as required?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
7 VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
8 Are Encore containers present?			<input checked="" type="checkbox"/>	(If yes, immediately deliver to Volatiles laboratory)
9 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
10 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
11 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
13 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>			
14 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
15 Carrier and tracking number.	<input checked="" type="checkbox"/>			Circle Applicable: FedEx Air FedEx Ground UPS Field Services Courier Other 7738 1332 2444

Comments (Use Continuation Form if needed):

Data Review Qualifier Definitions

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 (843) 556-8171

Report Date: 29-JUN-15

Project Specific Qualifier Definitions for GEL Client Code: CPRC

Code	Status	Qualifier Definition	CofA	Department	Fraction	Additional Comments
U	Programmed	Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.	Y			Includes MDA, TPU, count uncert.
J	Programmed	The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate). Value is estimated	Y	Organics		Organics only
P	Programmed	Aroclor target analyte with greater than 25% difference between column analyses.	Y	Organics		PCB only
C	Manual	Analyte has been confirmed by GC/MS analysis	Y	Organics	Pesticide	IF GC/MS confirmation was attempted but unsuccessful do not qualify with C
B	Programmed	The analyte was detected in both the associated QC blank and in the sample.	Y	Organics		
E	Manual	Concentration exceeds the calibration range of the instrument	Y	Organics		Qualifier Uploaded
A	Manual	The TIC is a suspected aldol-condensation product	Y	Organics	Semi-Volatile	Uploaded with TIC
X	Programmed	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier	Y			Replaces H Hold Date In RAD replaces UI. Same usage as standard X as well.
N	Programmed	Spike Sample recovery is outside control limits.	Y			
*	Programmed	Duplicate analysis not within control limits	Y	Inorganics		
>	Programmed	Result greater than quantifiable range or greater than upper limit of the analysis range	Y	General Chemistry		
Z	Manual	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier	Y			
B	Programmed	The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).	Y	Inorganics	Metals	Replaces J Estimated Value
D	Programmed	Results are reported from a diluted aliquot of sample.	Y			Dilution
E	Programmed	Reported value is estimated due to interferences. See comment in narrative.	Y	Inorganics	Metals	GEL E
M	Manual	Duplicate precision not met.	Y	Inorganics	Metals	Replaces *
o	Programmed	Analyte failed to recover within LCS limits (Organics only)	Y	Organics		
S	Manual	Reported value determined by the Method of Standard Additions (MSA)	Y	Inorganics		Not coded B/C Rarely preformed
T	Programmed	Spike and/or spike duplicate sample recovery is outside control limits.	Y	Organics		GC/MS only
W	Manual	Post-digestion spike recovery for GFAA out of control limit. Sample absorbency < 50% of spike absorbency.	Y	Inorganics		No GFAA in house.
B	Programmed	The associated QC sample blank has a result >= 2X the MDA and, after corrections, result is >= MDA for this sample	Y	Radiological		
Y	Manual	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier	Y			
+	Manual	Correlation coefficient for Method of Standard Additions (MSA) is < 0.995	Y	Inorganics		
B	Programmed	The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).	Y	General Chemistry		Replaces J Estimated Value
C	Programmed	Target analyte was detected in the sample and the associated blank. The associated blank concentration is >= EQL or is > 5% of the measured concentration and/or decision level for associated samples.	Y	Inorganics	Metals	Replaces B Blank Detection
C	Programmed	Target analyte was detected in the sample and the associated blank. The associated blank concentration is >= EQL or is > 5% of the measured concentration and/or decision level for associated samples.	Y	General Chemistry		Replaces B Blank Detection
<	Programmed	Sample is below the EPA guidance level for Reactive Releasable Cyanide and/or Reactive Releasable Sulfide	Y	General Chemistry		for Reactive CN/S

GEL LABORATORIES LLC
2040 Savage Road Charleston, SC 29407 (843) 556-8171

Report Date: 29-JUN-15

Project Specific Qualifier Definitions for GEL Client Code: CPRC

Code	Status	Qualifier Definition	CofA	Department	Fraction	Additional Comments
UX	Manual	Gamma Spectroscopy--Uncertain identification	Y	Radiological		

Laboratory Certifications

List of current GEL Certifications as of 24 July 2015

State	Certification
Alaska	UST-110
Arkansas	88-0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC000122013-10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-12-00283, P330-12-00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013-10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC000122013-10
Nebraska	NE-OS-26-13
Nevada	SC000122014-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68-00485
Plant Material Permit	PDEP-12-00260
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-15-10
Utah NELAP	SC000122015-17
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

**Certificate of Analysis Report
for**

CPRC001 CH2MHill Plateau Remediation Company

Client SDG: GEL374988 GEL Work Order: 374988

The Qualifiers in this report are defined as follows:

- * Duplicate analysis not within control limits
- B The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).
- C Target analyte was detected in the sample and the associated blank. The associated blank concentration is \geq EQL or is $> 5\%$ of the measured concentration and/or decision level for associated samples.
- D Results are reported from a diluted aliquot of sample.
- U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Heather Shaffer.

Reviewed by

Heather Shaffer

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RH4	Project:	CPRC0F15027
Sample ID:	374988001	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 12:55		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	2.57%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		8480	135	451	ug/kg	1	HSC	06/16/15	1604	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium		2040	123	410	ug/Kg	1	SXC5	06/17/15	1359	1485953	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1453	1485952

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

Notes:

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RF0	Project:	CPRC0F15027
Sample ID:	374988002	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	18-MAY-15 13:44		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	4.27%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		10100	153	510	ug/kg	1	HSC	06/16/15	1617	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	B	168	125	416	ug/Kg	1	SXC5	06/17/15	1410	1485953	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1459	1485952

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

Notes:

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RF2	Project:	CPRC0F15027
Sample ID:	374988003	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 09:36		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	1.45%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		22300	145	484	ug/kg	1	HSC	06/16/15	1621	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium		763	121	403	ug/Kg	1	SXC5	06/17/15	1411	1485953	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1500	1485952

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

Notes:

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RF5	Project:	CPRC0F15027
Sample ID:	374988004	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 09:49		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	2.88%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		15300	145	483	ug/kg	1	HSC	06/16/15	1624	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	U	123	123	411	ug/Kg	1	SXC5	06/17/15	1412	1485953	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1501	1485952

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

Notes:

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RB9	Project:	CPRC0F15027
Sample ID:	374988005	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	12-MAY-15 08:08		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	1.67%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		11800	151	503	ug/kg	1	HSC	06/16/15	1627	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium		547	120	401	ug/Kg	1	SXC5	06/17/15	1412	1485953	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1502	1485952

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

Notes:

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RF7	Project:	CPRC0F15027
Sample ID:	374988006	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 10:04		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	3.13%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		12400	149	498	ug/kg	1	HSC	06/16/15	1637	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	U	123	123	410	ug/Kg	1	SXC5	06/17/15	1413	1485953	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1503	1485952

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
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Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RH8	Project:	CPRC0F15027
Sample ID:	374988007	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 13:22		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	18.2%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		12500	155	516	ug/kg	1	HSC	06/16/15	1641	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium		519	136	452	ug/Kg	1	SXC5	06/17/15	1413	1485953	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1504	1485952

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

Notes:

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Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
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Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RJ0	Project:	CPRC0F15027
Sample ID:	374988008	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 13:40		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	17.1%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		10200	157	524	ug/kg	1	HSC	06/16/15	1644	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	U	139	139	464	ug/Kg	1	SXC5	06/17/15	1414	1485953	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1505	1485952

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RH6	Project:	CPRC0F15027
Sample ID:	374988009	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 13:04		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	7.05%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		14400	147	491	ug/kg	1	HSC	06/16/15	1647	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium		806	128	426	ug/Kg	1	SXC5	06/17/15	1415	1485953	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1506	1485952

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RF9	Project:	CPRC0F15027
Sample ID:	374988010	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 10:14		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	3.8%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		11300	133	442	ug/kg	1	HSC	06/16/15	1651	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	BC	342	124	413	ug/Kg	1	SXC5	06/18/15	1444	1486623	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1531	1486622

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

Notes:

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RD4	Project:	CPRC0F15027
Sample ID:	374988011	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	19-MAY-15 09:13		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	1.96%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		7350	139	464	ug/kg	1	HSC	06/16/15	1654	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	C	471	122	406	ug/Kg	1	SXC5	06/18/15	1449	1486623	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1607	1486622

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RH0	Project:	CPRC0F15027
Sample ID:	374988012	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 10:14		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	3.92%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		9670	146	487	ug/kg	1	HSC	06/16/15	1657	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	C	968	123	408	ug/Kg	1	SXC5	06/18/15	1451	1486623	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1608	1486622

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

Notes:

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
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 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RH2	Project:	CPRC0F15027
Sample ID:	374988013	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 10:37		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	2.96%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		9900	148	494	ug/kg	1	HSC	06/16/15	1701	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	BC	159	123	409	ug/Kg	1	SXC5	06/18/15	1451	1486623	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1610	1486622

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

Notes:

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Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
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Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RC7	Project:	CPRC0F15027
Sample ID:	374988014	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	19-MAY-15 08:20		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	1.22%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		18600	137	455	ug/kg	1	HSC	06/16/15	1704	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	C	465	120	401	ug/Kg	1	SXC5	06/18/15	1453	1486623	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1611	1486622

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

Notes:

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Certificate of Analysis

Report Date: June 29, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RD2	Project:	CPRC0F15027
Sample ID:	374988015	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	19-MAY-15 08:53		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	5.69%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Metals Analysis-ICP											
6010_METALS_ICP:COMMON - Cr only "Dry Weight Corrected"											
Chromium		8360	143	476	ug/kg	1	HSC	06/16/15	1708	1485543	1
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	BC	209	126	418	ug/Kg	1	SXC5	06/18/15	1453	1486623	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3050B	SW846 3050B Prep for 6010C	JXM5	06/15/15	1245	1485542
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1612	1486622

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	6010_METALS_ICP	
2	7196_CR6	

Notes:

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QC Summary

Report Date: June 29, 2015

Page 1 of 2

CH2MHill Plateau Remediation Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington
 Mr. Scot Fitzgerald

Contact:
 Workorder: 374988

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1485543										
QC1203336749	374988001	DUP									
Chromium		8480		8680	ug/kg	2.36		(0%-20%)	HSC	06/16/15	16:07
QC1203336748	LCS										
Chromium	49900			49400	ug/kg		99.1	(80%-120%)		06/16/15	16:01
QC1203336747	MB										
Chromium			U	148	ug/kg					06/16/15	15:57
QC1203336750	374988001	MS									
Chromium	45600	8480		50900	ug/kg		93.1	(75%-125%)		06/16/15	16:11
QC1203336751	374988001	SDILT									
Chromium		94.0	D	19.4	ug/L	3.45		(0%-10%)		06/16/15	16:14
Spectrometric Analysis											
Batch	1485953										
QC1203337921	374988001	DUP									
Hexavalent Chromium		2040		2080	ug/Kg	1.97	^	(+/-409)	SXC5	06/17/15	13:59
QC1203337919	ILCS										
Hexavalent Chromium	8000			6770	ug/Kg		84.6	(80%-120%)		06/17/15	13:52
QC1203337918	LCS										
Hexavalent Chromium	3990			3820	ug/Kg		95.7	(80%-120%)		06/17/15	13:52
QC1203337917	MB										
Hexavalent Chromium			U	120	ug/Kg					06/17/15	13:52
QC1203337925	374988001	MS									
Hexavalent Chromium	4090	2040		6230	ug/Kg		102	(75%-125%)		06/17/15	14:00
QC1203337929	374988001	MSD									
Hexavalent Chromium	4030	2040		6090	ug/Kg	2.18	100	(0%-30%)		06/17/15	14:01
Batch	1486623										
QC1203339240	374988010	DUP									
Hexavalent Chromium		BC	342	B	297	ug/Kg	14.1	^	(+/-414)	SXC5	06/18/15 14:45
QC1203339239	ILCS										
Hexavalent Chromium	7970			7790	ug/Kg		97.7	(80%-120%)		06/18/15	14:43
QC1203339238	LCS										

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QC Summary

Workorder: 374988

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Spectrometric Analysis											
Batch	1486623										
Hexavalent Chromium	3980			4180	ug/Kg		105	(80%-120%)		06/18/15	14:43
QC1203339237 MB											
Hexavalent Chromium			B	155	ug/Kg				SXC5	06/18/15	14:43
QC1203339242 374988010 MS											
Hexavalent Chromium	4080	BC	342	4870	ug/Kg		111	(75%-125%)		06/18/15	14:46
QC1203339246 374988010 MSD											
Hexavalent Chromium	4140	BC	342	5040	ug/Kg	3.33	113	(0%-30%)		06/18/15	14:47

Notes:

The Qualifiers in this report are defined as follows:

- * Duplicate analysis not within control limits
- + Correlation coefficient for Method of Standard Additions (MSA) is < 0.995
- B The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).
- C Target analyte was detected in the sample and the associated blank. The associated blank concentration is >= EQL or is > 5% of the measured concentration and/or decision level for associated samples.
- D Results are reported from a diluted aliquot of sample.
- E Reported value is estimated due to interferences. See comment in narrative.
- M Duplicate precision not met.
- N Spike Sample recovery is outside control limits.
- S Reported value determined by the Method of Standard Additions (MSA)
- U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
- W Post-digestion spike recovery for GFAA out of control limit. Sample absorbency < 50% of spike absorbency.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Z Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RH4
 Sample ID: 374988001
 Matrix: SOIL
 Collect Date: 08-JUN-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 2.57%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		2.57					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	0.112	+/-0.623	1.19	+/-0.624	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	-0.0389	+/-0.229	0.544	+/-0.229	1.00	pCi/g		MXS2	06/23/15	1520	1485930	3
Plutonium-239/240		3.28	+/-0.884	0.182	+/-0.976	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234	U	0.257	+/-0.312	0.418	+/-0.315	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	0.00	+/-0.158	0.235	+/-0.159	1.00	pCi/g						
Uranium-238		0.477	+/-0.377	0.352	+/-0.384	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137		0.184	+/-0.118	0.119	+/-0.120	0.100	pCi/g		MXR1	06/16/15	0659	1485712	5
Cobalt-60	U	0.0402	+/-0.0639	0.130	+/-0.0665	0.050	pCi/g						
Europium-152	U	0.0503	+/-0.178	0.279	+/-0.179	0.100	pCi/g						
Europium-154	U	0.129	+/-0.211	0.410	+/-0.220	0.100	pCi/g						
Europium-155	U	0.0598	+/-0.170	0.307	+/-0.172	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	0.0264	+/-0.641	1.40	+/-0.641	2.00	pCi/g		MJH1	06/20/15	1230	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		15.9	+/-0.843	0.254	+/-2.96	1.00	pCi/g		KSD1	06/29/15	0659	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium		60.5	+/-17.2	23.7	+/-22.0	30.0	pCi/g		GXR1	06/22/15	1648	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	0.518	+/-1.64	2.80	+/-1.64	5.00	pCi/g		EXK2	06/22/15	1131	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	0.0811	+/-0.823	1.42	+/-0.823	1.50	pCi/g		MYM	06/23/15	1258	1485659	10

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RH4
 Sample ID: 374988001

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer		Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	32.3	(15%-125%)
Plutonium-242 Tracer		Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	82.4	(15%-125%)
Uranium-232 Tracer		Alphaspec U, Solid "Dry Weight Corrected"	1485931	106	(15%-125%)
Strontium Carrier		GFPC, Sr90, solid "Dry Weight Corrected"	1485858	84.0	(25%-125%)
Technetium-99m Tracer		Liquid Scint Tc99, Solid "As Received"	1485659	95.3	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RF0
 Sample ID: 374988002
 Matrix: SOIL
 Collect Date: 18-MAY-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 4.27%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		4.27					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	-0.0389	+/-0.336	0.778	+/-0.337	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	-0.0229	+/-0.198	0.458	+/-0.198	1.00	pCi/g		MXS2	06/19/15	1010	1485930	3
Plutonium-239/240	U	0.317	+/-0.475	0.739	+/-0.478	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234	U	0.309	+/-0.362	0.502	+/-0.365	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	-0.0201	+/-0.174	0.402	+/-0.174	1.00	pCi/g						
Uranium-238	U	0.187	+/-0.270	0.325	+/-0.271	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	-0.00988	+/-0.0685	0.123	+/-0.0686	0.100	pCi/g		MXR1	06/16/15	0700	1485712	5
Cobalt-60	U	-0.015	+/-0.0796	0.144	+/-0.0799	0.050	pCi/g						
Europium-152	U	-0.0414	+/-0.146	0.257	+/-0.147	0.100	pCi/g						
Europium-154	U	-0.0611	+/-0.252	0.448	+/-0.253	0.100	pCi/g						
Europium-155	U	0.000266	+/-0.122	0.221	+/-0.122	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	-0.485	+/-0.726	1.19	+/-0.760	2.00	pCi/g		MJH1	06/20/15	1230	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		0.949	+/-0.291	0.382	+/-0.341	1.00	pCi/g		KSD1	06/29/15	0700	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium		37.1	+/-14.6	21.7	+/-16.9	30.0	pCi/g		GXR1	06/22/15	1710	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	-0.98	+/-1.89	3.31	+/-1.89	5.00	pCi/g		EXK2	06/21/15	1151	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	-0.537	+/-0.789	1.39	+/-0.789	1.50	pCi/g		MYM	06/23/15	1331	1485659	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RF0
 Sample ID: 374988002

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	49.4	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	76.7	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	105	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	86.4	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	94.5	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RF2
 Sample ID: 374988003
 Matrix: SOIL
 Collect Date: 08-JUN-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 1.45%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		1.45					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	-0.15	+/-0.242	0.771	+/-0.243	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	0.147	+/-0.408	0.706	+/-0.409	1.00	pCi/g		MXS2	06/25/15	1328	1485930	3
Plutonium-239/240	U	0.221	+/-0.433	0.705	+/-0.434	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234	U	0.411	+/-0.391	0.412	+/-0.396	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	0.184	+/-0.315	0.276	+/-0.317	1.00	pCi/g						
Uranium-238		0.652	+/-0.464	0.357	+/-0.476	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	-0.0114	+/-0.0517	0.0899	+/-0.052	0.100	pCi/g		MXR1	06/16/15	0759	1485712	5
Cobalt-60	U	-0.0135	+/-0.0795	0.111	+/-0.0798	0.050	pCi/g						
Europium-152	U	-0.00369	+/-0.132	0.224	+/-0.132	0.100	pCi/g						
Europium-154	U	0.00	+/-0.166	0.319	+/-0.00	0.100	pCi/g						
Europium-155	U	-0.0293	+/-0.125	0.207	+/-0.126	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	-0.397	+/-0.642	1.00	+/-0.668	2.00	pCi/g		MJH1	06/20/15	1230	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		3.51	+/-0.406	0.255	+/-0.746	1.00	pCi/g		KSD1	06/29/15	0700	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium		36.0	+/-17.4	26.7	+/-19.2	30.0	pCi/g		GXR1	06/22/15	1731	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	0.0839	+/-1.79	3.09	+/-1.79	5.00	pCi/g		EXK2	06/22/15	1212	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	0.126	+/-0.801	1.38	+/-0.801	1.50	pCi/g		MYM	06/23/15	1403	1485659	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

GEL LABORATORIES LLC

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RF2
 Sample ID: 374988003

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	67.0	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	17.9	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	87.8	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	86.4	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	95.1	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RF5
 Sample ID: 374988004
 Matrix: SOIL
 Collect Date: 08-JUN-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 2.88%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		2.88					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	-0.088	+/-0.266	0.747	+/-0.267	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	-0.0483	+/-0.214	0.558	+/-0.214	1.00	pCi/g		MXS2	06/19/15	1010	1485930	3
Plutonium-239/240	U	-0.145	+/-0.234	0.745	+/-0.234	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234		0.537	+/-0.461	0.456	+/-0.470	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	0.102	+/-0.286	0.305	+/-0.287	1.00	pCi/g						
Uranium-238	U	0.227	+/-0.327	0.395	+/-0.330	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	0.0179	+/-0.0495	0.0944	+/-0.0502	0.100	pCi/g		MXR1	06/16/15	0759	1485712	5
Cobalt-60	U	-0.0176	+/-0.0604	0.111	+/-0.0609	0.050	pCi/g						
Europium-152	U	0.0276	+/-0.145	0.216	+/-0.145	0.100	pCi/g						
Europium-154	U	0.122	+/-0.168	0.347	+/-0.177	0.100	pCi/g						
Europium-155	U	-0.0293	+/-0.138	0.236	+/-0.139	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	-0.31	+/-0.538	0.915	+/-0.557	2.00	pCi/g		MJH1	06/20/15	1324	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		56.5	+/-1.56	0.354	+/-10.3	1.00	pCi/g		KSD1	06/29/15	0700	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium		58.2	+/-19.0	27.0	+/-23.1	30.0	pCi/g		GXR1	06/22/15	1753	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	-0.819	+/-1.75	3.08	+/-1.75	5.00	pCi/g		EXK2	06/21/15	1313	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	-0.125	+/-0.759	1.32	+/-0.759	1.50	pCi/g		MYM 1	06/23/15	1436	1485659	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RF5
 Sample ID: 374988004

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	56.2	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	69.0	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	83.0	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	87.7	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	93.7	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RB9
 Sample ID: 374988005
 Matrix: SOIL
 Collect Date: 12-MAY-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 1.67%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		1.67					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	-0.0741	+/-0.224	0.628	+/-0.224	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	0.144	+/-0.286	0.464	+/-0.287	1.00	pCi/g		MXS2	06/23/15	1520	1485930	3
Plutonium-239/240	U	0.265	+/-0.312	0.337	+/-0.314	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234	U	0.464	+/-0.441	0.466	+/-0.448	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	0.079	+/-0.296	0.498	+/-0.297	1.00	pCi/g						
Uranium-238	U	0.235	+/-0.381	0.590	+/-0.383	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	0.054	+/-0.0834	0.0992	+/-0.0836	0.100	pCi/g		MXR1	06/16/15	0800	1485712	5
Cobalt-60	U	0.0385	+/-0.0883	0.147	+/-0.0901	0.050	pCi/g						
Europium-152		0.746	+/-0.236	0.232	+/-0.247	0.100	pCi/g						
Europium-154	U	-0.157	+/-0.217	0.337	+/-0.229	0.100	pCi/g						
Europium-155	U	0.101	+/-0.144	0.255	+/-0.151	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	-0.123	+/-0.424	0.788	+/-0.428	2.00	pCi/g		MJH1	06/20/15	1324	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		1.64	+/-0.334	0.369	+/-0.443	1.00	pCi/g		KSD1	06/29/15	0700	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium	U	3.85	+/-12.3	21.7	+/-12.4	30.0	pCi/g		GXR1	06/22/15	1814	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	-0.654	+/-1.68	2.94	+/-1.68	5.00	pCi/g		EXK2	06/22/15	1253	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	-0.338	+/-0.812	1.42	+/-0.812	1.50	pCi/g		MYM 1	06/23/15	1508	1485659	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RB9
 Sample ID: 374988005

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	73.8	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	74.7	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	85.5	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	85.2	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	94.2	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RF7
 Sample ID: 374988006
 Matrix: SOIL
 Collect Date: 08-JUN-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 3.13%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		3.13					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	-0.0538	+/-0.238	0.621	+/-0.238	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	0.0542	+/-0.203	0.342	+/-0.204	1.00	pCi/g		MXS2	06/20/15	1125	1485930	3
Plutonium-239/240	U	0.0571	+/-0.256	0.500	+/-0.256	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234		0.553	+/-0.475	0.470	+/-0.484	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	-0.0252	+/-0.217	0.503	+/-0.218	1.00	pCi/g						
Uranium-238	U	0.468	+/-0.445	0.470	+/-0.452	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	-0.0283	+/-0.055	0.098	+/-0.0565	0.100	pCi/g		MXR1	06/16/15	0800	1485712	5
Cobalt-60	U	-0.0455	+/-0.0619	0.107	+/-0.0653	0.050	pCi/g						
Europium-152	U	0.0173	+/-0.147	0.258	+/-0.147	0.100	pCi/g						
Europium-154	U	0.112	+/-0.189	0.376	+/-0.196	0.100	pCi/g						
Europium-155	U	0.142	+/-0.173	0.311	+/-0.185	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	-0.239	+/-0.482	0.842	+/-0.495	2.00	pCi/g		MJH1	06/22/15	0736	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		90.0	+/-2.03	0.236	+/-16.3	1.00	pCi/g		KSD1	06/29/15	0700	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium		54.5	+/-19.1	27.6	+/-22.8	30.0	pCi/g		GXR1	06/22/15	1835	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	0.708	+/-1.83	3.13	+/-1.84	5.00	pCi/g		EXK2	06/22/15	1334	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	0.0259	+/-0.790	1.36	+/-0.790	1.50	pCi/g		MYM 1	06/23/15	1540	1485659	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RF7
 Sample ID: 374988006

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	70.5	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	77.6	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	87.4	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	82.7	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	96.2	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RH8
 Sample ID: 374988007
 Matrix: SOIL
 Collect Date: 08-JUN-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 18.2%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		18.2					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	0.0961	+/-0.270	0.288	+/-0.271	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	-0.0329	+/-0.145	0.379	+/-0.146	1.00	pCi/g		MXS2	06/20/15	1125	1485930	3
Plutonium-239/240	U	0.0192	+/-0.200	0.418	+/-0.201	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234		0.840	+/-0.529	0.499	+/-0.546	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	0.00	+/-0.177	0.264	+/-0.178	1.00	pCi/g						
Uranium-238	U	0.214	+/-0.281	0.214	+/-0.283	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	-0.00348	+/-0.050	0.0921	+/-0.050	0.100	pCi/g		MXR1	06/16/15	0809	1485712	5
Cobalt-60	U	0.0188	+/-0.0582	0.117	+/-0.0588	0.050	pCi/g						
Europium-152	U	-0.0372	+/-0.126	0.204	+/-0.127	0.100	pCi/g						
Europium-154	U	-0.0205	+/-0.161	0.265	+/-0.162	0.100	pCi/g						
Europium-155	U	0.00152	+/-0.128	0.221	+/-0.128	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	0.0486	+/-0.469	1.17	+/-0.470	2.00	pCi/g		MJH1	06/22/15	0811	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90	U	0.407	+/-0.275	0.423	+/-0.284	1.00	pCi/g		KSD1	06/25/15	0910	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium	U	3.12	+/-13.6	24.1	+/-13.7	30.0	pCi/g		GXR1	06/22/15	1857	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	0.654	+/-1.47	2.51	+/-1.47	5.00	pCi/g		EXK2	06/21/15	1517	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	-0.0926	+/-0.823	1.43	+/-0.823	1.50	pCi/g		MYM	06/23/15	1613	1485659	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RH8
 Sample ID: 374988007

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	70.3	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	81.5	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	97.4	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	86.4	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	94.6	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RJO
 Sample ID: 374988008
 Matrix: SOIL
 Collect Date: 08-JUN-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 17.1%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		17.1					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	0.179	+/-0.353	0.489	+/-0.354	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	-0.119	+/-0.168	0.551	+/-0.169	1.00	pCi/g		MXS2	06/20/15	1125	1485930	3
Plutonium-239/240	U	0.162	+/-0.286	0.434	+/-0.287	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234	U	0.284	+/-0.359	0.446	+/-0.362	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	0.0757	+/-0.284	0.477	+/-0.284	1.00	pCi/g						
Uranium-238	U	0.264	+/-0.361	0.492	+/-0.364	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	0.0126	+/-0.0638	0.104	+/-0.064	0.100	pCi/g		MXR1	06/16/15	0801	1485712	5
Cobalt-60	U	-0.0604	+/-0.067	0.111	+/-0.0727	0.050	pCi/g						
Europium-152	U	0.0109	+/-0.147	0.233	+/-0.147	0.100	pCi/g						
Europium-154	U	-0.0149	+/-0.205	0.330	+/-0.206	0.100	pCi/g						
Europium-155	U	-0.0276	+/-0.134	0.232	+/-0.135	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	0.404	+/-0.841	2.04	+/-0.862	2.00	pCi/g		MJH1	06/22/15	0823	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90	U	0.216	+/-0.203	0.327	+/-0.206	1.00	pCi/g		KSD1	06/25/15	1206	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium	U	-10.3	+/-12.8	24.5	+/-12.8	30.0	pCi/g		GXR1	06/22/15	1918	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	-0.69	+/-1.43	2.51	+/-1.43	5.00	pCi/g		EXK2	06/21/15	1558	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	0.328	+/-0.816	1.39	+/-0.817	1.50	pCi/g		MYM 1	06/23/15	1645	1485659	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RJ0
 Sample ID: 374988008

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	72.7	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	82.0	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	92.2	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	87.7	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	97.0	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RH6
 Sample ID: 374988009
 Matrix: SOIL
 Collect Date: 08-JUN-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 7.05%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		7.05					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	0.0954	+/-0.268	0.286	+/-0.268	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	0.0355	+/-0.197	0.378	+/-0.197	1.00	pCi/g		MXS2	06/23/15	1520	1485930	3
Plutonium-239/240		0.701	+/-0.467	0.416	+/-0.476	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234	U	0.400	+/-0.419	0.522	+/-0.425	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	-0.0235	+/-0.203	0.470	+/-0.203	1.00	pCi/g						
Uranium-238		0.615	+/-0.469	0.380	+/-0.480	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	-0.0062	+/-0.0685	0.121	+/-0.0686	0.100	pCi/g		MXR1	06/16/15	0808	1485712	5
Cobalt-60	U	0.0261	+/-0.0762	0.151	+/-0.0771	0.050	pCi/g						
Europium-152	U	0.182	+/-0.189	0.311	+/-0.207	0.100	pCi/g						
Europium-154	U	-0.0252	+/-0.234	0.421	+/-0.234	0.100	pCi/g						
Europium-155	U	0.141	+/-0.227	0.288	+/-0.236	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	-0.0416	+/-0.778	1.56	+/-0.778	2.00	pCi/g		MJH1	06/22/15	0823	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		16.4	+/-0.860	0.396	+/-3.09	1.00	pCi/g		KSD1	06/29/15	0700	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium		48.2	+/-17.4	25.3	+/-20.5	30.0	pCi/g		GXR1	06/22/15	1940	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	-1.12	+/-1.79	3.15	+/-1.79	5.00	pCi/g		EXK2	06/21/15	1639	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	-0.599	+/-0.788	1.39	+/-0.788	1.50	pCi/g		MYM	06/23/15	1718	1485659	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RH6
 Sample ID: 374988009

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	70.5	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	78.0	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	85.1	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	87.7	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	97.0	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RF9
 Sample ID: 374988010
 Matrix: SOIL
 Collect Date: 08-JUN-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 3.8%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		3.80					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	-0.0236	+/-0.203	0.471	+/-0.204	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	-0.0957	+/-0.154	0.491	+/-0.155	1.00	pCi/g		MXS2	06/20/15	1125	1485930	3
Plutonium-239/240	U	0.00531	+/-0.244	0.537	+/-0.244	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234		0.708	+/-0.501	0.466	+/-0.514	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	0.00	+/-0.190	0.283	+/-0.191	1.00	pCi/g						
Uranium-238	U	0.137	+/-0.312	0.535	+/-0.313	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	0.0178	+/-0.0874	0.156	+/-0.0877	0.100	pCi/g		MXR1	06/16/15	0857	1485712	5
Cobalt-60	U	-0.00555	+/-0.0804	0.148	+/-0.0804	0.050	pCi/g						
Europium-152	U	0.174	+/-0.194	0.324	+/-0.210	0.100	pCi/g						
Europium-154	U	-0.102	+/-0.272	0.474	+/-0.276	0.100	pCi/g						
Europium-155	U	-0.0173	+/-0.133	0.232	+/-0.133	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	-0.624	+/-0.864	0.761	+/-0.911	2.00	pCi/g		MJH1	06/22/15	0828	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		11.9	+/-0.749	0.431	+/-2.24	1.00	pCi/g		KSD1	06/29/15	0700	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium		118	+/-21.6	25.9	+/-34.4	30.0	pCi/g		GXR1	06/22/15	2001	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	-1.05	+/-1.88	3.31	+/-1.88	5.00	pCi/g		EXK2	06/21/15	1720	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	0.022	+/-0.815	1.41	+/-0.815	1.50	pCi/g		MYM	06/23/15	1750	1485659	10

1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RF9
 Sample ID: 374988010

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	72.7	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	77.4	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	95.5	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	87.7	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	95.7	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RD4
 Sample ID: 374988011
 Matrix: SOIL
 Collect Date: 19-MAY-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 1.96%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		1.96					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	-0.0697	+/-0.210	0.591	+/-0.211	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	-0.155	+/-0.195	0.653	+/-0.196	1.00	pCi/g		MXS2	06/20/15	1125	1485930	3
Plutonium-239/240	U	0.042	+/-0.233	0.447	+/-0.234	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234	U	0.0218	+/-0.228	0.476	+/-0.228	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	0.169	+/-0.333	0.461	+/-0.334	1.00	pCi/g						
Uranium-238	U	0.352	+/-0.379	0.431	+/-0.383	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	-0.0959	+/-0.102	0.172	+/-0.111	0.100	pCi/g		MXR1	06/17/15	0617	1485712	5
Cobalt-60	U	-0.0232	+/-0.101	0.179	+/-0.101	0.050	pCi/g						
Europium-152	U	0.0139	+/-0.293	0.424	+/-0.293	0.100	pCi/g						
Europium-154	U	0.0727	+/-0.328	0.599	+/-0.330	0.100	pCi/g						
Europium-155	U	-0.0933	+/-0.201	0.305	+/-0.206	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	0.265	+/-0.959	2.02	+/-0.967	2.00	pCi/g		MJH1	06/22/15	0843	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		1.85	+/-0.328	0.286	+/-0.472	1.00	pCi/g		KSD1	06/29/15	0700	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium	U	-2.23	+/-13.9	25.4	+/-13.9	30.0	pCi/g		GXR1	06/22/15	2023	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	-1.11	+/-1.93	3.40	+/-1.93	5.00	pCi/g		EXK2	06/21/15	1802	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	0.561	+/-0.836	1.41	+/-0.839	1.50	pCi/g		MYM	06/23/15	1822	1485659	10

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RD4
 Sample ID: 374988011

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer	Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer		Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	75.2	(15%-125%)
Plutonium-242 Tracer		Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	74.3	(15%-125%)
Uranium-232 Tracer		Alphaspec U, Solid "Dry Weight Corrected"	1485931	94.2	(15%-125%)
Strontium Carrier		GFPC, Sr90, solid "Dry Weight Corrected"	1485858	82.7	(25%-125%)
Technetium-99m Tracer		Liquid Scint Tc99, Solid "As Received"	1485659	95.2	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RH0
 Sample ID: 374988012
 Matrix: SOIL
 Collect Date: 08-JUN-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 3.92%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		3.92					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	0.0261	+/-0.273	0.570	+/-0.273	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	-0.0139	+/-0.322	0.728	+/-0.322	1.00	pCi/g		MXS2	06/20/15	1117	1485930	3
Plutonium-239/240	U	-0.0764	+/-0.329	0.800	+/-0.330	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234	U	0.0723	+/-0.247	0.458	+/-0.247	1.00	pCi/g		MXS2	06/23/15	1520	1485931	4
Uranium-235/236	U	0.172	+/-0.294	0.258	+/-0.296	1.00	pCi/g						
Uranium-238	U	0.331	+/-0.337	0.333	+/-0.341	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	-0.00574	+/-0.112	0.200	+/-0.113	0.100	pCi/g		MXR1	06/16/15	0904	1485712	5
Cobalt-60	U	-0.0887	+/-0.122	0.205	+/-0.129	0.050	pCi/g						
Europium-152	U	0.197	+/-0.391	0.494	+/-0.401	0.100	pCi/g						
Europium-154	U	-0.0662	+/-0.337	0.598	+/-0.338	0.100	pCi/g						
Europium-155	U	0.198	+/-0.233	0.374	+/-0.250	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	-0.113	+/-0.760	1.52	+/-0.762	2.00	pCi/g		MJH1	06/22/15	0846	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		14.0	+/-0.808	0.320	+/-2.63	1.00	pCi/g		KSD1	06/29/15	0700	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium		81.2	+/-19.1	24.9	+/-26.5	30.0	pCi/g		GXR1	06/22/15	2044	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	0.791	+/-1.59	2.70	+/-1.59	5.00	pCi/g		EXK2	06/22/15	1416	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	0.101	+/-0.760	1.31	+/-0.760	1.50	pCi/g		MYM 1	06/23/15	1855	1485659	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

GEL LABORATORIES LLC

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RH0
 Sample ID: 374988012

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	71.7	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	82.1	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	97.3	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	82.7	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	96.3	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RH2
 Sample ID: 374988013
 Matrix: SOIL
 Collect Date: 08-JUN-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 2.96%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		2.96					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	0.127	+/-0.358	0.382	+/-0.358	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	0.0853	+/-0.240	0.256	+/-0.240	1.00	pCi/g		MXS2	06/20/15	1117	1485930	3
Plutonium-239/240	U	0.0648	+/-0.243	0.409	+/-0.244	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234	U	0.376	+/-0.394	0.491	+/-0.399	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	-0.0221	+/-0.191	0.442	+/-0.191	1.00	pCi/g						
Uranium-238		0.543	+/-0.444	0.455	+/-0.453	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	0.0327	+/-0.0516	0.0975	+/-0.0538	0.100	pCi/g		MXR1	06/17/15	0632	1485712	5
Cobalt-60	U	-0.0134	+/-0.0701	0.113	+/-0.0703	0.050	pCi/g						
Europium-152	U	0.146	+/-0.155	0.224	+/-0.169	0.100	pCi/g						
Europium-154	U	0.133	+/-0.171	0.341	+/-0.181	0.100	pCi/g						
Europium-155	U	0.136	+/-0.171	0.205	+/-0.171	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	-0.165	+/-0.801	1.61	+/-0.804	2.00	pCi/g		MJH1	06/22/15	0857	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		5.89	+/-0.531	0.255	+/-1.23	1.00	pCi/g		KSD1	06/29/15	0700	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium		103	+/-21.0	26.2	+/-31.5	30.0	pCi/g		GXR1	06/22/15	2106	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	-1.09	+/-1.51	2.67	+/-1.51	5.00	pCi/g		EXK2	06/22/15	1457	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	0.109	+/-0.760	1.31	+/-0.760	1.50	pCi/g		MYM 1	06/23/15	1927	1485659	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RH2
 Sample ID: 374988013

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	55.2	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	81.2	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	91.4	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	84.0	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	97.0	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RC7
 Sample ID: 374988014
 Matrix: SOIL
 Collect Date: 19-MAY-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 1.22%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		1.22					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	-0.0451	+/-0.200	0.521	+/-0.200	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	-0.0773	+/-0.179	0.531	+/-0.180	1.00	pCi/g		MXS2	06/20/15	1117	1485930	3
Plutonium-239/240	U	-0.0934	+/-0.253	0.675	+/-0.253	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234		0.532	+/-0.457	0.452	+/-0.466	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	-0.0242	+/-0.209	0.484	+/-0.209	1.00	pCi/g						
Uranium-238	U	0.206	+/-0.327	0.452	+/-0.329	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	-0.0467	+/-0.059	0.097	+/-0.0628	0.100	pCi/g		MXR1	06/17/15	0647	1485712	5
Cobalt-60	U	-0.0324	+/-0.0651	0.115	+/-0.0669	0.050	pCi/g						
Europium-152	U	0.0276	+/-0.203	0.275	+/-0.204	0.100	pCi/g						
Europium-154	U	-0.00527	+/-0.194	0.360	+/-0.194	0.100	pCi/g						
Europium-155	U	0.166	+/-0.179	0.294	+/-0.195	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	-0.313	+/-0.613	0.763	+/-0.630	2.00	pCi/g		MJH1	06/22/15	0905	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		1.60	+/-0.364	0.435	+/-0.467	1.00	pCi/g		KSD1	06/29/15	0700	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium	U	-1.61	+/-13.7	24.9	+/-13.7	30.0	pCi/g		GXR1	06/22/15	2127	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	-0.244	+/-1.76	3.06	+/-1.76	5.00	pCi/g		EXK2	06/22/15	1538	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	-0.649	+/-0.706	1.25	+/-0.706	1.50	pCi/g		MYM	06/23/15	1959	1485659	10

1

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

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Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RC7
 Sample ID: 374988014

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	73.7	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	92.2	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	92.6	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	79.0	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	98.5	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Report Date: June 29, 2015

Client Sample ID: B30RD2
 Sample ID: 374988015
 Matrix: SOIL
 Collect Date: 19-MAY-15
 Receive Date: 12-JUN-15
 Collector: Client
 Moisture: 5.69%

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
Gravimetric Solids													
<i>Moisture Content - D2216 "As Received"</i>													
Moisture		5.69					percent		CXC1	06/12/15	1520	1485598	1
Rad Alpha Spec Analysis													
<i>Alphaspec Am241 Solid "Dry Weight Corrected"</i>													
Americium-241	U	0.179	+/-0.306	0.268	+/-0.308	1.00	pCi/g		MXS2	06/20/15	1619	1485928	2
<i>Alphaspec Pu, Solid "Dry Weight Corrected"</i>													
Plutonium-238	U	-0.0404	+/-0.279	0.679	+/-0.279	1.00	pCi/g		MXS2	06/20/15	1117	1485930	3
Plutonium-239/240	U	0.304	+/-0.457	0.711	+/-0.459	1.00	pCi/g						
<i>Alphaspec U, Solid "Dry Weight Corrected"</i>													
Uranium-233/234	U	0.333	+/-0.541	0.873	+/-0.544	1.00	pCi/g		MXS2	06/20/15	1118	1485931	4
Uranium-235/236	U	0.203	+/-0.466	0.740	+/-0.468	1.00	pCi/g						
Uranium-238		0.623	+/-0.565	0.518	+/-0.577	1.00	pCi/g						
Rad Gamma Spec Analysis													
<i>Gamma Cs137,Co60,Eu152,Eu154,E155 "Dry Weight Corrected"</i>													
Cesium-137	U	-0.034	+/-0.0641	0.0956	+/-0.066	0.100	pCi/g		MXR1	06/17/15	0648	1485712	5
Cobalt-60	U	0.0414	+/-0.0628	0.124	+/-0.0656	0.050	pCi/g						
Europium-152	U	0.0919	+/-0.132	0.210	+/-0.139	0.100	pCi/g						
Europium-154	U	0.187	+/-0.166	0.345	+/-0.187	0.100	pCi/g						
Europium-155	U	0.0803	+/-0.122	0.209	+/-0.128	0.100	pCi/g						
<i>Gamma I129, Solid "As Received"</i>													
Iodine-129	U	0.0535	+/-0.739	1.57	+/-0.739	2.00	pCi/g		MJH1	06/22/15	0933	1485720	6
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid "Dry Weight Corrected"</i>													
Strontium-90		1.34	+/-0.298	0.331	+/-0.382	1.00	pCi/g		KSD1	06/29/15	0708	1485858	7
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid "As Received"</i>													
Tritium	U	4.85	+/-15.7	27.6	+/-15.8	30.0	pCi/g		GXR1	06/22/15	2149	1486509	8
<i>Liquid Scint C14, Solid "As Received"</i>													
Carbon-14	U	0.211	+/-1.55	2.67	+/-1.55	5.00	pCi/g		EXK2	06/22/15	1619	1486494	9
<i>Liquid Scint Tc99, Solid "As Received"</i>													
Technetium-99	U	0.0376	+/-0.688	1.19	+/-0.688	1.50	pCi/g		MYM 1	06/23/15	2032	1485659	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	06/12/15	1520	1485598

The following Analytical Methods were performed

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : CH2MHill Plateau Remediation
 Address : Company
 MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027
 Client Sample ID: B30RD2
 Sample ID: 374988015

Report Date: June 29, 2015

Project: CPRC0F15027
 Client ID: CPRC001

Parameter	Qualifier	Result	Uncertainty	MDC	TPU	RL	Units	DF	Analyst	Date	Time	Batch	Mtd.
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The following Analytical Methods were performed

Method	Description
1	ASTM D 2216 (Modified)
2	AMCMISO_EIE_PREC_AEA
3	PUISO_PLATE_AEA
4	UIISO_IE_PRECIP_AEA
5	GAMMA_GS
6	I129LL_SEP_LEPS_GS
7	SRISO_SEP_PRECIP_GPC
8	TRITIUM_DIST_LSC
9	C14_LSC
10	TC99_EIE_LSC

Surrogate/Tracer Recovery	Test	Batch ID	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241 Solid "Dry Weight Corrected"	1485928	78.8	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid "Dry Weight Corrected"	1485930	77.2	(15%-125%)
Uranium-232 Tracer	Alphaspec U, Solid "Dry Weight Corrected"	1485931	69.9	(15%-125%)
Strontium Carrier	GFPC, Sr90, solid "Dry Weight Corrected"	1485858	85.2	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid "As Received"	1485659	97.1	(15%-125%)

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

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QC Summary

Report Date: June 29, 2015
Page 1 of 6

Client : CH2MHill Plateau Remediation Company
MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington
Contact: Mr. Scot Fitzgerald
Workorder: 374988

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch	1485928									
QC1203337865	374988001	DUP								
Americium-241	U	0.112		0.471	pCi/g	86.8		(0% - 100%)	MXS2	06/21/1510:11
		Uncert:	+/-0.623	+/-0.296						
		TPU:	+/-0.624	+/-0.300						
**Americium-243 Tracer	20.2	6.52		14.2	pCi/g		70.4	(15%-125%)		
		Uncert:	+/-4.10	+/-1.75						
		TPU:	+/-5.92	+/-2.73						
QC1203337866	LCS									
Americium-241	18.1			15.3	pCi/g		84.3	(80%-120%)	MXS2	06/21/1510:11
		Uncert:		+/-1.33						
		TPU:		+/-1.97						
**Americium-243 Tracer	19.6			17.4	pCi/g		88.9	(15%-125%)		
		Uncert:		+/-1.50						
		TPU:		+/-2.40						
QC1203337864	MB									
Americium-241			U	0.00	pCi/g				MXS2	06/21/1510:11
		Uncert:		+/-0.072						
		TPU:		+/-0.0721						
**Americium-243 Tracer	19.6			14.3	pCi/g		72.9	(15%-125%)		
		Uncert:		+/-1.57						
		TPU:		+/-2.49						
Batch	1485930									
QC1203337868	374988001	DUP								
Plutonium-238	U	-0.0389	U	0.305	pCi/g	0		N/A	MXS2	06/23/1515:20
		Uncert:		+/-0.453						
		TPU:		+/-0.455						
Plutonium-239/240		3.28		3.97	pCi/g	19.1		(0%-20%)		
		Uncert:		+/-1.28						
		TPU:		+/-1.42						
**Plutonium-242 Tracer	18.6	15.3		10.5	pCi/g		56.8	(15%-125%)		
		Uncert:		+/-2.70						
		TPU:		+/-3.96						
QC1203337869	LCS									
Plutonium-238			U	0.0909	pCi/g			(75%-125%)	MXS2	06/20/1511:17
		Uncert:		+/-0.256						
		TPU:		+/-0.256						
Plutonium-239/240	18.1			20.0	pCi/g		110	(80%-120%)		
		Uncert:		+/-2.65						
		TPU:		+/-4.02						
**Plutonium-242 Tracer	18.1			14.2	pCi/g		78.8	(15%-125%)		
		Uncert:		+/-2.53						
		TPU:		+/-3.72						

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QC Summary

Workorder: 374988

Page 2 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1485930										
QC1203337867	MB										
Plutonium-238			U	0.00362	pCi/g				MXS2	06/20/1511:17	
	Uncert:			+/-0.269							
	TPU:			+/-0.269							
Plutonium-239/240			U	0.0254	pCi/g						
	Uncert:			+/-0.265							
	TPU:			+/-0.265							
**Plutonium-242 Tracer	18.1			13.0	pCi/g		72.1	(15%-125%)			
	Uncert:			+/-2.52							
	TPU:			+/-3.70							
Batch	1485931										
QC1203337871	374988001 DUP										
Uranium-233/234	U	0.257	U	0.225	pCi/g	0			N/A	MXS2	06/20/1511:18
	Uncert:	+/-0.312		+/-0.707							
	TPU:	+/-0.315		+/-0.708							
Uranium-235/236	U	0.00	U	-0.152	pCi/g	0			N/A		
	Uncert:	+/-0.158		+/-0.459							
	TPU:	+/-0.159		+/-0.461							
Uranium-238		0.477	U	0.259	pCi/g	65.8		(0% - 100%)			
	Uncert:	+/-0.377		+/-0.596							
	TPU:	+/-0.384		+/-0.598							
**Uranium-232 Tracer	20.0	21.2		7.97	pCi/g		39.8	(15%-125%)			
	Uncert:	+/-2.22		+/-3.65							
	TPU:	+/-3.85		+/-5.63							
QC1203337872	LCS										
Uranium-233/234				25.2	pCi/g				MXS2	06/20/1511:18	
	Uncert:			+/-2.90							
	TPU:			+/-5.21							
Uranium-235/236				0.901	pCi/g						
	Uncert:			+/-0.661							
	TPU:			+/-0.679							
Uranium-238	24.9			26.5	pCi/g		106	(80%-120%)			
	Uncert:			+/-2.96							
	TPU:			+/-5.43							
**Uranium-232 Tracer	19.5			15.2	pCi/g		78.3	(15%-125%)			
	Uncert:			+/-2.55							
	TPU:			+/-4.20							
QC1203337870	MB										
Uranium-233/234			U	0.0522	pCi/g				MXS2	06/20/1511:18	
	Uncert:			+/-0.196							
	TPU:			+/-0.196							
Uranium-235/236			U	0.149	pCi/g						
	Uncert:			+/-0.294							
	TPU:			+/-0.295							
Uranium-238			U	-0.0165	pCi/g						
	Uncert:			+/-0.142							
	TPU:			+/-0.143							

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 374988

Page 3 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	1485931										
**Uranium-232 Tracer	19.5			19.2	pCi/g		98.6	(15%-125%)			
	Uncert:			+/-2.28							
	TPU:			+/-3.89							
Rad Gamma Spec											
Batch	1485712										
QC1203337250	374988001 DUP										
Cesium-137		0.184		0.162	pCi/g	12.7		(0% - 100%)	MXR1	06/17/1506:59	
	Uncert:	+/-0.118		+/-0.101							
	TPU:	+/-0.120		+/-0.102							
Cobalt-60	U	0.0402	U	0.111	pCi/g	0			N/A		
	Uncert:	+/-0.0639		+/-0.0477							
	TPU:	+/-0.0665		+/-0.0702							
Europium-152	U	0.0503	U	-0.0858	pCi/g	0			N/A		
	Uncert:	+/-0.178		+/-0.144							
	TPU:	+/-0.179		+/-0.150							
Europium-154	U	0.129	U	0.067	pCi/g	0			N/A		
	Uncert:	+/-0.211		+/-0.194							
	TPU:	+/-0.220		+/-0.196							
Europium-155	U	0.0598	U	-0.078	pCi/g	0			N/A		
	Uncert:	+/-0.170		+/-0.147							
	TPU:	+/-0.172		+/-0.151							
QC1203337251	LCS										
Americium-241	1450			1630	pCi/g		113	(80%-120%)	MXR1	06/17/1506:56	
	Uncert:			+/-22.7							
	TPU:			+/-125							
Cesium-137	497			539	pCi/g		108	(80%-120%)			
	Uncert:			+/-8.92							
	TPU:			+/-58.4							
Cobalt-60	421			438	pCi/g		104	(80%-120%)			
	Uncert:			+/-10.4							
	TPU:			+/-43.7							
Europium-152			U	1.62	pCi/g						
	Uncert:			+/-3.53							
	TPU:			+/-3.60							
Europium-154			U	1.24	pCi/g						
	Uncert:			+/-3.16							
	TPU:			+/-3.21							
Europium-155			U	1.96	pCi/g						
	Uncert:			+/-3.45							
	TPU:			+/-3.56							
QC1203337249	MB										
Cesium-137			U	-0.0277	pCi/g				MXR1	06/17/1506:55	
	Uncert:			+/-0.0825							
	TPU:			+/-0.0835							
Cobalt-60			U	0.0311	pCi/g						
	Uncert:			+/-0.100							

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QC Summary

Workorder: 374988

Page 4 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	1485712										
Europium-152		TPU:		+/-0.101							
			U	0.077	pCi/g						
		Uncert:		+/-0.198							
Europium-154		TPU:		+/-0.201							
			U	-0.00497	pCi/g						
		Uncert:		+/-0.249							
Europium-155		TPU:		+/-0.249							
			U	-0.152	pCi/g						
		Uncert:		+/-0.166							
		TPU:		+/-0.180							
Batch	1485720										
QC1203337267	374988001 DUP										
Iodine-129		U	0.0264	U	0.911	pCi/g	0		N/A	MJH1	06/22/1509:34
		Uncert:	+/-0.641		+/-0.765						
		TPU:	+/-0.641		+/-0.873						
QC1203337269	LCS										
Iodine-129		38.9			36.5	pCi/g		93.9	(80%-120%)	MJH1	06/22/1509:45
		Uncert:			+/-4.46						
		TPU:			+/-5.77						
QC1203337266	MB										
Iodine-129				U	-0.029	pCi/g				MJH1	06/22/1509:33
		Uncert:			+/-0.416						
		TPU:			+/-0.417						
QC1203337268	374988001 MS										
Iodine-129		41.5	U	0.0264	35.5	pCi/g		85.6	(75%-125%)	MJH1	06/22/1509:44
		Uncert:		+/-0.641	+/-7.10						
		TPU:		+/-0.641	+/-7.94						
Rad Gas Flow											
Batch	1485858										
QC1203337671	374988005 DUP										
Strontium-90			1.64		2.26	pCi/g	31.7*		(0%-20%)	KSD1	06/29/1507:08
		Uncert:	+/-0.334		+/-0.348						
		TPU:	+/-0.443		+/-0.530						
**Strontium Carrier		8.10	6.90		6.60	mg		81.5	(25%-125%)		
QC1203337672	LCS										
Strontium-90		21.5			21.4	pCi/g		99.4	(80%-120%)	KSD1	06/25/1510:22
		Uncert:			+/-1.24						
		TPU:			+/-4.17						
**Strontium Carrier		8.10			6.70	mg		82.7	(25%-125%)		
QC1203337670	MB										
Strontium-90				U	0.197	pCi/g				KSD1	06/25/1509:13
		Uncert:			+/-0.236						
		TPU:			+/-0.238						
**Strontium Carrier		8.10			6.70	mg		82.7	(25%-125%)		
Rad Liquid Scintillation											

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QC Summary

Workorder: 374988

Page 5 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	1485659										
QC1203337094	374988001 DUP										
Technetium-99		U	0.0811	U	-0.161	pCi/g	0		N/AMYM1	06/23/1521:37	
		Uncert:	+/-0.823		+/-0.749						
		TPU:	+/-0.823		+/-0.749						
**Technetium-99m Tracer	58500		55700		56600	CPM		96.7	(15%-125%)		
QC1203337095	LCS										
Technetium-99		35.9			33.3	pCi/g		92.8	(80%-120%) MYM1	06/24/1507:26	
		Uncert:			+/-1.99						
		TPU:			+/-4.31						
**Technetium-99m Tracer	58500				56700	CPM		97	(15%-125%)		
QC1203337093	MB										
Technetium-99				U	-0.359	pCi/g			MYM1	06/23/1521:05	
		Uncert:			+/-0.671						
		TPU:			+/-0.671						
**Technetium-99m Tracer	58500				56500	CPM		96.5	(15%-125%)		
Batch	1486494										
QC1203338832	374988001 DUP										
Carbon-14		U	0.518	U	0.624	pCi/g	0		N/A EXK2	06/22/1517:00	
		Uncert:	+/-1.64		+/-1.60						
		TPU:	+/-1.64		+/-1.60						
QC1203338834	LCS										
Carbon-14		109			113	pCi/g		104	(80%-120%) EXK2	06/21/1523:31	
		Uncert:			+/-3.51						
		TPU:			+/-9.00						
QC1203338831	MB										
Carbon-14				U	-0.981	pCi/g			EXK2	06/21/1521:28	
		Uncert:			+/-1.41						
		TPU:			+/-1.41						
QC1203338833	374988001 MS										
Carbon-14		123 U	0.518		128	pCi/g		104	(75%-125%) EXK2	06/21/1522:50	
		Uncert:	+/-1.64		+/-3.96						
		TPU:	+/-1.64		+/-10.2						
Batch	1486509										
QC1203338895	374988001 DUP										
Tritium			60.5		78.7	pCi/g	26.2		(0% - 100%) GXR1	06/22/1522:32	
		Uncert:	+/-17.2		+/-17.3						
		TPU:	+/-22.0		+/-24.9						
QC1203338897	LCS										
Tritium		57.0			54.4	pCi/g		95.4	(80%-120%) GXR1	06/22/1523:15	
		Uncert:			+/-12.7						
		TPU:			+/-17.7						
QC1203338894	MB										
Tritium				U	-3.8	pCi/g			GXR1	06/22/1522:10	
		Uncert:			+/-9.26						
		TPU:			+/-9.26						
QC1203338896	374988001 MS										

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QC Summary

Workorder: 374988

Page 6 of 6

Parname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation										
Batch	1486509									
Tritium	89.0	60.5	156	pCi/g		107	(75%-125%)	GXR1	06/22/1522:53	
	Uncert:	+/-17.2	+/-23.6							
	TPU:	+/-22.0	+/-42.5							

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- B The associated QC sample blank has a result $\geq 2X$ the MDA and, after corrections, result is \geq MDA for this sample
- D Results are reported from a diluted aliquot of sample.
- N Spike Sample recovery is outside control limits.
- U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
- UX Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Z Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

** Indicates analyte is a surrogate/tracer compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

GEL Laboratories LLC
Form GEL-DER

DER Report No.: 1421767

Revision No.: 1

DATA EXCEPTION REPORT			
Mo.Day Yr. 17-JUN-15	Division: Industrial	Quality Criteria: Specifications	Type: Process
Instrument Type: VIS SPECTROMETER	Test / Method: SW846 7196A	Matrix Type: Solid	Client Code: CPRC, OLAB
Batch ID: 1485953	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 374988(GEL374988)			
Application Issues: Sample received out of holding			
Specification and Requirements		DER Disposition:	
Exception Description:			
1. Sample received out of holding: 374988 005		1. Sample (See Below) was received by the laboratory outside of the method specified holding time. The data is qualified. 374988005 (B30RB9) [Received 12-JUN-15, out of holding 11-JUN-15].	

Originator's Name:

Sarah Carson 17-JUN-15

Data Validator/Group Leader:

Elzbieta Szulc 17-JUN-15

GEL Laboratories LLC
Form GEL-DER

DER Report No.: 1423790
Revision No.: 3

DATA EXCEPTION REPORT			
Mo.Day Yr. 23-JUN-15	Division: Radiochemistry	Quality Criteria: Specifications	Type: Process
Instrument Type: GAMMA SPECTROMETER	Test / Method: DOE HASL 300, 4.5.2.3/Ga-01-R	Matrix Type: Solid	Client Code: CPRC
Batch ID: 1485712	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 374988(GEL374988)			
Application Issues: RDL less than MDA			
Specification and Requirements Exception Description:		DER Disposition:	
<p>The following RDLs in sample 374988001(B30RH4) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988002(B30RF0) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988003(B30RF2) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988004(B30RF5) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988005(B30RB9) were not achieved: Co-60, Eu-154 and Eu-155. The following RDLs in sample 374988006(B30RF7) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988007(B30RH8) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988008(B30RJ0) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988009(B30RH6) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988010(B30RF9) were not achieved: Cs-137, Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988011(B30RD4) were not achieved: Cs-137, Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988012(B30RH0) were not achieved: Cs-137, Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988013(B30RH2) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988014(B30RC7) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988015(B30RD2) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in MB 1203337249 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in DUP 1203337250(B30RH4) were not achieved: Co-60, Eu-152, Eu-154 and Eu-155.</p>		<p>Required detection limits were not met due to limited sample volume. Reporting results.</p>	

Originator's Name:
Spencer Collins 23-JUN-15

Data Validator/Group Leader:
Shenise Gerideau 25-JUN-15

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-037	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE COS JCH 6/11/15
SAMPLING LOCATION C8796, Interval 19		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	DATA TURNAROUND 7 Days / 30 Days JCH 6/11/15	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-645-3 Pg. 7	ACTUAL SAMPLE DEPTH 54.4 563 ft	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		PRESERVATION None	374988	
		HOLDING TIME None				
		TYPE OF CONTAINER P				
		NO. OF CONTAINER(S) 1				
		VOLUME 125mL				
		SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RH3	SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RH4	SOIL	6-9-15	12:55	✓		

September 14, 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 1445	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 1445	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; 0.192 KG'S TRVL-15-037	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1800		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM FEDEX	DATE/TIME	RECEIVED BY/STORED IN M. Kusko/CHPRC	DATE/TIME 6-10-15 0910		
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

REV 2

CH2Mhill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-023	PAGE 1 OF 1
COLLECTOR <i>Brotherton</i>		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE <i>COB SH</i>	DATA TURNAROUND <i>30 Days / 30 Days</i>
SAMPLING LOCATION C8796, Interval 12		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	<i>Just what</i>
ICE CHEST NO. <i>GWS-343</i>		FIELD LOGBOOK NO. <i>HNF-N-645-3 p3</i>	ACTUAL SAMPLE DEPTH <i>48.138.6 ft.</i>	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. <i>5716</i>		BILL OF LADING/AIR BILL NO. <i>TT38 1332 2444</i>		
MATRIX* A=Air DL=Drum L=Liquids DS=Drum S=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 are 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 None	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1	VOLUME 125mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RD9		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS		<i>374988</i>		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RF0	SOIL	<i>5-18-15</i>	<i>1344</i>	<i>✓</i>		

September 14, 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>Brotherton</i>	DATE/TIME <i>5-18-15 1430</i>	RECEIVED BY/STORED IN <i>SSU #2</i>	DATE/TIME <i>5-18-15 1430</i>	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON;	
RELINQUISHED BY/REMOVED FROM <i>SSU #2</i>	DATE/TIME <i>JUN 11 2015 1000</i>	RECEIVED BY/STORED IN <i>E.L. Kauer/CHPRC</i>	DATE/TIME <i>JUN 11 2015 1000</i>		
RELINQUISHED BY/REMOVED FROM <i>E.L. Kauer/CHPRC</i>	DATE/TIME <i>JUN 11 2015 1130</i>	RECEIVED BY/STORED IN <i>B.E. Briggs/CHPRC</i>	DATE/TIME <i>JUN 11 2015 1130</i>		
RELINQUISHED BY/REMOVED FROM <i>B.E. Briggs/CHPRC</i>	DATE/TIME <i>JUN 11 2015 1400</i>	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM <i>Perp</i>	DATE/TIME	RECEIVED BY/STORED IN <i>M. Kristae Wilkins</i>	DATE/TIME <i>6-12-15 0940</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	<i>TRVL-15-037</i>	
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

REV 2

93 of 343

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-025	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE COS OH JLK 6/11/15	DATA TURNAROUND 30 Days / 30 Days JLK 6/11/15
SAMPLING LOCATION C8796, Interval 13	PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343	FIELD LOGBOOK NO. HNF-N-645-3/7	ACTUAL SAMPLE DEPTH 49.5 50.5 ft.		COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wide X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	None		374988	
		HOLDING TIME	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
		VOLUME	125mL			
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RF1		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RF2	SOIL	6-8-15	09:36			

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UISO_IE_PRECIP_AEA: COMMON; 0.223 KG. TRVL-15-037	
D.L. Floyd/CHPRC	MAY 08 2015 1235	SSU #2	MAY 08 2015		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
540 ER	JUN 11 2015 1000	E.L. Kauer/CHPRC	JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
E.L. Kauer/CHPRC	JUN 11 2015 1130	B.E. Briggs/CHPRC	JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
B.E. Briggs/CHPRC	JUN 11 2015 1400	FEDEX			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
Ray		M. Kin... 6-12-15 0910			
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	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-028	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE LOS SH JH 6/16/15	DATA TURNAROUND 30 Days / 30 Days JH 6/16/15
SAMPLING LOCATION C8796, Interval 14 REQ		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-N-645-3 / 5116	ACTUAL SAMPLE DEPTH 49.5 - 51 ft.	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are not regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION None	HOLDING TIME None	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1	VOLUME 125mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RF4		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RF5	SOIL	6-8-15	09:49			

374988

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 235	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 1255	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; TRVL 15- 037 0.198 KG'S	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN M.K. [Signature]	DATE/TIME 6-12-15 0900		
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	

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-004	PAGE 1 OF 1
COLLECTOR D. Brotherton		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE C05 SH or 6/15/15
SAMPLING LOCATION C8796, Interval 2		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027		DATA TURNAROUND 30 Days - 30 ^{sec} Days ^{7 Days} / 7 Days
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-N-645-3p2	ACTUAL SAMPLE DEPTH 27.5 - 28.5 ft	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. T738 1332 2444		
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 are 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		None		
		TYPE OF CONTAINER		P		
		NO. OF CONTAINER(S)		1		
		VOLUME		125mL		
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RB8		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RB9	SOIL	5-12-15	0808	✓		

374988

September 14, 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; WT ^{MO} 5-12-15 146.6 .1966 Kg TRVL-15-037	
D.W. Brotherton/CHPRC	5-12-15 0933	SSU #2	5-12-15 0933		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
SSU #2	JUN 11 2015 1400	E.L. Kauer/CHPRC	JUN 11 2015 1600		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
E.L. Kauer/CHPRC	JUN 11 2015 1130	B.E. Briggs/CHPRC	JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
B.E. Briggs/CHPRC	JUN 11 2015 1400	FEDEX			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
		M. Kinsten/CHPRC	6-11-15 0910		
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	

REV 2

96 of 343

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-030	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE C05 SH JUL 6/11/15	DATA TURNAROUND 30-Days / 30-Days with call/15
SAMPLING LOCATION C8796, Interval 15		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. MNFN-645-3/2	ACTUAL SAMPLE DEPTH 50.5 51.4 ft	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5116		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are 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 None	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1	VOLUME 125mL
	SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RF6	SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RF7	SOIL	6-8-15	10:04			

374988

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 06 2015 1235	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 1235	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; TRVL-15-037 0-204 KG'S	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauor/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauor/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	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		

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-041	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE 65 JUL 6/1/15	DATA TURNAROUND 7 -30 Days / 30 Days JUL 6/1/15
SAMPLING LOCATION C8796, Interval 22		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS343		FIELD LOGBOOK NO. HNF-N. 645-3 Pg. 7	ACTUAL SAMPLE DEPTH 64.6 67.6 ft.	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	None		374988	
		HOLDING TIME	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
		VOLUME	125mL			
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RH7		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RH8	SOIL	6-8-15	13:22	✓		

September 14, 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 1445	RECEIVED BY/STORED IN SSU 2	DATE/TIME MAY 08 2015 1445	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_ETE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; 0-314 KG'S	
RELINQUISHED BY/REMOVED FROM SSU 2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN E.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1402	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM D.L. Floyd	DATE/TIME	RECEIVED BY/STORED IN M. Koston	DATE/TIME 6/27/15 0910		
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	

REV 2

98 of 343

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-043	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE COS 8H JUL 6/11/15	DATA TURNAROUND -30 Days / 30 Days JUL 6/11/15
SAMPLING LOCATION C8796, Interval 23		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-N-645-3 Pg. 7	ACTUAL SAMPLE DEPTH 68.0 70.8 ft.	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are not regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION None	HOLDING TIME None	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1	VOLUME 125mL
	SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RH9	SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS		374988		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RJ0	SOIL	6-9-15	13 40	✓		

September 14, 2015

REV 2

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 1445	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 1445	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; 0.208 KG-S TRVL 15- 037	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM FEDEX	DATE/TIME JUN 4	RECEIVED BY/STORED IN M. K.../...	DATE/TIME 6-11-15 0900		
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	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-039	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC	COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE 65 JUL 6/15	DATA TURNAROUND 30 Days / 30 Days JUL 6/15
SAMPLING LOCATION C8796, Interval 20 REQ	PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS343	FIELD LOGBOOK NO. HNF-645-3 pg. 7	ACTUAL SAMPLE DEPTH 56.2 59.0 ft		COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. T138 1332 2444		
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 are not regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	None		374988	
		HOLDING TIME	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
		VOLUME	125mL			
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RH6		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RH6	SOIL	6-8-15	13:04	✓		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 1445	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 1445	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UI50_IE_PRECIP_AEA: COMMON;	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM [Signature]	DATE/TIME	RECEIVED BY/STORED IN [Signature]	DATE/TIME 6-12-15 0910		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	0.189 KG'S TRVL 15- 037	
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-032	PAGE 1 OF 1	
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE COS OFF JUL 6 2015	DATA TURNAROUND 7 Days / 38 Days JUL 6 2015	
SAMPLING LOCATION C8796, Interval 16 REQ		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNFN L45-3 / >	ACTUAL SAMPLE DEPTH 51.4 52.8 ft.	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444			
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WT=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are 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 None	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1	VOLUME 125mL	
		SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RF8		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
		SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
		B30RF9	SOIL	6-8-15	10:14	J	
		374988					

September 14, 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 00	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 1235	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; TRVL 15- 037 0-193 KG ²⁵	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1200		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1408	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM Fedex	DATE/TIME	RECEIVED BY/STORED IN M. Kinslow	DATE/TIME 6-12-15 0910		
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	

REV 2

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-017	PAGE 1 OF 1
COLLECTOR D.W. Brotherton/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE CAS BH JUL 6/11/15	DATA TURNAROUND 30 Days / 30 Days JUL 6/11/15
SAMPLING LOCATION C8796, Interval 9		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-N-645-3/4	ACTUAL SAMPLE DEPTH 39.5-41.1	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5714		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are 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		None		
		TYPE OF CONTAINER		P		
		NO. OF CONTAINER(S)		1		
		VOLUME		125mL		
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RD3		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RD4	SOIL	5-19-15	03 5-19-15 0953 6913	✓		

374988

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.W. Brotherton/CHPRC	DATE/TIME 5-19-15 0930	RECEIVED BY/STORED IN SSU #2	DATE/TIME 5-19-15 0930	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; 1129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON;	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauert/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauert/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM [Signature]	DATE/TIME	RECEIVED BY/STORED IN M. Kistow	DATE/TIME 6-11-15 0910		
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-15-037	
LABORATORY SECTION	RECEIVED BY			TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DISPOSED BY	DATE/TIME

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-033	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE LOS -8H out 6/11/15	DATA TURNAROUND 30 Days / 30 Days out 6/11/15
SAMPLING LOCATION C8796, Interval 16 DUP REQ		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. 645-312	ACTUAL SAMPLE DEPTH 51.4 52.8 ft	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	None	374988		
		HOLDING TIME	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
		VOLUME	125mL			
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RHO	SOIL	6-8-15	10:14	J		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 1235	RECEIVED BY/STORED IN SSV #2	DATE/TIME MAY 08 2015 1235	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UISO_IE_PRECIP_AEA: COMMON; TRVL-15-037 0.198 KG	
RELINQUISHED BY/REMOVED FROM SSV #2	DATE/TIME JUN 11 2015 1000	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1000		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 1130	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	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	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-035	PAGE 1 OF 1
COLLECTOR D.L. Floyd/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE <i>COS</i> <i>Just bills</i>	DATA TURNAROUND 30 Days / 30 Days <i>Just bills</i>
SAMPLING LOCATION C8796, Interval 18		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. <i>GW5-343</i>		FIELD LOGBOOK NO. <i>HNF-N-645-3 Pg. 7</i>	ACTUAL SAMPLE DEPTH <i>53-1 54.5 ft.</i>	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. <i>5716</i>		BILL OF LADING/AIR BILL NO. <i>7738 1332 2444</i>		
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS *Contains Radioactive Material at concentrations that are 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 None	TYPE OF CONTAINER P	NO. OF CONTAINER(S) 1	VOLUME 125mL
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RH1		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS		<i>374988</i>		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RH2	SOIL	6-8-15	10:37	✓		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM D.L. Floyd/CHPRC	DATE/TIME MAY 08 2015 12:55	RECEIVED BY/STORED IN SSU #2	DATE/TIME MAY 08 2015 12:55	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON; TRVL 15- 037 0.188 KG	
RELINQUISHED BY/REMOVED FROM SSU #2	DATE/TIME JUN 11 2015 10:00	RECEIVED BY/STORED IN E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 10:00		
RELINQUISHED BY/REMOVED FROM E.L. Kauer/CHPRC	DATE/TIME JUN 11 2015 11:20	RECEIVED BY/STORED IN B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 11:20		
RELINQUISHED BY/REMOVED FROM B.E. Briggs/CHPRC	DATE/TIME JUN 11 2015 1400	RECEIVED BY/STORED IN FEDEX	DATE/TIME		
RELINQUISHED BY/REMOVED FROM <i>1084</i>	DATE/TIME	RECEIVED BY/STORED IN <i>M. Kinser</i>	DATE/TIME 6-12-15 09:00		
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	

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-011	PAGE 1 OF 1
COLLECTOR D.W. Brotherton/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D		PRICE CODE COS SH Jett 6/11/15
SAMPLING LOCATION C8796, Interval 6		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	DATA TURNAROUND 30 Days / 30 Days Jett 6/11/15	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-N-645-3/4	ACTUAL SAMPLE DEPTH 33.5-34.9 ft	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS ORIGINAL	
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
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 are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		PRESERVATION None	374988		
			HOLDING TIME None			
			TYPE OF CONTAINER P			
			NO. OF CONTAINER(S) 1			
			VOLUME 125mL			
SPECIAL HANDLING AND/OR STORAGE RADIOACTIVE TIE TO: B30RC6		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RC7	SOIL	5-19-15	0820			

September 14, 2015

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUIISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON;	
D.W. Brotherton/CHPRC	5-19-15 0930	SSU #2	5-19-15 0930		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
SSU #2	JUN 11 2015 1000	E.L. Kauer/CHPRC	JUN 11 2015 1006		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
E.L. Kauer/CHPRC	JUN 11 2015 1130	B.E. Briggs/CHPRC	JUN 11 2015 1121		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
B.E. Briggs/CHPRC	JUN 11 2015 1400	FEDEX			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-037	
FedEx		M. Kingston	6-12-15 0910		
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	

REV 2

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F15-027-015	PAGE 1 OF 1
COLLECTOR D.W. Brotherton/CHPRC		COMPANY CONTACT SUMNER, LC	TELEPHONE NO. 376-3922	PROJECT COORDINATOR TODAK, D	PRICE CODE COS SH out 6/11/15	DATA TURNAROUND 30 Days / 30 Days out 6/11/15
SAMPLING LOCATION C8796, Interval 8 SPT REQ		PROJECT DESIGNATION 100-KE Characterization Boreholes - Soil		SAF NO. F15-027	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GWS-343		FIELD LOGBOOK NO. HNF-N-645-3/4	ACTUAL SAMPLE DEPTH 34.7-38.3 ft.	COA 303581	METHOD OF SHIPMENT FEDERAL EXPRESS	ORIGINAL
SHIPPED TO GEL Laboratories, LLC		OFFSITE PROPERTY NO. 5716		BILL OF LADING/AIR BILL NO. 7738 1332 2444		
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid C=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 are not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.	PRESERVATION	None		374988	
		HOLDING TIME	None			
		TYPE OF CONTAINER	P			
		NO. OF CONTAINER(S)	1			
		VOLUME	125mL			
SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B30RD2	SOIL	5-19-15	0853	✓		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL-15-037 (1) Moisture Content - D2216; 6010_METALS_ICP: COMMON {Chromium}; 7196_CR6: COMMON; GAMMA_GS: COMMON; C14_LSC: COMMON; AMCMISO_IE_PRECIP_AEA: COMMON; I129_SEP_LEPS_GS: COMMON; PUISO_PLATE_AEA: COMMON; SRTOT_SEP_PRECIP_GPC: COMMON; TC99_EIE_LSC: COMMON; TRITIUM_DIST_LSC: COMMON; UIISO_IE_PRECIP_AEA: COMMON;	
D.W. Brotherton/CHPRC	5-19-15 0930	SSU #2	5-19-15 0930		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
SSU #2	JUN 11 2015 10 ⁰⁰	E.L. Kauer/CHPRC	JUN 11 2015 10 ⁰⁰		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
E.L. Kauer/CHPRC	JUN 11 2015 1130	E.L. Briggs/CHPRC	JUN 11 2015 1130		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
E.L. Briggs/CHPRC	JUN 11 2015 1400	FEDEX			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	TRVL 15- 037	
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	

Hammons, Jennifer L

From: Baechler, Michael A
Sent: Thursday, June 11, 2015 9:56 AM
To: Aguilar, Christina M; Aguilar, Juan R; Baechler, Michael A; Briggs, Barbara E; Brotherton, Donald W; Campbell, Karen M; Ellingsworth, Randy D; Hall, Frank M; Hammons, Jennifer L; Hinojosa, Pedro; Patterson, Kevin C; Stiles, Kyle K; Trent, Stephen J; Wall, Lesly D; White, Mitzi A
Subject: FW: Well 199-K-221 (C8796) Sample Shipping Authorization

One more fix, added I-8 split.

Michael A. Baechler

*Scientist, CHPRC, Contractor to the Department of Energy
Soil & Groundwater Remediation Project,
CHPRC Sample Management Office
(509) 373-4452 Office
(509) 539-3117 Cellular*



From: Baechler, Michael A
Sent: Thursday, June 11, 2015 9:13 AM
To: Aguilar, Christina M; Aguilar, Juan R; Baechler, Michael A; Briggs, Barbara E; Brotherton, Donald W; Campbell, Karen M; Ellingsworth, Randy D; Hall, Frank M; Hammons, Jennifer L; Hinojosa, Pedro; Patterson, Kevin C; Stiles, Kyle K; Trent, Stephen J; Wall, Lesly D; White, Mitzi A
Subject: FW: Well 199-K-221 (C8796) Sample Shipping Authorization

All,

Please substitute interval 8 below for interval 7 (I-7 not going to GEL). Sorry for the error.

C8796, Interval 8 REQ	40	SOIL	GRAB	---	---	B31F18	---	B30RD0 (RADSCREEN INCLUDED IN MAIN SAMPLE)	---	F15-027-014(222- S) F15-027-103(ESL)
C8796, Interval 8 SPT REQ	40	SOIL	GRAB	---	B30RD2	B31F19	---	---	---	F15-027-015(GEL) F15-027-104(ESL)

Thanks,

Michael A. Baechler

*Scientist, CHPRC, Contractor to the Department of Energy
Soil & Groundwater Remediation Project,
CHPRC Sample Management Office
(509) 373-4452 Office
(509) 539-3117 Cellular*



From: Baechler, Michael A

Sent: Thursday, June 11, 2015 9:09 AM

To: Aguilar, Christina M; Aguilar, Juan R; Baechler, Michael A; Briggs, Barbara E; Brotherton, Donald W; Campbell, Karen M; Ellingsworth, Randy D; Hall, Frank M; Hammons, Jennifer L; Hinojosa, Pedro; Patterson, Kevin C; Stiles, Kyle K; Trent, Stephen J; Wall, Lesly D; White, Mitzi A

Subject: Well 199-K-221 (C8796) Sample Shipping Authorization

All,

The samples listed below are authorized for transport as non-regulated material to onsite facilities and offsite laboratories.

LOCATION	EST_INT	MATRIX	METHOD	TARL	GEL	ESL	CRCP	222-S	FIELD	COC
C8796, Interval 1 REQ	26	SOIL	GRAB	---	---	B30RB5	---	B30RB6 (RADSCREEN INCLUDED IN MAIN SAMPLE)	---	F15-027- 001(ESL)
										F15-027- 002(222- 5)
										F15-027- 003(CRCP)
										F15-027- 004(GEL)
										F15-027- 097(ESL)
C8796, Interval 2	28	SOIL	GRAB	---	B30RB9	B31F12	B30RB8(RS)	---	---	F15-027- 010(CRCP)
										F15-027- 011(GEL)
										F15-027- 101(ESL)
										F15-027- 012(GEL)
										F15-027- 013(GEL)
C8796, Interval 6	36	SOIL	GRAB	---	B30RC7	B31F16	B30RC6(RS)	---	---	F15-027- 014(GEL)
										F15-027- 015(GEL)
										F15-027- 016(GEL)
										F15-027- 017(GEL)
										F15-027- 018(CRCP)
C8796, Interval 7	38	SOIL	GRAB	---	B30RC9	B31F17	B30RC8(RS)	---	---	F15-027- 019(GEL)
										F15-027- 020(GEL)
										F15-027- 021(GEL)
										F15-027- 022(CRCP)
										F15-027- 023(GEL)
C8796, Interval 9	42	SOIL	GRAB	---	B30RD4	B31F20	B30RD3(RS)	---	---	F15-027- 024(CRCP)
										F15-027- 025(GEL)
										F15-027- 026(GEL)
										F15-027- 027(GEL)
										F15-027- 028(GEL)
C8796, Interval 12	48	SOIL	GRAB	---	B30RF0	B31F23	B30RD9(RS)	---	---	F15-027- 029(GEL)
										F15-027- 030(GEL)
										F15-027- 031(GEL)
										F15-027- 032(GEL)
										F15-027- 033(GEL)
C8796, Interval 13	50	SOIL	GRAB	---	B30RF2	B31F24	B30RF1(RS)	---	---	F15-027- 034(CRCP)
										F15-027- 035(GEL)
										F15-027- 036(GEL)
										F15-027- 037(GEL)
										F15-027- 038(GEL)

C8796, Interval 14 REQ	52	SOIL	GRAB	---	B30RF5	B30RF3	B30RF4(RS)	---	---	F15-027-026(ESL) F15-027-027(CRCF) F15-027-028(GEL)
C8796, Interval 15	54	SOIL	GRAB	---	B30RF7	B31F25	B30RF6(RS)	---	---	F15-027-029(CRCF) F15-027-030(GEL) F15-027-110(ESL)
C8796, Interval 16 REQ	56	SOIL	GRAB	---	B30RF9	B31F26	B30RF8(RS)	---	---	F15-027-031(CRCF) F15-027-032(GEL) F15-027-111(ESL)
C8796, Interval 16 DUP REQ	56	SOIL	GRAB	---	B30RH0	B31F27	---	---	---	F15-027-033(GEL) F15-027-112(ESL)
C8796, Interval 17 REQ	59	WATER	GRAB	B30T09	B30RP1	---	B30RP0(RS)	---	B30RT4	F15-028-001(CRCF) F15-028-002(GEL) F15-028-025
C8796, Interval 18	58	SOIL	GRAB	---	B30RH2	B31F28	B30RH1(RS)	---	---	F15-027-034(CRCF) F15-027-035(GEL) F15-027-113(ESL)
C8796, Interval 19	60	SOIL	GRAB	---	B30RH4	B31F29	B30RH3(RS)	---	---	F15-027-036(CRCF) F15-027-037(GEL) F15-027-114(ESL)
C8796, Interval 20 REQ	62	SOIL	GRAB	---	B30RH6	B31F30	B30RH5(RS)	---	---	F15-027-038(CRCF) F15-027-039(GEL) F15-027-115(ESL)

C8796, Interval 21 REQ	70	WATER	GRAB	B30RP6	B30RP7	---	B30RP5(RS)	---	B30RT6	F15-028- 006(CRCF) F15-028- 007(GEL) F15-028- 008(TARL)
C8796, Interval 22	66	SOIL	GRAB	---	B30RHB	B31F31	B30RH7(RS)	---	---	F15-027- 040(CRCF) F15-027- 041(GEL) F15-027- 116(ESL)
C8796, Interval 23	68	SOIL	GRAB	---	B30R30	B31F32	B30RH9(RS)	---	---	F15-027- 042(CRCF) F15-027- 043(GEL) F15-027- 117(ESL)

Thanks,

Michael A. Baechler

Scientist, CH2RC, Contractor to the Department of Energy

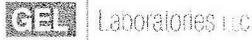
Soil & Groundwater Remediation Project,

CH2RC Sample Management Office

(509) 373-4452 Office

(509) 539-3117 Cellular





SAMPLE RECEIPT & REVIEW FORM

Client:		SDG/AR/COC/Work Order: 374988
Received By: MK		Date Received: 6-12-15
Suspected Hazard Information	Yes No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0
Classified Radioactive II or III by RSO?		If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		
Package, COC, and/or Samples marked as beryllium or asbestos containing?		If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: ice bags Blue ice Dry ice None Other (describe) all temperatures are recorded in Celsius
2a Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: ESD32015330 Secondary Temperature Device Serial # (if Applicable):
3 Chain of custody documents included with shipment?				
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6 Do Low Level Perchlorate samples (EPA 6850) have headspace as required?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
7 VOA vials free of headspace (defined as < 6mm bubble)?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
8 Are Encore containers present?			<input checked="" type="checkbox"/>	If yes, immediately deliver to Volatiles laboratory)
9 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
10 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
11 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
13 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>			
14 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
15 Carrier and tracking number.	<input checked="" type="checkbox"/>			Circle Applicable: FedEx Air FedEx Ground UPS Field Services Courier Other 7738 1332 2444

Comments (Use Continuation Form if needed):

Metals Analysis

Case Narrative

Metals
Technical Case Narrative
CH2MHill Plateau Remediation Company (CPRC)
SDG #: GEL374988
Work Order #: 374988

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9
374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203336747	Method Blank (MB)ICP
1203336748	Laboratory Control Sample (LCS)
1203336751	374988001(B30RH4L) Serial Dilution (SD)
1203336749	374988001(B30RH4D) Sample Duplicate (DUP)
1203336750	374988001(B30RH4S) Matrix Spike (MS)

Sample Analysis

The samples in this SDG were analyzed on a "dry weight" basis.

Method/Analysis Information

Analytical Batch:	1485543
Prep Batch :	1485542
Standard Operating Procedures:	GL-MA-E-013 REV# 24 and GL-MA-E-009 REV# 25
Analytical Method:	6010_METALS_ICP
Prep Method :	SW846 3050B

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

System Configuration

The Metals analysis-ICP was performed on a P E 5300 Optima radial/axial-viewing inductively coupled plasma atomic emission spectrometer. The instrument is equipped with an ESI SC-FAST introduction, cyclonic spray chamber, and yttrium or scandium internal standard.

Calibration Information**Instrument Calibration**

All initial calibration requirements have been met for this sample delivery group (SDG).

CRDL/PQL Requirements

The CRDL/PQL standard recoveries met the referenced advisory control limits.

ICSA/ICSAB Statement

All interference check samples (ICSA and ICSAB) associated with this SDG met the established acceptance criteria.

Continuing Calibration Blanks (CCB) Requirements

All continuing calibration blanks (CCB) bracketing this batch met the established acceptance criteria.

Continuing Calibration Verification (CCV) Requirements

All continuing calibration verifications (CCV) bracketing this SDG met the acceptance criteria.

Quality Control (QC) Information**Method Blank (MB) Statement**

The MB analyzed with this SDG met the acceptance criteria.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Sample Statement

The following sample was selected as the quality control (QC) sample for this SDG: 374988001 (B30RH4).

Matrix Spike (MS/MSD) Recovery Statement

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike met the recommended quality control acceptance criteria for percent recoveries for all applicable analytes.

Duplicate Relative Percent Difference (RPD) Statement

The RPD obtained from the designated sample duplicate (DUP) is evaluated based on acceptance criteria of 20% when the sample is >5X the contract required reporting limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control of +/-RL is used to evaluate the DUP results. The relative percent differences (RPD) between the sample and its duplicate (DUP) were within acceptable limits for all applicable analytes.

Serial Dilution % Difference Statement

All applicable analytes in the serial dilution (SDILT) demonstrated acceptable correlation to its associated sample and met the established acceptance percent difference criteria.

Technical Information**Holding Time Specifications**

GEL assigns holding times based on the associated methodology. Holding time is measured by comparison of the date and time of sample collection to the date and time of sample preparation and analysis. Those holding

times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP. Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

Sample Dilutions

The samples in this SDG did not require dilutions.

Preparation Information

The samples in this SDG were not diluted and prepared according to the cited SOP.

Miscellaneous Information**Electronic Packaging Comment**

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. An electronic signature page inserted after the case narrative will include the data validator's signature and title. The signature page also includes the data qualifiers used in the fractional package. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Data Exception (DER) Documentation

A data exception report was not required for this SDG.

Additional Comments

Additional comments were not required for this SDG.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

**Qualifier Definition Report
for**

CPRC001 CH2MHill Plateau Remediation Company

Client SDG: GEL374988 GEL Work Order: 374988

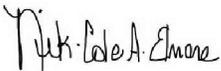
The Qualifiers in this report are defined as follows:

- * Duplicate analysis not within control limits
- D Results are reported from a diluted aliquot of sample.
- U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: 

Name: Nik-Cole Elmore

Date: 24 JUN 2015

Title: Data Validator

Sample Data Summary

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988001

CLIENT ID: B30RH4

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low **%SOLIDS:** 97.4

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	8480	ug/kg			P	135	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988002

CLIENT ID: B30RF0

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low **%SOLIDS:** 95.7

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	10100	ug/kg			P	153	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988003

CLIENT ID: B30RF2

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low **%SOLIDS:** 98.6

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	22300	ug/kg			P	145	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988004

CLIENT ID: B30RF5

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low %SOLIDS: 97.1

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	15300	ug/kg			P	145	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988005

CLIENT ID: B30RB9

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low %SOLIDS: 98.3

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	11800	ug/kg			P	151	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988006

CLIENT ID: B30RF7

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low %SOLIDS: 96.9

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	12400	ug/kg			P	149	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988007

CLIENT ID: B30RH8

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low **%SOLIDS:** 82

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	12500	ug/kg			P	155	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988008

CLIENT ID: B30RJ0

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low %SOLIDS: 83

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	10200	ug/kg			P	157	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988009

CLIENT ID: B30RH6

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low %SOLIDS: 92.9

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	14400	ug/kg			P	147	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988010

CLIENT ID: B30RF9

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low **%SOLIDS:** 96.2

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	11300	ug/kg			P	133	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988011

CLIENT ID: B30RD4

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low **%SOLIDS:** 98

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	7350	ug/kg			P	139	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988012

CLIENT ID: B30RH0

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low **%SOLIDS:** 96.1

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	9670	ug/kg			P	146	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988013

CLIENT ID: B30RH2

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low %SOLIDS: 97

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	9900	ug/kg			P	148	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988014

CLIENT ID: B30RC7

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low %SOLIDS: 98.8

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	18600	ug/kg			P	137	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

GEL Laboratories LLC

METALS
-1-
INORGANICS ANALYSIS DATA PACKAGE

SDG No: GEL374988

METHOD TYPE: SW846

SAMPLE ID: 374988015

CLIENT ID: B30RD2

CONTRACT: CPRC0F15027

MATRIX:SOIL

DATE RECEIVED 12-JUN-15

LEVEL: Low **%SOLIDS:** 94.3

<u>CAS No</u>	<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>C</u>	<u>Qual</u>	<u>M*</u>	<u>MDL</u>	<u>DF</u>	<u>Inst ID</u>	<u>Analytical Run</u>
7440-47-3	Chromium	8360	ug/kg			P	143	1	OPTIMA3	061615-1

*Analytical Methods:

P SW846 3050B/6010C

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: June 24, 2015

Page 1 of 2

CH2MHill Plateau Remediation Company
MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington
Mr. Scot Fitzgerald

Contact:
Workorder: 374988

Parname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
Metals Analysis-ICP											
Batch	1485543										
QC1203336749	374988001	DUP									
Chromium		8480		8680	ug/kg	2.36		(0%-20%)	HSC	06/16/15	16:07
QC1203336748	LCS										
Chromium	49900			49400	ug/kg		99.1	(80%-120%)		06/16/15	16:01
QC1203336747	MB										
Chromium			U	ND	ug/kg					06/16/15	15:57
QC1203336750	374988001	MS									
Chromium	45600	8480		50900	ug/kg		93.1	(75%-125%)		06/16/15	16:11
QC1203336751	374988001	SDILT									
Chromium		94.0	D	19.4	ug/L	3.45		(0%-10%)		06/16/15	16:14

Notes:

The Qualifiers in this report are defined as follows:

- * Duplicate analysis not within control limits
- + Correlation coefficient for Method of Standard Additions (MSA) is < 0.995
- B The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).
- C Target analyte was detected in the sample and the associated blank. The associated blank concentration is >= EQL or is > 5% of the measured concentration and/or decision level for associated samples.
- D Results are reported from a diluted aliquot of sample.
- E Reported value is estimated due to interferences. See comment in narrative.
- M Duplicate precision not met.
- N Spike Sample recovery is outside control limits.
- S Reported value determined by the Method of Standard Additions (MSA)
- U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
- W Post-digestion spike recovery for GFAA out of control limit. Sample absorbency < 50% of spike absorbency.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Z Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

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QC Summary

Workorder: 374988

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD/D%	REC%	Range	Anlst	Date	Time
----------	-----	--------	------	----	-------	--------	------	-------	-------	------	------

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

General Chem Analysis

Case Narrative

**General Chemistry
Technical Case Narrative
CH2MHill Plateau Remediation Company (CPRC)
SDG #: GEL374988
Work Order #: 374988**

Method/Analysis Information

Product:	Hexavalent Chromium		
Analytical Batch:	1485953 and 1486623	Method:	7196_CR6: COMMON
Prep Batch :	1485952 and 1486622	Method:	SW846 3060A

Sample Analysis

The following samples were analyzed using the analytical protocol as established in 7196_CR6 :

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9
374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203337917	Method Blank (MB)
1203339237	Method Blank (MB)
1203337918	Laboratory Control Sample (LCS)
1203339238	Laboratory Control Sample (LCS)
1203337921	374988001(B30RH4) Sample Duplicate (DUP)
1203339240	374988010(B30RF9) Sample Duplicate (DUP)
1203337925	374988001(B30RH4) Matrix Spike (MS)
1203339242	374988010(B30RF9) Matrix Spike (MS)
1203337929	374988001(B30RH4) Matrix Spike Duplicate (MSD)
1203339246	374988010(B30RF9) Matrix Spike Duplicate (MSD)
1203337919	Insoluble Lab Control Sample (ILCS)
1203339239	Insoluble Lab Control Sample (ILCS)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-GC-E-044 REV# 21.

Preparation/Analytical Method Verification

The SOP stated above has been prepared based on technical research and testing conducted by GEL Laboratories, LLC. and with guidance from the regulatory documents listed in this "Method/Analysis Information" section.

Calibration Information

The Spectrometric analysis was performed on a Spectronic 20D+ Digital Spectrophotometer.

Initial Calibration

All initial calibration requirements have been met for this SDG.

Continuing Calibration Blanks

All continuing calibration blanks (CCBs) associated with reported data from this batch were within acceptance limits.

Calibration Verification Information (CCV)

All continuing calibration verification standards (CCVs) associated with reported data from this batch were within acceptance limits.

Y Intercept Rule

The absolute value of the intercept is less than 3 times the MDL.

Quality Control (QC) Information**Method Blank (MB) Statement**

The MBs Batch 1486623 analyzed with this SDG met the acceptance criteria. In instances where there were positive hits in the method blank, the results were evaluated and appropriately flagged on the data.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Quality Control (QC) Designation

Samples 374988001 (B30RH4)- Batch 1485953 and 374988010 (B30RF9)- Batch 1486623 were selected for QC analysis.

Matrix Spike (MS)/Post Spike (PS) Recovery Statement

The MS/PS recoveries for this sample set were within the required acceptance limits.

MS/MSD Relative Percent Difference (RPD) Statement

The RPDs between the spike and spike duplicate met the acceptance limits.

Duplicate Relative Percent Difference (RPD) Statement

The RPD between the sample and its duplicate met the acceptance limits.

Technical Information

GEL assigns holding times based on the date and time of sample collection. Those holding times expressed in hours are calculated in the AlphaLims system by hours. Those holding times expressed as days expire at midnight on the day of expiration.

Holding Times

Sample (See Below) was received by the laboratory outside of the method specified holding time. The data is qualified.

Sample	Analyte	Value
374988005 (B30RB9)		Received 12-JUN-15, out of holding 11-JUN-15

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-analysis

The samples in this SDG did not require re-analysis.

Miscellaneous Information

Data Exception (DER) Documentation

A data exception report (DER) 1421767 was generated for sample 374988005 (B30RB9)- Batch 1485953 in this SDG/batch.

Additional Comments

Additional comments were not required for this SDG.

Electronic Packaging Comment

This data package was generated using an electronic data processing program referred to as virtual packaging. In an effort to increase quality and efficiency, the laboratory has developed systems to generate all data packages electronically. The following change from traditional packages should be noted:

Analyst/peer reviewer initials and dates are not present on the electronic data files. Presently, all initials and dates are present on the original raw data. These hard copies are temporarily stored in the laboratory. The data validator will always sign and date the case narrative. Data that are not generated electronically, such as hand written pages, will be scanned and inserted into the electronic package.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

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**Qualifier Definition Report
for**

CPRC001 CH2MHill Plateau Remediation Company

Client SDG: GEL374988 GEL Work Order: 374988

The Qualifiers in this report are defined as follows:

- B The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).
- C Target analyte was detected in the sample and the associated blank. The associated blank concentration is \geq EQL or is $> 5\%$ of the measured concentration and/or decision level for associated samples.
- U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: 

Name: Thomas Lewis

Date: 24 JUN 2015

Title: Data Validator

Sample Data Summary

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RH4	Project:	CPRC0F15027
Sample ID:	374988001	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 12:55		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	2.57%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium		2040	123	410	ug/Kg	1	SXC5	06/17/15	1359	1485953	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1453	1485952

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	7196_CR6		

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RF0	Project:	CPRC0F15027
Sample ID:	374988002	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	18-MAY-15 13:44		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	4.27%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	B	168	125	416	ug/Kg	1	SXC5	06/17/15	1410	1485953	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1459	1485952

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	7196_CR6	

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RF2	Project:	CPRC0F15027
Sample ID:	374988003	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 09:36		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	1.45%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium		763	121	403	ug/Kg	1	SXC5	06/17/15	1411	1485953	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1500	1485952

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	7196_CR6		

Notes:

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 Address : MSIN R3-50 CHPRC
 PO Box 1600
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 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RF5	Project:	CPRC0F15027
Sample ID:	374988004	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 09:49		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	2.88%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	U	123	123	411	ug/Kg	1	SXC5	06/17/15	1412	1485953	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1501	1485952

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	7196_CR6		

Notes:

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Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
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 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RB9	Project:	CPRC0F15027
Sample ID:	374988005	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	12-MAY-15 08:08		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	1.67%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium		547	120	401	ug/Kg	1	SXC5	06/17/15	1412	1485953	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1502	1485952

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	7196_CR6		

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RF7	Project:	CPRC0F15027
Sample ID:	374988006	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 10:04		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	3.13%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	U	123	123	410	ug/Kg	1	SXC5	06/17/15	1413	1485953	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1503	1485952

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	7196_CR6		

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RH8	Project:	CPRC0F15027
Sample ID:	374988007	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 13:22		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	18.2%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium		519	136	452	ug/Kg	1	SXC5	06/17/15	1413	1485953	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1504	1485952

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	7196_CR6		

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
Address : MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Project: CHPRC SAF F15-027

Client Sample ID:	B30RJ0	Project:	CPRC0F15027
Sample ID:	374988008	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 13:40		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	17.1%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	U	139	139	464	ug/Kg	1	SXC5	06/17/15	1414	1485953	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1505	1485952

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	7196_CR6	

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
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 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RH6	Project:	CPRC0F15027
Sample ID:	374988009	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 13:04		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	7.05%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium		806	128	426	ug/Kg	1	SXC5	06/17/15	1415	1485953	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/16/15	1506	1485952

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	7196_CR6		

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
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 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RF9	Project:	CPRC0F15027
Sample ID:	374988010	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 10:14		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	3.8%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	BC	342	124	413	ug/Kg	1	SXC5	06/18/15	1444	1486623	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1531	1486622

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	7196_CR6		

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RD4	Project:	CPRC0F15027
Sample ID:	374988011	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	19-MAY-15 09:13		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	1.96%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	C	471	122	406	ug/Kg	1	SXC5	06/18/15	1449	1486623	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1607	1486622

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	7196_CR6	

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RH0	Project:	CPRC0F15027
Sample ID:	374988012	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 10:14		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	3.92%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	C	968	123	408	ug/Kg	1	SXC5	06/18/15	1451	1486623	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1608	1486622

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	7196_CR6		

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RH2	Project:	CPRC0F15027
Sample ID:	374988013	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	08-JUN-15 10:37		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	2.96%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	BC	159	123	409	ug/Kg	1	SXC5	06/18/15	1451	1486623	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1610	1486622

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	7196_CR6		

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RC7	Project:	CPRC0F15027
Sample ID:	374988014	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	19-MAY-15 08:20		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	1.22%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	C	465	120	401	ug/Kg	1	SXC5	06/18/15	1453	1486623	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1611	1486622

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	7196_CR6	

Notes:

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Certificate of Analysis

Report Date: June 24, 2015

Company : CH2MHill Plateau Remediation Company
 Address : MSIN R3-50 CHPRC
 PO Box 1600
 Richland, Washington 99352
 Contact: Mr. Scot Fitzgerald
 Project: CHPRC SAF F15-027

Client Sample ID:	B30RD2	Project:	CPRC0F15027
Sample ID:	374988015	Client ID:	CPRC001
Matrix:	SOIL		
Collect Date:	19-MAY-15 08:53		
Receive Date:	12-JUN-15		
Collector:	Client		
Moisture:	5.69%		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Spectrometric Analysis											
7196_CR6: COMMON "Dry Weight Corrected"											
Hexavalent Chromium	BC	209	126	418	ug/Kg	1	SXC5	06/18/15	1453	1486623	1

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
SW846 3060A	SW846_7196A Hexavalent Chromium in Soil	SXC5	06/17/15	1612	1486622

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	7196_CR6	

Notes:

Quality Control Summary

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: June 24, 2015

Page 1 of 2

CH2MHill Plateau Remediation Company
MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington

Contact: Mr. Scot Fitzgerald

Workorder: 374988

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Spectrometric Analysis											
Batch	1485953										
QC1203337921	374988001	DUP									
Hexavalent Chromium		2040		2080	ug/Kg	1.97	^	(+/-409)	SXC5	06/17/15	13:59
QC1203337919	ILCS										
Hexavalent Chromium	8000			6770	ug/Kg			(80%-120%)		06/17/15	13:52
QC1203337918	LCS										
Hexavalent Chromium	3990			3820	ug/Kg			(80%-120%)		06/17/15	13:52
QC1203337917	MB										
Hexavalent Chromium		U		120	ug/Kg					06/17/15	13:52
QC1203337925	374988001	MS									
Hexavalent Chromium	4090	2040		6230	ug/Kg			(75%-125%)		06/17/15	14:00
QC1203337929	374988001	MSD									
Hexavalent Chromium	4030	2040		6090	ug/Kg	2.18	100	(0%-30%)		06/17/15	14:01
Batch	1486623										
QC1203339240	374988010	DUP									
Hexavalent Chromium		BC	342	B	297	ug/Kg	14.1	^	(+/-414)	SXC5	06/18/15 14:45
QC1203339239	ILCS										
Hexavalent Chromium	7970			7790	ug/Kg			(80%-120%)		06/18/15	14:43
QC1203339238	LCS										
Hexavalent Chromium	3980			4180	ug/Kg			(80%-120%)		06/18/15	14:43
QC1203339237	MB										
Hexavalent Chromium		B		155	ug/Kg					06/18/15	14:43
QC1203339242	374988010	MS									
Hexavalent Chromium	4080	BC	342	4870	ug/Kg			(75%-125%)		06/18/15	14:46
QC1203339246	374988010	MSD									
Hexavalent Chromium	4140	BC	342	5040	ug/Kg	3.33	113	(0%-30%)		06/18/15	14:47

Notes:

The Qualifiers in this report are defined as follows:

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QC Summary

Workorder: 374988

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
 ^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
 * Indicates that a Quality Control parameter was not within specifications.
 For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Miscellaneous

GEL Laboratories LLC
Form GEL-DER

DER Report No.: 1421767
Revision No.: 1

DATA EXCEPTION REPORT			
Mo.Day Yr. 17-JUN-15	Division: Industrial	Quality Criteria: Specifications	Type: Process
Instrument Type: VIS SPECTROMETER	Test / Method: SW846 7196A	Matrix Type: Solid	Client Code: CPRC, OLAB
Batch ID: 1485953	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 374988(GEL374988)			
Application Issues: Sample received out of holding			
Specification and Requirements Exception Description:		DER Disposition:	
1. Sample received out of holding: 374988 005		1. Sample (See Below) was received by the laboratory outside of the method specified holding time. The data is qualified. 374988005 (B30RB9) [Received 12-JUN-15, out of holding 11-JUN-15].	

Originator's Name:
Sarah Carson 17-JUN-15

Data Validator/Group Leader:
Elzbieta Szulc 17-JUN-15

Radiological Analysis

**Radiochemistry
 Technical Case Narrative
 CH2M Hill Plateau Remediation Company (CPRC)
 SDG #: GEL374988
 Work Order #: 374988**

Method/Analysis Information

Product: Alphaspec Am241 Solid
 Analytical Method: AMCMISO_EIE_PREC_AEA
 Prep Method: ASTM D 2216 (Modified)
 Analytical Batch Number: 1485928
 Prep Batch Number: 1485598

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9
374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203337864	Method Blank (MB)
1203337866	Laboratory Control Sample (LCS)
1203337865	374988001(B30RH4) Sample Duplicate (DUP)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 25.

Calibration Information:**Calibration Information**

All initial and continuing calibration requirements have been met.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:**Blank Information**

The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 374988001 (B30RH4).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Recounts

None of the samples in this sample set were recounted.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration

Manual integration of alpha spectroscopy spectra 1203337866 (LCS) was performed to fully separate counts in Regions of Interest which would have been biased.

Sample-Specific MDA/MDC

The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

Additional Comments

Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product: Alphaspec Pu, Solid
Analytical Method: PUIISO_PLATE_AEA
Prep Method: ASTM D 2216 (Modified)
Analytical Batch Number: 1485930
Prep Batch Number: 1485598

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9
374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203337867	Method Blank (MB)
1203337869	Laboratory Control Sample (LCS)
1203337868	374988001(B30RH4) Sample Duplicate (DUP)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 25.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 374988001 (B30RH4).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Recounts

Sample 374988003 (B30RF2) was recounted due to high MDC. The recount is reported. Samples 1203337868 (B30RH4DUP) and 374988001 (B30RH4) were recounted due to high relative percent difference/relative error ratio. The recounts are reported. Sample 374988005 (B30RB9) was recounted due to poor resolution. The recount is reported. Sample 374988009 (B30RH6) was recounted to verify results. The recount is being reported.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration

No manual integrations were performed on data in this batch.

Sample-Specific MDA/MDC

The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

Additional Comments

Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Alphaspec U, Solid
Analytical Method:	UIISO_IE_PRECIP_AEA
Prep Method:	ASTM D 2216 (Modified)
Analytical Batch Number:	1485931
Prep Batch Number:	1485598

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9
374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203337870	Method Blank (MB)
1203337872	Laboratory Control Sample (LCS)
1203337871	374988001(B30RH4) Sample Duplicate (DUP)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 25.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 374988001 (B30RH4).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Recounts

Sample 374988012 (B30RH0) was recounted due to a peak shift. The recount is reported.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Manual Integration

No manual integrations were performed on data in this batch.

Sample-Specific MDA/MDC

The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

Additional Comments

Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Dry Weight-Percent Moisture
Analytical Method:	ASTM D 2216 (Modified)
Analytical Batch Number:	1485598

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9

374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203336898	374988001(B30RH4) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-OA-E-020 REV# 10 and GL-RAD-A-021 REV# 20.

Calibration Information:**Quality Control (QC) Information:****Designated QC**

The following sample was used for QC: 374988001 (B30RH4).

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Additional Comments

Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Gamma Cs137,Co60,Eu152,Eu154,E155
Analytical Method:	GAMMA_GS
Prep Method:	ASTM D 2216 (Modified)
Analytical Batch Number:	1485712
Prep Batch Number:	1485598

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9
374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203337249	Method Blank (MB)
1203337251	Laboratory Control Sample (LCS)
1203337250	374988001(B30RH4) Sample Duplicate (DUP)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 25.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 374988001 (B30RH4).

QC Information

All of the QC samples meet the required acceptance limits with the following exceptions: Refer to Data Exception Report (DER).

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Recounts

None of the samples in this sample set were recounted.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following DER was generated for this SDG: DER 1423790 was generated due to RDL less than MDA. The following RDLs in sample 374988001 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988002 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988003 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988004 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988005 were not achieved: Co-60, Eu-154 and Eu-155. The following RDLs in sample 374988006 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988007 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988008 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988009 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988010 were not achieved: Cs-137, Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988011 were not achieved: Cs-137, Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988012 were not achieved: Cs-137, Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988013 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988014 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988015 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in MB 1203337249 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in DUP 1203337250 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. Required detection limits were not met due to limited sample volume. Reporting results.

Sample-Specific MDA/MDC

The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

Additional Comments

Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Gamma I129, Solid
Analytical Method:	DOE EML HASL-300,I-01 Modified
Analytical Batch Number:	1485720

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9
374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203337266	Method Blank (MB)
1203337269	Laboratory Control Sample (LCS)
1203337267	374988001(B30RH4) Sample Duplicate (DUP)
1203337268	374988001(B30RH4) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-006 REV# 21.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 374988001 (B30RH4).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Recounts

None of the samples in this sample set were recounted.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Sample-Specific MDA/MDC

The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

Additional Comments

Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	SRTOT_SEP_PRECIP_GPC: COMMON
Analytical Method:	SRTOT_SEP_PRECIP_GPC
Prep Method:	ASTM D 2216 (Modified)
Analytical Batch Number:	1485858
Prep Batch Number:	1485598

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9

374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203337670	Method Blank (MB)
1203337672	Laboratory Control Sample (LCS)
1203337671	374988005(B30RB9) Sample Duplicate (DUP)

The samples in this SDG were analyzed on a "dry weight" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 17.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 374988005 (B30RB9).

QC Information

All of the QC samples meet the required acceptance limits with the following exceptions: The sample and the duplicate, 1203337671 (B30RB9DUP) and 374988005 (B30RB9), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with a value of 1.75.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Chemical Recoveries

All chemical recoveries meet the required acceptance limits for this sample set.

Recounts

Sample 374988008 (B30RJ0) was recounted due to results more negative than the three sigma TPU. The second count is reported. Samples 1203337671 (B30RB9DUP), 374988001 (B30RH4), 374988002 (B30RF0),

374988003 (B30RF2), 374988004 (B30RF5), 374988005 (B30RB9), 374988006 (B30RF7), 374988009 (B30RH6), 374988010 (B30RF9), 374988011 (B30RD4), 374988012 (B30RH0), 374988013 (B30RH2), 374988014 (B30RC7) and 374988015 (B30RD2) were verified by recounting at least five days from the separation date. The recounts are reported.

Miscellaneous Information:

Data Exception (DER) Documentation

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Sample-Specific MDA/MDC

The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

Additional Comments

Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product: Liquid Scint Tc99, Solid
Analytical Method: TC99_EIE_LSC
Analytical Batch Number: 1485659

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9
374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203337093	Method Blank (MB)
1203337095	Laboratory Control Sample (LCS)
1203337094	374988001(B30RH4) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-059 REV# 3.

Calibration Information:**Calibration Information**

All initial and continuing calibration requirements have been met.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:**Blank Information**

The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 374988001 (B30RH4).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Recounts

Sample 1203337095 (LCS) was recounted due to low recovery. The recount is reported.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Sample-Specific MDA/MDC

The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

Additional Comments

Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product: Liquid Scint C14, Solid
Analytical Method: C14_LSC
Analytical Batch Number: 1486494

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9
374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203338831	Method Blank (MB)
1203338834	Laboratory Control Sample (LCS)
1203338832	374988001(B30RH4) Sample Duplicate (DUP)
1203338833	374988001(B30RH4) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-003 REV# 15.

Calibration Information:**Calibration Information**

All initial and continuing calibration requirements have been met.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:**Blank Information**

The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 374988001 (B30RH4).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Recounts

Samples 1203338832 (B30RH4DUP), 374988001 (B30RH4), 374988003 (B30RF2), 374988005 (B30RB9), 374988006 (B30RF7), 374988012 (B30RH0), 374988013 (B30RH2), 374988014 (B30RC7) and 374988015 (B30RD2) were recounted due to the quench number being outside the calibration range. The recounts are reported.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Sample-Specific MDA/MDC

The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

Additional Comments

Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	LSC, Tritium Dist, Solid
Analytical Method:	TRITIUM_DIST_LSC
Analytical Batch Number:	1486509

Sample ID	Client ID
374988001	B30RH4
374988002	B30RF0
374988003	B30RF2
374988004	B30RF5
374988005	B30RB9
374988006	B30RF7
374988007	B30RH8
374988008	B30RJ0
374988009	B30RH6
374988010	B30RF9
374988011	B30RD4
374988012	B30RH0
374988013	B30RH2
374988014	B30RC7
374988015	B30RD2
1203338894	Method Blank (MB)
1203338897	Laboratory Control Sample (LCS)
1203338895	374988001(B30RH4) Sample Duplicate (DUP)
1203338896	374988001(B30RH4) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 21.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 374988001 (B30RH4).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Recounts

Samples 374988002 (B30RF0), 374988003 (B30RF2), 374988004 (B30RF5), 374988006 (B30RF7), 374988009 (B30RH6), 374988010 (B30RF9), 374988012 (B30RH0) and 374988013 (B30RH2) were recounted to verify sample results. The recount results are similar to the original results. Original results are reported.

Miscellaneous Information:**Data Exception (DER) Documentation**

Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Sample-Specific MDA/MDC

The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

Additional Comments

Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

**Qualifier Definition Report
for**

CPRC001 CH2MHill Plateau Remediation Company

Client SDG: GEL374988 GEL Work Order: 374988

The Qualifiers in this report are defined as follows:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: 

Name: Theresa Austin

Date: 06 AUG 2015

Title: Group Leader

GEL Laboratories LLC
Form GEL-DER

DER Report No.: 1423790

Revision No.: 3

DATA EXCEPTION REPORT			
Mo.Day Yr. 23-JUN-15	Division: Radiochemistry	Quality Criteria: Specifications	Type: Process
Instrument Type: GAMMA SPECTROMETER	Test / Method: DOE HASL 300, 4.5.2.3/Ga-01-R	Matrix Type: Solid	Client Code: CPRC
Batch ID: 1485712	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 374988(GEL374988)			
Application Issues: RDL less than MDA			
Specification and Requirements Exception Description:		DER Disposition:	
<p>The following RDLs in sample 374988001 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988002 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988003 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988004 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988005 were not achieved: Co-60, Eu-154 and Eu-155. The following RDLs in sample 374988006 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988007 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988008 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988009 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988010 were not achieved: Cs-137, Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988011 were not achieved: Cs-137, Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988012 were not achieved: Cs-137, Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988013 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988014 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in sample 374988015 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in MB 1203337249 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155. The following RDLs in DUP 1203337250 were not achieved: Co-60, Eu-152, Eu-154 and Eu-155.</p>		<p>Required detection limits were not met due to limited sample volume. Reporting results.</p>	

Originator's Name:
Spencer Collins 23-JUN-15

Data Validator/Group Leader:
Shenise Gerideau 25-JUN-15

Sample Data Summary

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988001	Date Collected: 06/08/2015 12:55	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.6
Client ID: B30RH4		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1236
Data File: S0374988001_AM.1A.gcnf	Aliquot: 0.106 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	0.112	pCi/g	+/-0.623	0.624	1.19	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	6.52	20.2	pCi/g	32.3	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988001	Date Collected: 06/08/2015 12:55	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.6
Client ID: B30RH4	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/23/2015 15:20	Aliquot: 0.106 g	Instrument: 1083
Data File: S0374988001_PU.2A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	-0.0389	pCi/g	+/-0.229	0.229	0.544	1.00
OER-100-70	Plutonium-239/240		3.28	pCi/g	+/-0.884	0.976	0.182	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	15.3	18.6	pCi/g	82.4	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988001	Date Collected: 06/08/2015 12:55	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.6
Client ID: B30RH4	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.106 g	Instrument: 1127
Data File: S0374988001_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234	U	0.257	pCi/g	+/-0.312	0.315	0.418	1.00
15117-96-1/13982-7	Uranium-235/236	U	0.00	pCi/g	+/-0.158	0.159	0.235	1.00
7440-61-1	Uranium-238		0.477	pCi/g	+/-0.377	0.384	0.352	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	21.2	20.0	pCi/g	106	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988001	Date Collected: 06/08/2015 12:55	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.6
Client ID: B30RH4	Method: SRTOT_SEP_PRECIP_GPC	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Analyst: KSD1	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 06:59	Aliquot: 1.013 g	Instrument: PIC4C
Data File: S1485858r2.xls	Prep Method: EPA 905.0 Modified/DOE RP5	Count Time: 60 min
Prep Batch: 1485858	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		15.9	pCi/g	+/-0.843	2.96	0.254	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	6.80	8.10	mg	84.0	(25%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988001	Date Collected: 06/08/2015 12:55	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.6
Client ID: B30RH4	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/16/2015 06:59	Aliquot: 18.855 g	Instrument: GAM12
Data File: G374988001.CNF;2	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137		0.184	pCi/g	+/-0.118	0.120	0.119	0.100
10198-40-0	Cobalt-60	U	0.0402	pCi/g	+/-0.0639	0.0665	0.130	0.050
14683-23-9	Europium-152	U	0.0503	pCi/g	+/-0.178	0.179	0.279	0.100
15585-10-1	Europium-154	U	0.129	pCi/g	+/-0.211	0.220	0.410	0.100
14391-16-3	Europium-155	U	0.0598	pCi/g	+/-0.170	0.172	0.307	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988001	Date Collected: 06/08/2015 12:55	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.6
Client ID: B30RH4	Method: DOE EML HASL-300,I-01 Mo	Prep Basis: "As Received"
Batch ID: 1485720	Analyst: MJH1	SOP Ref: GL-RAD-A-006
Run Date: 06/20/2015 12:30	Aliquot: 1.004 g	Instrument: XRAY1
Data File: I374988001.CNF;1	Prep Method: DOE EML HASL-300,I-01 M	Count Time: 30 min
Prep Batch: 1485720		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	0.0264	pCi/g	+/-0.641	0.641	1.40	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988001	Date Collected: 06/08/2015 12:55	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.6
Client ID: B30RH4	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 12:58	Aliquot: 2.149 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	0.0811	pCi/g	+/-0.823	0.823	1.42	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	55700	58500	CPM	95.3	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988001	Date Collected: 06/08/2015 12:55	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.6
Client ID: B30RH4	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/22/2015 11:31	Aliquot: 0.605 g	Instrument: LSCTEAL
Data File: C1486494R.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	0.518	pCi/g	+/-1.64	1.64	2.80	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988001	Date Collected: 06/08/2015 12:55	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.6
Client ID: B30RH4	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 16:48	Aliquot: 1.146 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		60.5	pCi/g	+/-17.2	22.0	23.7	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988001	Date Collected: 06/08/2015 12:55	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.6
Client ID: B30RH4		Prep Basis: "As Received"
Batch ID: 1485598	Method: ASTM D 2216 (Modified)	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20	Analyst: CXC1	Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC
	Moisture		2.57	percent +/-	
Surrogate/Tracer recovery			Result	Nominal	Units
			Recovery%	Acceptable Limits	

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988002	Date Collected: 05/18/2015 13:44	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 4.3
Client ID: B30RF0		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1239
Data File: S0374988002_AM.1A.gcnf	Aliquot: 0.1 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	-0.0389	pCi/g	+/-0.336	0.337	0.778	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	10.6	21.4	pCi/g	49.4	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988002	Date Collected: 05/18/2015 13:44	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 4.3
Client ID: B30RF0	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/19/2015 10:10	Aliquot: 0.1 g	Instrument: 1229
Data File: S0374988002_PU.1A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	-0.0229	pCi/g	+/-0.198	0.198	0.458	1.00
OER-100-70	Plutonium-239/240	U	0.317	pCi/g	+/-0.475	0.478	0.739	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	15.1	19.7	pCi/g	76.7	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988002	Date Collected: 05/18/2015 13:44	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 4.3
Client ID: B30RF0	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.1 g	Instrument: 1129
Data File: S0374988002_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234	U	0.309	pCi/g	+/-0.362	0.365	0.502	1.00
15117-96-1/13982-7	Uranium-235/236	U	-0.0201	pCi/g	+/-0.174	0.174	0.402	1.00
7440-61-1	Uranium-238	U	0.187	pCi/g	+/-0.270	0.271	0.325	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	22.3	21.2	pCi/g	105	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988002	Date Collected: 05/18/2015 13:44	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 4.3
Client ID: B30RF0	Method: SRTOT_SEP_PRECIP_GPC	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Analyst: KSD1	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:00	Aliquot: 1.004 g	Instrument: PIC2B
Data File: S1485858r2.xls	Prep Method: EPA 905.0 Modified/DOE RP5	Count Time: 60 min
Prep Batch: 1485858	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		0.949	pCi/g	+/-0.291	0.341	0.382	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	7.00	8.10	mg	86.4	(25%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988002	Date Collected: 05/18/2015 13:44	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 4.3
Client ID: B30RF0	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/16/2015 07:00	Aliquot: 18.375 g	Instrument: GAM23
Data File: G374988002.CNF;2	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	-0.00988	pCi/g	+/-0.0685	0.0686	0.123	0.100
10198-40-0	Cobalt-60	U	-0.015	pCi/g	+/-0.0796	0.0799	0.144	0.050
14683-23-9	Europium-152	U	-0.0414	pCi/g	+/-0.146	0.147	0.257	0.100
15585-10-1	Europium-154	U	-0.0611	pCi/g	+/-0.252	0.253	0.448	0.100
14391-16-3	Europium-155	U	0.000266	pCi/g	+/-0.122	0.122	0.221	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988002	Date Collected: 05/18/2015 13:44	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 4.3
Client ID: B30RF0		Prep Basis: "As Received"
Batch ID: 1485720	Method: DOE EML HASL-300,I-01 Mo	SOP Ref: GL-RAD-A-006
Run Date: 06/20/2015 12:30	Analyst: MJH1	Instrument: GAM21
Data File: I374988002.CNF;1	Aliquot: 1.015 g	Count Time: 30 min
Prep Batch: 1485720	Prep Method: DOE EML HASL-300,I-01 M	
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	-0.485	pCi/g	+/-0.726	0.760	1.19	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988002	Date Collected: 05/18/2015 13:44	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 4.3
Client ID: B30RF0	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 13:31	Aliquot: 2.161 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	-0.537	pCi/g	+/-0.789	0.789	1.39	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	55300	58500	CPM	94.5	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988002	Date Collected: 05/18/2015 13:44	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 4.3
Client ID: B30RF0	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 17:10	Aliquot: 1.28 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		37.1	pCi/g	+/-14.6	16.9	21.7	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988002	Date Collected: 05/18/2015 13:44	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 4.3
Client ID: B30RF0	Method: ASTM D 2216 (Modified)	Prep Basis: "As Received"
Batch ID: 1485598	Analyst: CXC1	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20		Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC	
	Moisture		4.27	percent +/-		
Surrogate/Tracer recovery		Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988003	Date Collected: 06/08/2015 09:36	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.4
Client ID: B30RF2		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1240
Data File: S0374988003_AM.1A.gcnf	Aliquot: 0.107 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	-0.15	pCi/g	+/-0.242	0.243	0.771	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	13.4	20.0	pCi/g	67.0	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988003	Date Collected: 06/08/2015 09:36	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.4
Client ID: B30RF2	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/25/2015 13:28	Aliquot: 0.107 g	Instrument: 1110
Data File: S0374988003_PU.2A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 1000 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	0.147	pCi/g	+/-0.408	0.409	0.706	1.00
OER-100-70	Plutonium-239/240	U	0.221	pCi/g	+/-0.433	0.434	0.705	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	3.30	18.4	pCi/g	17.9	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988003	Date Collected: 06/08/2015 09:36	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.4
Client ID: B30RF2	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.107 g	Instrument: 1130
Data File: S0374988003_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234	U	0.411	pCi/g	+/-0.391	0.396	0.412	1.00
15117-96-1/13982-7	Uranium-235/236	U	0.184	pCi/g	+/-0.315	0.317	0.276	1.00
7440-61-1	Uranium-238		0.652	pCi/g	+/-0.464	0.476	0.357	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	17.4	19.8	pCi/g	87.8	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988003	Date Collected: 06/08/2015 09:36	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.4
Client ID: B30RF2		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Method: SRTOT_SEP_PRECIP_GPC	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:00	Analyst: KSD1	Instrument: PIC1C
Data File: S1485858r2.xls	Aliquot: 1.016 g	Count Time: 60 min
Prep Batch: 1485858	Prep Method: EPA 905.0 Modified/DOE RP5	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		3.51	pCi/g	+/-0.406	0.746	0.255	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	7.00	8.10	mg	86.4	(25%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

GEL Laboratories LLC

Report Date: August 6, 2015

Page 1 of 1

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988003	Date Collected: 06/08/2015 09:36	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.4
Client ID: B30RF2	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/16/2015 07:59	Aliquot: 18.714 g	Instrument: GAM09
Data File: G374988003.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	-0.0114	pCi/g	+/-0.0517	0.052	0.0899	0.100
10198-40-0	Cobalt-60	U	-0.0135	pCi/g	+/-0.0795	0.0798	0.111	0.050
14683-23-9	Europium-152	U	-0.00369	pCi/g	+/-0.132	0.132	0.224	0.100
15585-10-1	Europium-154	U	0.00	pCi/g	+/-0.166	0.00	0.319	0.100
14391-16-3	Europium-155	U	-0.0293	pCi/g	+/-0.125	0.126	0.207	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988003	Date Collected: 06/08/2015 09:36	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.4
Client ID: B30RF2		Prep Basis: "As Received"
Batch ID: 1485720	Method: DOE EML HASL-300,I-01 Mo	SOP Ref: GL-RAD-A-006
Run Date: 06/20/2015 12:30	Analyst: MJH1	Instrument: XRAY3
Data File: I374988003.CNF;1	Aliquot: 1.013 g	Count Time: 30 min
Prep Batch: 1485720	Prep Method: DOE EML HASL-300,I-01 M	
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	-0.397	pCi/g	+/-0.642	0.668	1.00	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988003	Date Collected: 06/08/2015 09:36	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.4
Client ID: B30RF2	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 14:03	Aliquot: 2.15 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	0.126	pCi/g	+/-0.801	0.801	1.38	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	55600	58500	CPM	95.1	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988003	Date Collected: 06/08/2015 09:36	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.4
Client ID: B30RF2	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/22/2015 12:12	Aliquot: 0.548 g	Instrument: LSCTEAL
Data File: C1486494R.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	0.0839	pCi/g	+/-1.79	1.79	3.09	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988003	Date Collected: 06/08/2015 09:36	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.4
Client ID: B30RF2	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 17:31	Aliquot: 1.041 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		36.0	pCi/g	+/-17.4	19.2	26.7	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

GEL Laboratories LLC

Report Date: August 6, 2015

Page 1 of 1

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988003	Date Collected: 06/08/2015 09:36	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.4
Client ID: B30RF2	Method: ASTM D 2216 (Modified)	Prep Basis: "As Received"
Batch ID: 1485598	Analyst: CXC1	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20		Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC	
	Moisture		1.45	percent +/-		
Surrogate/Tracer recovery		Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988004	Date Collected: 06/08/2015 09:49	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.9
Client ID: B30RF5		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1242
Data File: S0374988004_AM.1A.gcnf	Aliquot: 0.106 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	-0.088	pCi/g	+/-0.266	0.267	0.747	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	11.3	20.2	pCi/g	56.2	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988004	Date Collected: 06/08/2015 09:49	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.9
Client ID: B30RF5	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/19/2015 10:10	Aliquot: 0.106 g	Instrument: 1255
Data File: S0374988004_PU.1A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	-0.0483	pCi/g	+/-0.214	0.214	0.558	1.00
OER-100-70	Plutonium-239/240	U	-0.145	pCi/g	+/-0.234	0.234	0.745	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	12.8	18.6	pCi/g	69.0	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988004	Date Collected: 06/08/2015 09:49	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.9
Client ID: B30RF5	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.106 g	Instrument: 1131
Data File: S0374988004_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234		0.537	pCi/g	+/-0.461	0.470	0.456	1.00
15117-96-1/13982-7	Uranium-235/236	U	0.102	pCi/g	+/-0.286	0.287	0.305	1.00
7440-61-1	Uranium-238	U	0.227	pCi/g	+/-0.327	0.330	0.395	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	16.6	20.0	pCi/g	83.0	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988004	Date Collected: 06/08/2015 09:49	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.9
Client ID: B30RF5		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Method: SRTOT_SEP_PRECIP_GPC	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:00	Analyst: KSD1	Instrument: PIC4A
Data File: S1485858r2.xls	Aliquot: 1 g	Count Time: 60 min
Prep Batch: 1485858	Prep Method: EPA 905.0 Modified/DOE RP5	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		56.5	pCi/g	+/-1.56	10.3	0.354	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	7.10	8.10	mg	87.7	(25%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988004	Date Collected: 06/08/2015 09:49	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.9
Client ID: B30RF5	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/16/2015 07:59	Aliquot: 18.983 g	Instrument: GAM14
Data File: G374988004.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	0.0179	pCi/g	+/-0.0495	0.0502	0.0944	0.100
10198-40-0	Cobalt-60	U	-0.0176	pCi/g	+/-0.0604	0.0609	0.111	0.050
14683-23-9	Europium-152	U	0.0276	pCi/g	+/-0.145	0.145	0.216	0.100
15585-10-1	Europium-154	U	0.122	pCi/g	+/-0.168	0.177	0.347	0.100
14391-16-3	Europium-155	U	-0.0293	pCi/g	+/-0.138	0.139	0.236	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988004	Date Collected: 06/08/2015 09:49	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.9
Client ID: B30RF5	Method: DOE EML HASL-300,I-01 Mo	Prep Basis: "As Received"
Batch ID: 1485720	Analyst: MJH1	SOP Ref: GL-RAD-A-006
Run Date: 06/20/2015 13:24	Aliquot: 1.008 g	Instrument: XRAY1
Data File: I374988004.CNF;1	Prep Method: DOE EML HASL-300,I-01 M	Count Time: 60 min
Prep Batch: 1485720		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	-0.31	pCi/g	+/-0.538	0.557	0.915	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988004	Date Collected: 06/08/2015 09:49	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.9
Client ID: B30RF5	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 14:36	Aliquot: 2.239 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	-0.125	pCi/g	+/-0.759	0.759	1.32	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	54800	58500	CPM	93.7	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988004	Date Collected: 06/08/2015 09:49	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.9
Client ID: B30RF5	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/21/2015 13:13	Aliquot: 0.561 g	Instrument: LSCTEAL
Data File: C1486494.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	-0.819	pCi/g	+/-1.75	1.75	3.08	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988004	Date Collected: 06/08/2015 09:49	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.9
Client ID: B30RF5	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 17:53	Aliquot: 1.003 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		58.2	pCi/g	+/-19.0	23.1	27.0	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

GEL Laboratories LLC

Report Date: August 6, 2015

Page 1 of 1

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988004	Date Collected: 06/08/2015 09:49	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2.9
Client ID: B30RF5	Method: ASTM D 2216 (Modified)	Prep Basis: "As Received"
Batch ID: 1485598	Analyst: CXC1	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20		Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC	
	Moisture		2.88	percent +/-		
Surrogate/Tracer recovery		Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988005	Date Collected: 05/12/2015 08:08	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.7
Client ID: B30RB9		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1243
Data File: S0374988005_AM.1A.gcnf	Aliquot: 0.101 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	-0.0741	pCi/g	+/-0.224	0.224	0.628	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	15.6	21.2	pCi/g	73.8	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988005	Date Collected: 05/12/2015 08:08	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.7
Client ID: B30RB9	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/23/2015 15:20	Aliquot: 0.101 g	Instrument: 1084
Data File: S0374988005_PU.2A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	0.144	pCi/g	+/-0.286	0.287	0.464	1.00
OER-100-70	Plutonium-239/240	U	0.265	pCi/g	+/-0.312	0.314	0.337	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	14.6	19.5	pCi/g	74.7	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988005	Date Collected: 05/12/2015 08:08	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.7
Client ID: B30RB9	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.101 g	Instrument: 1132
Data File: S0374988005_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234	U	0.464	pCi/g	+/-0.441	0.448	0.466	1.00
15117-96-1/13982-7	Uranium-235/236	U	0.079	pCi/g	+/-0.296	0.297	0.498	1.00
7440-61-1	Uranium-238	U	0.235	pCi/g	+/-0.381	0.383	0.590	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	18.0	21.0	pCi/g	85.5	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988005	Date Collected: 05/12/2015 08:08	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.7
Client ID: B30RB9	Method: SRTOT_SEP_PRECIP_GPC	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Analyst: KSD1	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:00	Aliquot: 1.005 g	Instrument: PIC1D
Data File: S1485858r2.xls	Prep Method: EPA 905.0 Modified/DOE RP5	Count Time: 60 min
Prep Batch: 1485858		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		1.64	pCi/g	+/-0.334	0.443	0.369	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	6.90	8.10	mg	85.2	(25%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988005	Date Collected: 05/12/2015 08:08	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.7
Client ID: B30RB9	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/16/2015 08:00	Aliquot: 20.02 g	Instrument: GAM32
Data File: G374988005.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	0.054	pCi/g	+/-0.0834	0.0836	0.0992	0.100
10198-40-0	Cobalt-60	U	0.0385	pCi/g	+/-0.0883	0.0901	0.147	0.050
14683-23-9	Europium-152		0.746	pCi/g	+/-0.236	0.247	0.232	0.100
15585-10-1	Europium-154	U	-0.157	pCi/g	+/-0.217	0.229	0.337	0.100
14391-16-3	Europium-155	U	0.101	pCi/g	+/-0.144	0.151	0.255	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988005	Date Collected: 05/12/2015 08:08	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.7
Client ID: B30RB9	Method: DOE EML HASL-300,I-01 Mo	Prep Basis: "As Received"
Batch ID: 1485720	Analyst: MJH1	SOP Ref: GL-RAD-A-006
Run Date: 06/20/2015 13:24	Aliquot: 1.004 g	Instrument: XRAY3
Data File: I374988005.CNF;1	Prep Method: DOE EML HASL-300,I-01 M	Count Time: 60 min
Prep Batch: 1485720		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	-0.123	pCi/g	+/-0.424	0.428	0.788	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988005	Date Collected: 05/12/2015 08:08	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.7
Client ID: B30RB9	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 15:08	Aliquot: 2.068 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	-0.338	pCi/g	+/-0.812	0.812	1.42	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	55100	58500	CPM	94.2	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988005	Date Collected: 05/12/2015 08:08	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.7
Client ID: B30RB9	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/22/2015 12:53	Aliquot: 0.575 g	Instrument: LSCTEAL
Data File: C1486494R.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	-0.654	pCi/g	+/-1.68	1.68	2.94	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988005	Date Collected: 05/12/2015 08:08	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.7
Client ID: B30RB9	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 18:14	Aliquot: 1.277 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium	U	3.85	pCi/g	+/-12.3	12.4	21.7	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988005	Date Collected: 05/12/2015 08:08	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.7
Client ID: B30RB9	Method: ASTM D 2216 (Modified)	Prep Basis: "As Received"
Batch ID: 1485598	Analyst: CXC1	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20		Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC	
	Moisture		1.67	percent +/-		
Surrogate/Tracer recovery		Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988006	Date Collected: 06/08/2015 10:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.1
Client ID: B30RF7		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1244
Data File: S0374988006_AM.1A.gcnf	Aliquot: 0.101 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	-0.0538	pCi/g	+/-0.238	0.238	0.621	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	14.9	21.2	pCi/g	70.5	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988006	Date Collected: 06/08/2015 10:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.1
Client ID: B30RF7	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:25	Aliquot: 0.101 g	Instrument: 1093
Data File: S0374988006_PU.1A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	0.0542	pCi/g	+/-0.203	0.204	0.342	1.00
OER-100-70	Plutonium-239/240	U	0.0571	pCi/g	+/-0.256	0.256	0.500	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	15.1	19.5	pCi/g	77.6	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988006	Date Collected: 06/08/2015 10:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.1
Client ID: B30RF7	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.101 g	Instrument: 1133
Data File: S0374988006_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234		0.553	pCi/g	+/-0.475	0.484	0.470	1.00
15117-96-1/13982-7	Uranium-235/236	U	-0.0252	pCi/g	+/-0.217	0.218	0.503	1.00
7440-61-1	Uranium-238	U	0.468	pCi/g	+/-0.445	0.452	0.470	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	18.4	21.0	pCi/g	87.4	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988006	Date Collected: 06/08/2015 10:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.1
Client ID: B30RF7		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Method: SRTOT_SEP_PRECIP_GPC	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:00	Analyst: KSD1	Instrument: PIC2C
Data File: S1485858r2.xls	Aliquot: 1.008 g	Count Time: 60 min
Prep Batch: 1485858	Prep Method: EPA 905.0 Modified/DOE RP5	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		90.0	pCi/g	+/-2.03	16.3	0.236	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	6.70	8.10	mg	82.7	(25%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988006	Date Collected: 06/08/2015 10:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.1
Client ID: B30RF7	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/16/2015 08:00	Aliquot: 17.816 g	Instrument: GAM33
Data File: G374988006.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	-0.0283	pCi/g	+/-0.055	0.0565	0.098	0.100
10198-40-0	Cobalt-60	U	-0.0455	pCi/g	+/-0.0619	0.0653	0.107	0.050
14683-23-9	Europium-152	U	0.0173	pCi/g	+/-0.147	0.147	0.258	0.100
15585-10-1	Europium-154	U	0.112	pCi/g	+/-0.189	0.196	0.376	0.100
14391-16-3	Europium-155	U	0.142	pCi/g	+/-0.173	0.185	0.311	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988006	Date Collected: 06/08/2015 10:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.1
Client ID: B30RF7	Method: DOE EML HASL-300,I-01 Mo	Prep Basis: "As Received"
Batch ID: 1485720	Analyst: MJH1	SOP Ref: GL-RAD-A-006
Run Date: 06/22/2015 07:36	Aliquot: 1.023 g	Instrument: XRAY1
Data File: I374988006.CNF;1	Prep Method: DOE EML HASL-300,I-01 M	Count Time: 60 min
Prep Batch: 1485720		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	-0.239	pCi/g	+/-0.482	0.495	0.842	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988006	Date Collected: 06/08/2015 10:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.1
Client ID: B30RF7	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 15:40	Aliquot: 2.11 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	0.0259	pCi/g	+/-0.790	0.790	1.36	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	56300	58500	CPM	96.2	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988006	Date Collected: 06/08/2015 10:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.1
Client ID: B30RF7	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/22/2015 13:34	Aliquot: 0.544 g	Instrument: LSCTEAL
Data File: C1486494R.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	0.708	pCi/g	+/-1.83	1.84	3.13	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988006	Date Collected: 06/08/2015 10:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.1
Client ID: B30RF7	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 18:35	Aliquot: 1.001 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		54.5	pCi/g	+/-19.1	22.8	27.6	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988006	Date Collected: 06/08/2015 10:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.1
Client ID: B30RF7	Method: ASTM D 2216 (Modified)	Prep Basis: "As Received"
Batch ID: 1485598	Analyst: CXC1	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20		Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC	
	Moisture		3.13	percent +/-		
Surrogate/Tracer recovery		Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988007	Date Collected: 06/08/2015 13:22	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 18.2
Client ID: B30RH8		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1245
Data File: S0374988007_AM.1A.gcnf	Aliquot: 0.109 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	0.0961	pCi/g	+/-0.270	0.271	0.288	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	13.8	19.6	pCi/g	70.3	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988007	Date Collected: 06/08/2015 13:22	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 18.2
Client ID: B30RH8	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:25	Aliquot: 0.109 g	Instrument: 1095
Data File: S0374988007_PU.1A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	-0.0329	pCi/g	+/-0.145	0.146	0.379	1.00
OER-100-70	Plutonium-239/240	U	0.0192	pCi/g	+/-0.200	0.201	0.418	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	14.7	18.1	pCi/g	81.5	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988007	Date Collected: 06/08/2015 13:22	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 18.2
Client ID: B30RH8	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.109 g	Instrument: 1134
Data File: S0374988007_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234		0.840	pCi/g	+/-0.529	0.546	0.499	1.00
15117-96-1/13982-7	Uranium-235/236	U	0.00	pCi/g	+/-0.177	0.178	0.264	1.00
7440-61-1	Uranium-238	U	0.214	pCi/g	+/-0.281	0.283	0.214	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	19.0	19.5	pCi/g	97.4	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988007	Date Collected: 06/08/2015 13:22	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 18.2
Client ID: B30RH8	Method: SRTOT_SEP_PRECIP_GPC	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Analyst: KSD1	SOP Ref: GL-RAD-A-004
Run Date: 06/25/2015 09:10	Aliquot: 1 g	Instrument: PIC7A
Data File: S1485858r2.xls	Prep Method: EPA 905.0 Modified/DOE RP5	Count Time: 60 min
Prep Batch: 1485858	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium	U	0.407	pCi/g	+/-0.275	0.284	0.423	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	7.00	8.10	mg	86.4	(25%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988007	Date Collected: 06/08/2015 13:22	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 18.2
Client ID: B30RH8	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/16/2015 08:09	Aliquot: 21.052 g	Instrument: GAM40
Data File: G374988007.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	-0.00348	pCi/g	+/-0.050	0.050	0.0921	0.100
10198-40-0	Cobalt-60	U	0.0188	pCi/g	+/-0.0582	0.0588	0.117	0.050
14683-23-9	Europium-152	U	-0.0372	pCi/g	+/-0.126	0.127	0.204	0.100
15585-10-1	Europium-154	U	-0.0205	pCi/g	+/-0.161	0.162	0.265	0.100
14391-16-3	Europium-155	U	0.00152	pCi/g	+/-0.128	0.128	0.221	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988007	Date Collected: 06/08/2015 13:22	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 18.2
Client ID: B30RH8		Prep Basis: "As Received"
Batch ID: 1485720	Method: DOE EML HASL-300,I-01 Mo	SOP Ref: GL-RAD-A-006
Run Date: 06/22/2015 08:11	Analyst: MJH1	Instrument: XRAY3
Data File: I374988007.CNF;1	Aliquot: 1.052 g	Count Time: 30 min
Prep Batch: 1485720	Prep Method: DOE EML HASL-300,I-01 M	
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	0.0486	pCi/g	+/-0.469	0.470	1.17	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988007	Date Collected: 06/08/2015 13:22	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 18.2
Client ID: B30RH8	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 16:13	Aliquot: 2.08 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	-0.0926	pCi/g	+/-0.823	0.823	1.43	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	55300	58500	CPM	94.6	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988007	Date Collected: 06/08/2015 13:22	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 18.2
Client ID: B30RH8	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/21/2015 15:17	Aliquot: 0.693 g	Instrument: LSCTEAL
Data File: C1486494.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	0.654	pCi/g	+/-1.47	1.47	2.51	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988007	Date Collected: 06/08/2015 13:22	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 18.2
Client ID: B30RH8	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 18:57	Aliquot: 1.603 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium	U	3.12	pCi/g	+/-13.6	13.7	24.1	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988007	Date Collected: 06/08/2015 13:22	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 18.2
Client ID: B30RH8		Prep Basis: "As Received"
Batch ID: 1485598	Method: ASTM D 2216 (Modified)	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20	Analyst: CXC1	Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC
	Moisture		18.2	percent +/-	
Surrogate/Tracer recovery			Result	Nominal	Units
			Recovery%	Acceptable Limits	

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988008	Date Collected: 06/08/2015 13:40	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 17.1
Client ID: B30RJ0		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1246
Data File: S0374988008_AM.1A.gcnf	Aliquot: 0.101 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	0.179	pCi/g	+/-0.353	0.354	0.489	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	15.4	21.2	pCi/g	72.7	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988008	Date Collected: 06/08/2015 13:40	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 17.1
Client ID: B30RJ0	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:25	Aliquot: 0.101 g	Instrument: 1096
Data File: S0374988008_PU.1A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	-0.119	pCi/g	+/-0.168	0.169	0.551	1.00
OER-100-70	Plutonium-239/240	U	0.162	pCi/g	+/-0.286	0.287	0.434	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	16.0	19.5	pCi/g	82.0	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988008	Date Collected: 06/08/2015 13:40	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 17.1
Client ID: B30RJ0	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.101 g	Instrument: 1135
Data File: S0374988008_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234	U	0.284	pCi/g	+/-0.359	0.362	0.446	1.00
15117-96-1/13982-7	Uranium-235/236	U	0.0757	pCi/g	+/-0.284	0.284	0.477	1.00
7440-61-1	Uranium-238	U	0.264	pCi/g	+/-0.361	0.364	0.492	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	19.4	21.0	pCi/g	92.2	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988008	Date Collected: 06/08/2015 13:40	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 17.1
Client ID: B30RJ0		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Method: SRTOT_SEP_PRECIP_GPC	SOP Ref: GL-RAD-A-004
Run Date: 06/25/2015 12:06	Analyst: KSD1	Instrument: PIC2C
Data File: S1485858r2.xls	Aliquot: 1.007 g	Count Time: 60 min
Prep Batch: 1485858	Prep Method: EPA 905.0 Modified/DOE RP5	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium	U	0.216	pCi/g	+/-0.203	0.206	0.327	1.00

Surrogate/Tracer recovery

	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	7.10	8.10	mg	87.7	(25%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988008	Date Collected: 06/08/2015 13:40	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 17.1
Client ID: B30RJ0	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/16/2015 08:01	Aliquot: 19.039 g	Instrument: GAM44
Data File: G374988008.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	0.0126	pCi/g	+/-0.0638	0.064	0.104	0.100
10198-40-0	Cobalt-60	U	-0.0604	pCi/g	+/-0.067	0.0727	0.111	0.050
14683-23-9	Europium-152	U	0.0109	pCi/g	+/-0.147	0.147	0.233	0.100
15585-10-1	Europium-154	U	-0.0149	pCi/g	+/-0.205	0.206	0.330	0.100
14391-16-3	Europium-155	U	-0.0276	pCi/g	+/-0.134	0.135	0.232	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988008	Date Collected: 06/08/2015 13:40	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 17.1
Client ID: B30RJ0		Prep Basis: "As Received"
Batch ID: 1485720	Method: DOE EML HASL-300,I-01 Mo	SOP Ref: GL-RAD-A-006
Run Date: 06/22/2015 08:23	Analyst: MJH1	Instrument: XRAY4
Data File: I374988008.CNF;1	Aliquot: 1.069 g	Count Time: 30 min
Prep Batch: 1485720	Prep Method: DOE EML HASL-300,I-01 M	
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	0.404	pCi/g	+/-0.841	0.862	2.04	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988008	Date Collected: 06/08/2015 13:40	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 17.1
Client ID: B30RJ0	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 16:45	Aliquot: 2.034 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	0.328	pCi/g	+/-0.816	0.817	1.39	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	56700	58500	CPM	97.0	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988008	Date Collected: 06/08/2015 13:40	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 17.1
Client ID: B30RJ0	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/21/2015 15:58	Aliquot: 0.695 g	Instrument: LSCTEAL
Data File: C1486494.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	-0.69	pCi/g	+/-1.43	1.43	2.51	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988008	Date Collected: 06/08/2015 13:40	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 17.1
Client ID: B30RJ0	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 19:18	Aliquot: 1.123 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium	U	-10.3	pCi/g	+/-12.8	12.8	24.5	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988008	Date Collected: 06/08/2015 13:40	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 17.1
Client ID: B30RJ0		Prep Basis: "As Received"
Batch ID: 1485598	Method: ASTM D 2216 (Modified)	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20	Analyst: CXC1	Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC
	Moisture		17.1	percent +/-	
Surrogate/Tracer recovery			Result	Nominal	Units
			Recovery%	Acceptable Limits	

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988009	Date Collected: 06/08/2015 13:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 7.1
Client ID: B30RH6		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1247
Data File: S0374988009_AM.1A.gcnf	Aliquot: 0.108 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	0.0954	pCi/g	+/-0.268	0.268	0.286	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	14.0	19.8	pCi/g	70.5	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988009	Date Collected: 06/08/2015 13:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 7.1
Client ID: B30RH6	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/23/2015 15:20	Aliquot: 0.108 g	Instrument: 1085
Data File: S0374988009_PU.2A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	0.0355	pCi/g	+/-0.197	0.197	0.378	1.00
OER-100-70	Plutonium-239/240		0.701	pCi/g	+/-0.467	0.476	0.416	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	14.2	18.2	pCi/g	78.0	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988009	Date Collected: 06/08/2015 13:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 7.1
Client ID: B30RH6	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.108 g	Instrument: 1136
Data File: S0374988009_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234	U	0.400	pCi/g	+/-0.419	0.425	0.522	1.00
15117-96-1/13982-7	Uranium-235/236	U	-0.0235	pCi/g	+/-0.203	0.203	0.470	1.00
7440-61-1	Uranium-238		0.615	pCi/g	+/-0.469	0.480	0.380	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	16.7	19.7	pCi/g	85.1	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988009	Date Collected: 06/08/2015 13:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 7.1
Client ID: B30RH6	Method: SRTOT_SEP_PRECIP_GPC	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Analyst: KSD1	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:00	Aliquot: 1.001 g	Instrument: PIC4B
Data File: S1485858r2.xls	Prep Method: EPA 905.0 Modified/DOE RP5	Count Time: 60 min
Prep Batch: 1485858	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		16.4	pCi/g	+/-0.860	3.09	0.396	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	7.10	8.10	mg	87.7	(25%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988009	Date Collected: 06/08/2015 13:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 7.1
Client ID: B30RH6	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/16/2015 08:08	Aliquot: 18.057 g	Instrument: GAM03
Data File: G374988009.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	-0.0062	pCi/g	+/-0.0685	0.0686	0.121	0.100
10198-40-0	Cobalt-60	U	0.0261	pCi/g	+/-0.0762	0.0771	0.151	0.050
14683-23-9	Europium-152	U	0.182	pCi/g	+/-0.189	0.207	0.311	0.100
15585-10-1	Europium-154	U	-0.0252	pCi/g	+/-0.234	0.234	0.421	0.100
14391-16-3	Europium-155	U	0.141	pCi/g	+/-0.227	0.236	0.288	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988009	Date Collected: 06/08/2015 13:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 7.1
Client ID: B30RH6	Method: DOE EML HASL-300,I-01 Mo	Prep Basis: "As Received"
Batch ID: 1485720	Analyst: MJH1	SOP Ref: GL-RAD-A-006
Run Date: 06/22/2015 08:23	Aliquot: 1.037 g	Instrument: GAM21
Data File: I374988009.CNF;1	Prep Method: DOE EML HASL-300,I-01 M	Count Time: 30 min
Prep Batch: 1485720		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	-0.0416	pCi/g	+/-0.778	0.778	1.56	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988009	Date Collected: 06/08/2015 13:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 7.1
Client ID: B30RH6	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 17:18	Aliquot: 2.056 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	-0.599	pCi/g	+/-0.788	0.788	1.39	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	56800	58500	CPM	97.0	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988009	Date Collected: 06/08/2015 13:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 7.1
Client ID: B30RH6	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/21/2015 16:39	Aliquot: 0.551 g	Instrument: LSCTEAL
Data File: C1486494.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	-1.12	pCi/g	+/-1.79	1.79	3.15	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988009	Date Collected: 06/08/2015 13:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 7.1
Client ID: B30RH6	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 19:40	Aliquot: 1.097 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		48.2	pCi/g	+/-17.4	20.5	25.3	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

GEL Laboratories LLC

Report Date: August 6, 2015

Page 1 of 1

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988009	Date Collected: 06/08/2015 13:04	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 7.1
Client ID: B30RH6	Method: ASTM D 2216 (Modified)	Prep Basis: "As Received"
Batch ID: 1485598	Analyst: CXC1	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20		Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC	
	Moisture		7.05	percent +/-		
Surrogate/Tracer recovery		Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988010	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.8
Client ID: B30RF9	Method: AMCMISO_EIE_PREC_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Aliquot: 0.103 g	Instrument: 1248
Data File: S0374988010_AM.1A.gcnf	Prep Method: DOE EML HASL-300, Am-05	Count Time: 240 min
Prep Batch: 1485928		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	-0.0236	pCi/g	+/-0.203	0.204	0.471	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	15.1	20.8	pCi/g	72.7	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988010	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.8
Client ID: B30RF9	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:25	Aliquot: 0.103 g	Instrument: 1099
Data File: S0374988010_PU.1A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	-0.0957	pCi/g	+/-0.154	0.155	0.491	1.00
OER-100-70	Plutonium-239/240	U	0.00531	pCi/g	+/-0.244	0.244	0.537	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	14.8	19.1	pCi/g	77.4	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988010	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.8
Client ID: B30RF9	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.103 g	Instrument: 1137
Data File: S0374988010_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234		0.708	pCi/g	+/-0.501	0.514	0.466	1.00
15117-96-1/13982-7	Uranium-235/236	U	0.00	pCi/g	+/-0.190	0.191	0.283	1.00
7440-61-1	Uranium-238	U	0.137	pCi/g	+/-0.312	0.313	0.535	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	19.7	20.6	pCi/g	95.5	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988010	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.8
Client ID: B30RF9	Method: SRTOT_SEP_PRECIP_GPC	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Analyst: KSD1	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:00	Aliquot: 1.008 g	Instrument: PIC4D
Data File: S1485858r2.xls	Prep Method: EPA 905.0 Modified/DOE RP5	Count Time: 60 min
Prep Batch: 1485858		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		11.9	pCi/g	+/-0.749	2.24	0.431	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	7.10	8.10	mg	87.7	(25%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988010	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.8
Client ID: B30RF9	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/16/2015 08:57	Aliquot: 18.704 g	Instrument: GAM39
Data File: G374988010.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	0.0178	pCi/g	+/-0.0874	0.0877	0.156	0.100
10198-40-0	Cobalt-60	U	-0.00555	pCi/g	+/-0.0804	0.0804	0.148	0.050
14683-23-9	Europium-152	U	0.174	pCi/g	+/-0.194	0.210	0.324	0.100
15585-10-1	Europium-154	U	-0.102	pCi/g	+/-0.272	0.276	0.474	0.100
14391-16-3	Europium-155	U	-0.0173	pCi/g	+/-0.133	0.133	0.232	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988010	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.8
Client ID: B30RF9	Method: DOE EML HASL-300,I-01 Mo	Prep Basis: "As Received"
Batch ID: 1485720	Analyst: MJH1	SOP Ref: GL-RAD-A-006
Run Date: 06/22/2015 08:28	Aliquot: 1.005 g	Instrument: XRAY6
Data File: I374988010.CNF;1	Prep Method: DOE EML HASL-300,I-01 M	Count Time: 30 min
Prep Batch: 1485720		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	-0.624	pCi/g	+/-0.864	0.911	0.761	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988010	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.8
Client ID: B30RF9	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 17:50	Aliquot: 2.071 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	0.022	pCi/g	+/-0.815	0.815	1.41	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	56000	58500	CPM	95.7	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988010	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.8
Client ID: B30RF9	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/21/2015 17:20	Aliquot: 0.524 g	Instrument: LSCTEAL
Data File: C1486494.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	-1.05	pCi/g	+/-1.88	1.88	3.31	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988010	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.8
Client ID: B30RF9	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 20:01	Aliquot: 1.036 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		118	pCi/g	+/-21.6	34.4	25.9	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988010	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.8
Client ID: B30RF9	Method: ASTM D 2216 (Modified)	Prep Basis: "As Received"
Batch ID: 1485598	Analyst: CXC1	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20		Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC	
	Moisture		3.80	percent +/-		
Surrogate/Tracer recovery		Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988011	Date Collected: 05/19/2015 09:13	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2
Client ID: B30RD4	Method: AMCMISO_EIE_PREC_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Aliquot: 0.1 g	Instrument: 1249
Data File: S0374988011_AM.1A.gcnf	Prep Method: DOE EML HASL-300, Am-05	Count Time: 240 min
Prep Batch: 1485928		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	-0.0697	pCi/g	+/-0.210	0.211	0.591	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	16.1	21.4	pCi/g	75.2	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988011	Date Collected: 05/19/2015 09:13	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2
Client ID: B30RD4	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:25	Aliquot: 0.1 g	Instrument: 1100
Data File: S0374988011_PU.1A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	-0.155	pCi/g	+/-0.195	0.196	0.653	1.00
OER-100-70	Plutonium-239/240	U	0.042	pCi/g	+/-0.233	0.234	0.447	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	14.6	19.7	pCi/g	74.3	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988011	Date Collected: 05/19/2015 09:13	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2
Client ID: B30RD4	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.1 g	Instrument: 1138
Data File: S0374988011_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234	U	0.0218	pCi/g	+/-0.228	0.228	0.476	1.00
15117-96-1/13982-7	Uranium-235/236	U	0.169	pCi/g	+/-0.333	0.334	0.461	1.00
7440-61-1	Uranium-238	U	0.352	pCi/g	+/-0.379	0.383	0.431	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	20.0	21.2	pCi/g	94.2	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988011	Date Collected: 05/19/2015 09:13	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2
Client ID: B30RD4	Method: SRTOT_SEP_PRECIP_GPC	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Analyst: KSD1	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:00	Aliquot: 1.003 g	Instrument: PIC2A
Data File: S1485858r2.xls	Prep Method: EPA 905.0 Modified/DOE RP5	Count Time: 60 min
Prep Batch: 1485858	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		1.85	pCi/g	+/-0.328	0.472	0.286	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	6.70	8.10	mg	82.7	(25%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988011	Date Collected: 05/19/2015 09:13	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2
Client ID: B30RD4	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/17/2015 06:17	Aliquot: 19.679 g	Instrument: GAM13
Data File: G374988011.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	-0.0959	pCi/g	+/-0.102	0.111	0.172	0.100
10198-40-0	Cobalt-60	U	-0.0232	pCi/g	+/-0.101	0.101	0.179	0.050
14683-23-9	Europium-152	U	0.0139	pCi/g	+/-0.293	0.293	0.424	0.100
15585-10-1	Europium-154	U	0.0727	pCi/g	+/-0.328	0.330	0.599	0.100
14391-16-3	Europium-155	U	-0.0933	pCi/g	+/-0.201	0.206	0.305	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988011	Date Collected: 05/19/2015 09:13	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2
Client ID: B30RD4	Method: DOE EML HASL-300,I-01 Mo	Prep Basis: "As Received"
Batch ID: 1485720	Analyst: MJH1	SOP Ref: GL-RAD-A-006
Run Date: 06/22/2015 08:43	Aliquot: 1.004 g	Instrument: XRAY1
Data File: I374988011.CNF;1	Prep Method: DOE EML HASL-300,I-01 M	Count Time: 30 min
Prep Batch: 1485720		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	0.265	pCi/g	+/-0.959	0.967	2.02	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988011	Date Collected: 05/19/2015 09:13	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2
Client ID: B30RD4	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 18:22	Aliquot: 2.066 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	0.561	pCi/g	+/-0.836	0.839	1.41	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	55700	58500	CPM	95.2	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988011	Date Collected: 05/19/2015 09:13	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2
Client ID: B30RD4	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/21/2015 18:02	Aliquot: 0.508 g	Instrument: LSCTEAL
Data File: C1486494.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	-1.11	pCi/g	+/-1.93	1.93	3.40	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988011	Date Collected: 05/19/2015 09:13	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2
Client ID: B30RD4	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 20:23	Aliquot: 1.089 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium	U	-2.23	pCi/g	+/-13.9	13.9	25.4	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988011	Date Collected: 05/19/2015 09:13	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 2
Client ID: B30RD4	Method: ASTM D 2216 (Modified)	Prep Basis: "As Received"
Batch ID: 1485598	Analyst: CXC1	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20		Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC	
	Moisture		1.96	percent +/-		
Surrogate/Tracer recovery		Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988012	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.9
Client ID: B30RH0		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1250
Data File: S0374988012_AM.1A.gcnf	Aliquot: 0.108 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	0.0261	pCi/g	+/-0.273	0.273	0.570	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	14.2	19.8	pCi/g	71.7	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988012	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.9
Client ID: B30RH0	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:17	Aliquot: 0.108 g	Instrument: 1211
Data File: S0374988012_PU.1A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	-0.0139	pCi/g	+/-0.322	0.322	0.728	1.00
OER-100-70	Plutonium-239/240	U	-0.0764	pCi/g	+/-0.329	0.330	0.800	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	15.0	18.2	pCi/g	82.1	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988012	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.9
Client ID: B30RH0	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/23/2015 15:20	Aliquot: 0.108 g	Instrument: 1004
Data File: S0374988012_UU.2A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234	U	0.0723	pCi/g	+/-0.247	0.247	0.458	1.00
15117-96-1/13982-7	Uranium-235/236	U	0.172	pCi/g	+/-0.294	0.296	0.258	1.00
7440-61-1	Uranium-238	U	0.331	pCi/g	+/-0.337	0.341	0.333	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	19.1	19.7	pCi/g	97.3	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988012	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.9
Client ID: B30RH0	Method: SRTOT_SEP_PRECIP_GPC	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Analyst: KSD1	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:00	Aliquot: 1.009 g	Instrument: PIC3C
Data File: S1485858r2.xls	Prep Method: EPA 905.0 Modified/DOE RP5	Count Time: 60 min
Prep Batch: 1485858	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		14.0	pCi/g	+/-0.808	2.63	0.320	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	6.70	8.10	mg	82.7	(25%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988012	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.9
Client ID: B30RH0	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/16/2015 09:04	Aliquot: 17.632 g	Instrument: GAM13
Data File: G374988012.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	-0.00574	pCi/g	+/-0.112	0.113	0.200	0.100
10198-40-0	Cobalt-60	U	-0.0887	pCi/g	+/-0.122	0.129	0.205	0.050
14683-23-9	Europium-152	U	0.197	pCi/g	+/-0.391	0.401	0.494	0.100
15585-10-1	Europium-154	U	-0.0662	pCi/g	+/-0.337	0.338	0.598	0.100
14391-16-3	Europium-155	U	0.198	pCi/g	+/-0.233	0.250	0.374	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988012	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.9
Client ID: B30RH0		Prep Basis: "As Received"
Batch ID: 1485720	Method: DOE EML HASL-300,I-01 Mo	SOP Ref: GL-RAD-A-006
Run Date: 06/22/2015 08:46	Analyst: MJH1	Instrument: XRAY3
Data File: I374988012.CNF;1	Aliquot: 1.005 g	Count Time: 30 min
Prep Batch: 1485720	Prep Method: DOE EML HASL-300,I-01 M	
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	-0.113	pCi/g	+/-0.760	0.762	1.52	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988012	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.9
Client ID: B30RH0	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 18:55	Aliquot: 2.21 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	0.101	pCi/g	+/-0.760	0.760	1.31	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	56300	58500	CPM	96.3	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988012	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.9
Client ID: B30RH0	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/22/2015 14:16	Aliquot: 0.621 g	Instrument: LSCTEAL
Data File: C1486494R.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	0.791	pCi/g	+/-1.59	1.59	2.70	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988012	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.9
Client ID: B30RH0	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 20:44	Aliquot: 1.076 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		81.2	pCi/g	+/-19.1	26.5	24.9	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988012	Date Collected: 06/08/2015 10:14	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3.9
Client ID: B30RH0	Method: ASTM D 2216 (Modified)	Prep Basis: "As Received"
Batch ID: 1485598	Analyst: CXC1	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20		Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC	
	Moisture		3.92	percent +/-		
Surrogate/Tracer recovery		Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988013	Date Collected: 06/08/2015 10:37	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3
Client ID: B30RH2	Method: AMCMISO_EIE_PREC_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Aliquot: 0.106 g	Instrument: 1251
Data File: S0374988013_AM.1A.gcnf	Prep Method: DOE EML HASL-300, Am-05	Count Time: 240 min
Prep Batch: 1485928		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	0.127	pCi/g	+/-0.358	0.358	0.382	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	11.1	20.2	pCi/g	55.2	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988013	Date Collected: 06/08/2015 10:37	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3
Client ID: B30RH2	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:17	Aliquot: 0.106 g	Instrument: 1212
Data File: S0374988013_PU.1A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	0.0853	pCi/g	+/-0.240	0.240	0.256	1.00
OER-100-70	Plutonium-239/240	U	0.0648	pCi/g	+/-0.243	0.244	0.409	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	15.1	18.6	pCi/g	81.2	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988013	Date Collected: 06/08/2015 10:37	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3
Client ID: B30RH2	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.106 g	Instrument: 1140
Data File: S0374988013_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234	U	0.376	pCi/g	+/-0.394	0.399	0.491	1.00
15117-96-1/13982-7	Uranium-235/236	U	-0.0221	pCi/g	+/-0.191	0.191	0.442	1.00
7440-61-1	Uranium-238		0.543	pCi/g	+/-0.444	0.453	0.455	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	18.3	20.0	pCi/g	91.4	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988013	Date Collected: 06/08/2015 10:37	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3
Client ID: B30RH2	Method: SRTOT_SEP_PRECIP_GPC	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Analyst: KSD1	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:00	Aliquot: 1.007 g	Instrument: PIC3D
Data File: S1485858r2.xls	Prep Method: EPA 905.0 Modified/DOE RP5	Count Time: 60 min
Prep Batch: 1485858		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		5.89	pCi/g	+/-0.531	1.23	0.255	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	6.80	8.10	mg	84.0	(25%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988013	Date Collected: 06/08/2015 10:37	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3
Client ID: B30RH2	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/17/2015 06:32	Aliquot: 19.05 g	Instrument: GAM27
Data File: G374988013.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	0.0327	pCi/g	+/-0.0516	0.0538	0.0975	0.100
10198-40-0	Cobalt-60	U	-0.0134	pCi/g	+/-0.0701	0.0703	0.113	0.050
14683-23-9	Europium-152	U	0.146	pCi/g	+/-0.155	0.169	0.224	0.100
15585-10-1	Europium-154	U	0.133	pCi/g	+/-0.171	0.181	0.341	0.100
14391-16-3	Europium-155	U	0.136	pCi/g	+/-0.171	0.171	0.205	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988013	Date Collected: 06/08/2015 10:37	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3
Client ID: B30RH2		Prep Basis: "As Received"
Batch ID: 1485720	Method: DOE EML HASL-300,I-01 Mo	SOP Ref: GL-RAD-A-006
Run Date: 06/22/2015 08:57	Analyst: MJH1	Instrument: XRAY4
Data File: I374988013.CNF;1	Aliquot: 1.034 g	Count Time: 30 min
Prep Batch: 1485720	Prep Method: DOE EML HASL-300,I-01 M	
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	-0.165	pCi/g	+/-0.801	0.804	1.61	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988013	Date Collected: 06/08/2015 10:37	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3
Client ID: B30RH2	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 19:27	Aliquot: 2.191 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	0.109	pCi/g	+/-0.760	0.760	1.31	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	56800	58500	CPM	97.0	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988013	Date Collected: 06/08/2015 10:37	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3
Client ID: B30RH2	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 21:06	Aliquot: 1.035 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium		103	pCi/g	+/-21.0	31.5	26.2	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988013	Date Collected: 06/08/2015 10:37	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 3
Client ID: B30RH2		Prep Basis: "As Received"
Batch ID: 1485598	Method: ASTM D 2216 (Modified)	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20	Analyst: CXC1	Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC
	Moisture		2.96	percent +/-	
Surrogate/Tracer recovery			Result	Nominal	Units
			Recovery%	Acceptable Limits	

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988014	Date Collected: 05/19/2015 08:20	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.2
Client ID: B30RC7		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1253
Data File: S0374988014_AM.1A.gcnf	Aliquot: 0.109 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	-0.0451	pCi/g	+/-0.200	0.200	0.521	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	14.5	19.6	pCi/g	73.7	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988014	Date Collected: 05/19/2015 08:20	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.2
Client ID: B30RC7	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:17	Aliquot: 0.109 g	Instrument: 1215
Data File: S0374988014_PU.1A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	-0.0773	pCi/g	+/-0.179	0.180	0.531	1.00
OER-100-70	Plutonium-239/240	U	-0.0934	pCi/g	+/-0.253	0.253	0.675	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	16.6	18.1	pCi/g	92.2	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988014	Date Collected: 05/19/2015 08:20	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.2
Client ID: B30RC7	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.109 g	Instrument: 1142
Data File: S0374988014_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931	Prep SOP Ref: GL-RAD-A-021	
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234		0.532	pCi/g	+/-0.457	0.466	0.452	1.00
15117-96-1/13982-7	Uranium-235/236	U	-0.0242	pCi/g	+/-0.209	0.209	0.484	1.00
7440-61-1	Uranium-238	U	0.206	pCi/g	+/-0.327	0.329	0.452	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	18.0	19.5	pCi/g	92.6	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988014	Date Collected: 05/19/2015 08:20	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.2
Client ID: B30RC7	Method: SRTOT_SEP_PRECIP_GPC	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Analyst: KSD1	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:00	Aliquot: 1.005 g	Instrument: PIC3B
Data File: S1485858r2.xls	Prep Method: EPA 905.0 Modified/DOE RP5	Count Time: 60 min
Prep Batch: 1485858		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		1.60	pCi/g	+/-0.364	0.467	0.435	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	6.40	8.10	mg	79.0	(25%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988014	Date Collected: 05/19/2015 08:20	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.2
Client ID: B30RC7	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/17/2015 06:47	Aliquot: 19.732 g	Instrument: GAM12
Data File: G374988014.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	-0.0467	pCi/g	+/-0.059	0.0628	0.097	0.100
10198-40-0	Cobalt-60	U	-0.0324	pCi/g	+/-0.0651	0.0669	0.115	0.050
14683-23-9	Europium-152	U	0.0276	pCi/g	+/-0.203	0.204	0.275	0.100
15585-10-1	Europium-154	U	-0.00527	pCi/g	+/-0.194	0.194	0.360	0.100
14391-16-3	Europium-155	U	0.166	pCi/g	+/-0.179	0.195	0.294	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988014	Date Collected: 05/19/2015 08:20	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.2
Client ID: B30RC7		Prep Basis: "As Received"
Batch ID: 1485720	Method: DOE EML HASL-300,I-01 Mo	SOP Ref: GL-RAD-A-006
Run Date: 06/22/2015 09:05	Analyst: MJH1	Instrument: XRAY6
Data File: I374988014.CNF;1	Aliquot: 1.002 g	Count Time: 30 min
Prep Batch: 1485720	Prep Method: DOE EML HASL-300,I-01 M	
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	-0.313	pCi/g	+/-0.613	0.630	0.763	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988014	Date Collected: 05/19/2015 08:20	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.2
Client ID: B30RC7	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 19:59	Aliquot: 2.244 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	-0.649	pCi/g	+/-0.706	0.706	1.25	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	57600	58500	CPM	98.5	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988014	Date Collected: 05/19/2015 08:20	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.2
Client ID: B30RC7	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/22/2015 15:38	Aliquot: 0.551 g	Instrument: LSCTEAL
Data File: C1486494R.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	-0.244	pCi/g	+/-1.76	1.76	3.06	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988014	Date Collected: 05/19/2015 08:20	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.2
Client ID: B30RC7	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 21:27	Aliquot: 1.099 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium	U	-1.61	pCi/g	+/-13.7	13.7	24.9	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

GEL Laboratories LLC

Report Date: August 6, 2015

Page 1 of 1

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988014	Date Collected: 05/19/2015 08:20	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 1.2
Client ID: B30RC7		Prep Basis: "As Received"
Batch ID: 1485598	Method: ASTM D 2216 (Modified)	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20	Analyst: CXC1	Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC
	Moisture		1.22	percent +/-	
Surrogate/Tracer recovery			Result	Nominal	Units
			Recovery%	Acceptable Limits	

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988015	Date Collected: 05/19/2015 08:53	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 5.7
Client ID: B30RD2		Prep Basis: "Dry Weight Corrected"
Batch ID: 1485928	Method: AMCMISO_EIE_PREC_AEA	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 16:19	Analyst: MXS2	Instrument: 1254
Data File: S0374988015_AM.1A.gcnf	Aliquot: 0.109 g	Count Time: 240 min
Prep Batch: 1485928	Prep Method: DOE EML HASL-300, Am-05	Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14596-10-2	Americium-241	U	0.179	pCi/g	+/-0.306	0.308	0.268	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Americium-243 Tracer	15.5	19.6	pCi/g	78.8	(15%-125%)

Comments:
U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
 TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988015	Date Collected: 05/19/2015 08:53	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 5.7
Client ID: B30RD2	Method: PUIISO_PLATE_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485930	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:17	Aliquot: 0.109 g	Instrument: 1216
Data File: S0374988015_PU.1A.genf	Prep Method: DOE EML HASL-300, Pu-11-	Count Time: 240 min
Prep Batch: 1485930		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
13981-16-3	Plutonium-238	U	-0.0404	pCi/g	+/-0.279	0.279	0.679	1.00
OER-100-70	Plutonium-239/240	U	0.304	pCi/g	+/-0.457	0.459	0.711	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Plutonium-242 Tracer	13.9	18.1	pCi/g	77.2	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.
TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988015	Date Collected: 05/19/2015 08:53	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 5.7
Client ID: B30RD2	Method: UIISO_IE_PRECIP_AEA	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485931	Analyst: MXS2	SOP Ref: GL-RAD-A-011
Run Date: 06/20/2015 11:18	Aliquot: 0.109 g	Instrument: 1143
Data File: S0374988015_UU.1A.genf	Prep Method: DOE EML HASL-300, U-02-R	Count Time: 240 min
Prep Batch: 1485931		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/17/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
U-233/234 <small>13968-55-3/13966-29-5</small>	Uranium-233/234	U	0.333	pCi/g	+/-0.541	0.544	0.873	1.00
15117-96-1/13982-7	Uranium-235/236	U	0.203	pCi/g	+/-0.466	0.468	0.740	1.00
7440-61-1	Uranium-238		0.623	pCi/g	+/-0.565	0.577	0.518	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Uranium-232 Tracer	13.6	19.5	pCi/g	69.9	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988015	Date Collected: 05/19/2015 08:53	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 5.7
Client ID: B30RD2	Method: SRTOT_SEP_PRECIP_GPC	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485858	Analyst: KSD1	SOP Ref: GL-RAD-A-004
Run Date: 06/29/2015 07:08	Aliquot: 1.006 g	Instrument: PIC5A
Data File: S1485858r2.xls	Prep Method: EPA 905.0 Modified/DOE RP5	Count Time: 60 min
Prep Batch: 1485858		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/19/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
SR-RAD	Total Strontium		1.34	pCi/g	+/-0.298	0.382	0.331	1.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Strontium Carrier	6.90	8.10	mg	85.2	(25%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988015	Date Collected: 05/19/2015 08:53	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 5.7
Client ID: B30RD2	Method: GAMMA_GS	Prep Basis: "Dry Weight Corrected"
Batch ID: 1485712	Analyst: MXR1	SOP Ref: GL-RAD-A-013
Run Date: 06/17/2015 06:48	Aliquot: 18.829 g	Instrument: GAM30
Data File: G374988015.CNF;1	Prep Method: DOE HASL 300, 4.5.2.3/Ga-01	Count Time: 240 min
Prep Batch: 1485712		Prep SOP Ref: GL-RAD-A-021
Prep Date: 06/15/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10045-97-3	Cesium-137	U	-0.034	pCi/g	+/-0.0641	0.066	0.0956	0.100
10198-40-0	Cobalt-60	U	0.0414	pCi/g	+/-0.0628	0.0656	0.124	0.050
14683-23-9	Europium-152	U	0.0919	pCi/g	+/-0.132	0.139	0.210	0.100
15585-10-1	Europium-154	U	0.187	pCi/g	+/-0.166	0.187	0.345	0.100
14391-16-3	Europium-155	U	0.0803	pCi/g	+/-0.122	0.128	0.209	0.100

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988015	Date Collected: 05/19/2015 08:53	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 5.7
Client ID: B30RD2		Prep Basis: "As Received"
Batch ID: 1485720	Method: DOE EML HASL-300,I-01 Mo	SOP Ref: GL-RAD-A-006
Run Date: 06/22/2015 09:33	Analyst: MJH1	Instrument: XRAY1
Data File: I374988015.CNF;1	Aliquot: 1.013 g	Count Time: 30 min
Prep Batch: 1485720	Prep Method: DOE EML HASL-300,I-01 M	
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
15046-84-1	Iodine-129	U	0.0535	pCi/g	+/-0.739	0.739	1.57	2.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988015	Date Collected: 05/19/2015 08:53	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 5.7
Client ID: B30RD2	Method: TC99_EIE_LSC	Prep Basis: "As Received"
Batch ID: 1485659	Analyst: MYM1	SOP Ref: GL-RAD-A-059
Run Date: 06/23/2015 20:32	Aliquot: 2.4 g	Instrument: LSCBLUE
Data File: E1485659.xls	Prep Method: DOE EML HASL-300, Tc-02-	Count Time: 30 min
Prep Batch: 1485659		
Prep Date: 06/18/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14133-76-7	Technetium-99	U	0.0376	pCi/g	+/-0.688	0.688	1.19	1.5

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
Technetium-99m Tracer	56800	58500	CPM	97.1	(15%-125%)

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

**Rad
Certificate of Analysis
Sample Summary**

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988015	Date Collected: 05/19/2015 08:53	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 5.7
Client ID: B30RD2	Method: C14_LSC	Prep Basis: "As Received"
Batch ID: 1486494	Analyst: EXK2	SOP Ref: GL-RAD-A-003
Run Date: 06/22/2015 16:19	Aliquot: 0.63 g	Instrument: LSCTEAL
Data File: C1486494R.xls	Prep Method: EPA EERF C-01 Modified	Count Time: 40 min
Prep Batch: 1486494		
Prep Date: 06/20/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
14762-75-5	Carbon-14	U	0.211	pCi/g	+/-1.55	1.55	2.67	5.00

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits
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Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988015	Date Collected: 05/19/2015 08:53	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 5.7
Client ID: B30RD2	Method: TRITIUM_DIST_LSC	Prep Basis: "As Received"
Batch ID: 1486509	Analyst: GXR1	SOP Ref: GL-RAD-A-002
Run Date: 06/22/2015 21:49	Aliquot: 1.018 g	Instrument: LSCSILVER
Data File: T1486509.xls	Prep Method: EPA 906.0 Modified	Count Time: 20 min
Prep Batch: 1486509		
Prep Date: 06/22/2015 00:00		

CAS No.	Parmname	Qual	Result	Units	Uncert	TPU	MDC	RDL
10028-17-8	Tritium	U	4.85	pCi/g	+/-15.7	15.8	27.6	30.0

Surrogate/Tracer recovery	Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

GEL Laboratories LLC

Report Date: August 6, 2015

Page 1 of 1

Rad
Certificate of Analysis
Sample Summary

SDG Number: GEL374988	Client: CPRC001	Project: CPRC0F15027
Lab Sample ID: 374988015	Date Collected: 05/19/2015 08:53	Matrix: SOIL
	Date Received: 06/12/2015 09:10	%Moisture: 5.7
Client ID: B30RD2	Method: ASTM D 2216 (Modified)	Prep Basis: "As Received"
Batch ID: 1485598	Analyst: CXC1	SOP Ref: GL-OA-E-020
Run Date: 06/12/2015 15:20		Instrument: SP-39020004
Data File:		Count Time:
Prep Batch: 1485598		
Prep Date: 06/12/2015 15:20		

CAS No.	Parmname	Qual	Result	Units	MDC	
	Moisture		5.69	percent +/-		
Surrogate/Tracer recovery		Result	Nominal	Units	Recovery%	Acceptable Limits

Comments:

U Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error. TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Quality Control Data

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QC Summary

Report Date: August 6, 2015
Page 1 of 6

Client : CH2MHill Plateau Remediation Company
MSIN R3-50 CHPRC
PO Box 1600
Richland, Washington 99352
Contact: Mr. Scot Fitzgerald
Workorder: 374988

Parmname	NOM	Sample	Qual	QC	Units	QC Criteria	Range	Analyst	Date Time
Rad Alpha Spec									
Batch	1485928								
QC1203337864	MB								
Americium-241			U	0.00	pCi/g			MXS2	06/21/1510:11
				Uncert: +/-0.072					
				TPU: +/-0.0721					
**Americium-243 Tracer	19.6			14.3	pCi/g	REC: 73	(15%-125%)		
				Uncert: +/-1.57					
				TPU: +/-2.49					
QC1203337865	374988001	DUP							
Americium-241		U	0.112	0.471	pCi/g				06/21/1510:11
				Uncert: +/-0.296		RPD: 87	(0% - 100%)		
				TPU: +/-0.624		RER: 1.02	(0-2)		
**Americium-243 Tracer	20.2		6.52	14.2	pCi/g	REC: 70	(15%-125%)		
				Uncert: +/-4.10					
				TPU: +/-5.92					
QC1203337866	LCS								
Americium-241				15.3	pCi/g	REC: 84	(80%-120%)		06/21/1510:11
				Uncert: +/-1.33					
				TPU: +/-1.97					
**Americium-243 Tracer	19.6			17.4	pCi/g	REC: 89	(15%-125%)		
				Uncert: +/-1.50					
				TPU: +/-2.40					
Batch	1485930								
QC1203337867	MB								
Plutonium-238			U	0.00362	pCi/g			MXS2	06/20/1511:17
				Uncert: +/-0.269					
				TPU: +/-0.269					
Plutonium-239/240			U	0.0254	pCi/g				
				Uncert: +/-0.265					
				TPU: +/-0.265					
**Plutonium-242 Tracer	18.1			13.0	pCi/g	REC: 72	(15%-125%)		
				Uncert: +/-2.52					
				TPU: +/-3.70					
QC1203337868	374988001	DUP							
Plutonium-238		U	-0.0389	U 0.305	pCi/g				06/23/1515:20
				Uncert: +/-0.453		RPD: 0	N/A		
				TPU: +/-0.229		RER: 1.32	(0-2)		
Plutonium-239/240			3.28	3.97	pCi/g				
				Uncert: +/-1.28		RPD: 19	(0% - 20%)		
				TPU: +/-0.976		RER: 0.785	(0-2)		
**Plutonium-242 Tracer	18.6		15.3	10.5	pCi/g	REC: 57	(15%-125%)		
				Uncert: +/-2.09					
				TPU: +/-3.14					
QC1203337869	LCS								
Plutonium-238			U	0.0909	pCi/g				06/20/1511:17
				Uncert: +/-0.256					

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QC Summary

Workorder: 374988

Page 2 of 6

Parmname	NOM	Sample	Qual	QC	Units	QC Criteria	Range	Analyst	Date Time
Rad Alpha Spec									
Batch	1485930								
Plutonium-239/240	18.1	TPU:		+/-0.256					
		Uncert:		20.0	pCi/g	REC: 110	(80%-120%)		
		TPU:		+/-2.65					
**Plutonium-242 Tracer	18.1	TPU:		+/-4.02	pCi/g	REC: 79	(15%-125%)		
		Uncert:		14.2					
		TPU:		+/-2.53					
		TPU:		+/-3.72					
Batch	1485931								
QC1203337870 MB									
Uranium-233/234			U	0.0522	pCi/g			MXS2	06/20/1511:18
		Uncert:		+/-0.196					
		TPU:		+/-0.196					
Uranium-235/236			U	0.149	pCi/g				
		Uncert:		+/-0.294					
		TPU:		+/-0.295					
Uranium-238			U	-0.0165	pCi/g				
		Uncert:		+/-0.142					
		TPU:		+/-0.143					
**Uranium-232 Tracer	19.5			19.2	pCi/g	REC: 99	(15%-125%)		
		Uncert:		+/-2.28					
		TPU:		+/-3.89					
QC1203337871 374988001 DUP									
Uranium-233/234		U	0.257 U	0.225	pCi/g				06/20/1511:18
		Uncert:	+/-0.312	+/-0.707		RPD: 0	N/A		
		TPU:	+/-0.315	+/-0.708		RER: 0.0789	(0-2)		
Uranium-235/236		U	0.00 U	-0.152	pCi/g				
		Uncert:	+/-0.158	+/-0.459		RPD: 0	N/A		
		TPU:	+/-0.159	+/-0.461		RER: 0.611	(0-2)		
Uranium-238			0.477 U	0.259	pCi/g				
		Uncert:	+/-0.377	+/-0.596		RPD: 66	(0% - 100%)		
		TPU:	+/-0.384	+/-0.598		RER: 0.601	(0-2)		
**Uranium-232 Tracer	20.0		21.2	7.97	pCi/g	REC: 40	(15%-125%)		
		Uncert:	+/-2.22	+/-3.65					
		TPU:	+/-3.85	+/-5.63					
QC1203337872 LCS									
Uranium-233/234				25.2	pCi/g				06/20/1511:18
		Uncert:		+/-2.90					
		TPU:		+/-5.21					
Uranium-235/236				0.901	pCi/g				
		Uncert:		+/-0.661					
		TPU:		+/-0.679					
Uranium-238	24.9			26.5	pCi/g	REC: 106	(80%-120%)		
		Uncert:		+/-2.96					
		TPU:		+/-5.43					
**Uranium-232 Tracer	19.5			15.2	pCi/g	REC: 78	(15%-125%)		
		Uncert:		+/-2.55					
		TPU:		+/-4.20					
Rad Gamma Spec									
Batch	1485712								

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QC Summary

Workorder: 374988

Page 3 of 6

Parmname	NOM	Sample	Qual	QC	Units	QC Criteria	Range	Analyst	Date Time
Rad Gamma Spec									
Batch	1485712								
QC1203337249	MB								
Cesium-137			U	-0.0277	pCi/g			MXR1	06/17/1506:55
				Uncert: +/-0.0825					
				TPU: +/-0.0835					
Cobalt-60			U	0.0311	pCi/g				
				Uncert: +/-0.100					
				TPU: +/-0.101					
Europium-152			U	0.077	pCi/g				
				Uncert: +/-0.198					
				TPU: +/-0.201					
Europium-154			U	-0.00497	pCi/g				
				Uncert: +/-0.249					
				TPU: +/-0.249					
Europium-155			U	-0.152	pCi/g				
				Uncert: +/-0.166					
				TPU: +/-0.180					
QC1203337250	374988001	DUP							
Cesium-137				0.184	pCi/g				06/17/1506:59
				Uncert: +/-0.118		RPD: 13	(0% - 100%)		
				TPU: +/-0.120		RER: 0.274	(0-2)		
Cobalt-60		U	0.0402	U	0.111	pCi/g			
				Uncert: +/-0.0639		RPD: 0	N/A		
				TPU: +/-0.0665		RER: 1.44	(0-2)		
Europium-152		U	0.0503	U	-0.0858	pCi/g			
				Uncert: +/-0.178		RPD: 0	N/A		
				TPU: +/-0.179		RER: 1.14	(0-2)		
Europium-154		U	0.129	U	0.067	pCi/g			
				Uncert: +/-0.211		RPD: 0	N/A		
				TPU: +/-0.220		RER: 0.413	(0-2)		
Europium-155		U	0.0598	U	-0.078	pCi/g			
				Uncert: +/-0.170		RPD: 0	N/A		
				TPU: +/-0.172		RER: 1.18	(0-2)		
QC1203337251	LCS								
Americium-241	1450			1630	pCi/g	REC: 113	(80%-120%)		06/17/1506:56
				Uncert: +/-22.7					
				TPU: +/-125					
Cesium-137	497			539	pCi/g	REC: 108	(80%-120%)		
				Uncert: +/-8.92					
				TPU: +/-58.4					
Cobalt-60	421			438	pCi/g	REC: 104	(80%-120%)		
				Uncert: +/-10.4					
				TPU: +/-43.7					
Europium-152			U	1.62	pCi/g				
				Uncert: +/-3.53					
				TPU: +/-3.60					
Europium-154			U	1.24	pCi/g				
				Uncert: +/-3.16					
				TPU: +/-3.21					
Europium-155			U	1.96	pCi/g				
				Uncert: +/-3.45					

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QC Summary

Workorder: 374988

Page 4 of 6

Parmname	NOM	Sample	Qual	QC	Units	QC Criteria	Range	Analyst	Date Time	
Rad Gamma Spec										
Batch	1485712									
				TPU:	+/-3.56					
Batch	1485720									
QC1203337266	MB									
Iodine-129			U	-0.029	pCi/g			MJH1	06/22/1509:33	
				Uncert:	+/-0.416					
				TPU:	+/-0.417					
QC1203337267	374988001	DUP								
Iodine-129		U	0.0264	U	0.911	pCi/g			06/22/1509:34	
				Uncert:	+/-0.641		+/-0.765			
				TPU:	+/-0.641		+/-0.873			
						RPD:	0	N/A		
						RER:	1.60	(0-2)		
QC1203337268	374988001	MS								
Iodine-129		41.5	U	0.0264	35.5	pCi/g	REC: 86	(75%-125%) 06/22/1509:44		
				Uncert:	+/-0.641		+/-7.10			
				TPU:	+/-0.641		+/-7.94			
QC1203337269	LCS									
Iodine-129		38.9			36.5	pCi/g	REC: 94	(80%-120%) 06/22/1509:45		
				Uncert:	+/-4.46					
				TPU:	+/-5.77					
Rad Gas Flow										
Batch	1485858									
QC1203337670	MB									
Total Strontium			U	0.197	pCi/g			KSD1	06/25/1509:13	
				Uncert:	+/-0.236					
				TPU:	+/-0.238					
**Strontium Carrier		8.10			6.70	mg	REC: 83	(25%-125%)		
QC1203337671	374988005	DUP								
Total Strontium				1.64	2.26	pCi/g			06/29/1507:08	
				Uncert:	+/-0.334		+/-0.348			
				TPU:	+/-0.443		+/-0.530			
**Strontium Carrier		8.10		6.90	6.60	mg	REC: 82	(25%-125%)		
QC1203337672	LCS									
Total Strontium		21.5			21.4	pCi/g	REC: 99	(80%-120%) 06/25/1510:22		
				Uncert:	+/-1.24					
				TPU:	+/-4.17					
**Strontium Carrier		8.10			6.70	mg	REC: 83	(25%-125%)		
Rad Liquid Scintillation										
Batch	1485659									
QC1203337093	MB									
Technetium-99			U	-0.359	pCi/g			MYM1	06/23/1521:05	
				Uncert:	+/-0.671					
				TPU:	+/-0.671					
**Technetium-99m Tracer		58500			56500	CPM	REC: 97	(15%-125%)		
QC1203337094	374988001	DUP								
Technetium-99			U	0.0811	U	-0.161	pCi/g		06/23/1521:37	
				Uncert:	+/-0.823		+/-0.749			
				TPU:	+/-0.823		+/-0.749			
**Technetium-99m Tracer		58500		55700	56600	CPM	REC: 97	(15%-125%)		
QC1203337095	LCS									
Technetium-99		35.9			33.3	pCi/g	REC: 93	(80%-120%) 06/24/1507:26		

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QC Summary

Workorder: 374988

Page 5 of 6

Parmname	NOM	Sample	Qual	QC	Units	QC Criteria	Range	Analyst	Date Time
Rad Liquid Scintillation									
Batch	1485659								
				Uncert:					
				TPU:					
**Technetium-99m Tracer	58500				CPM	REC:	97 (15%-125%)		
Batch	1486494								
QC1203338831	MB								
Carbon-14			U	-0.981	pCi/g			EXK2	06/21/1521:28
				Uncert:					
				TPU:					
QC1203338832	374988001	DUP							
Carbon-14		U	0.518	U	0.624	pCi/g			06/22/1517:00
				Uncert:	+/-1.64		RPD: 0	N/A	
				TPU:	+/-1.64		RER: 0.0904	(0-2)	
QC1203338833	374988001	MS							
Carbon-14		123	U	0.518	128	pCi/g	REC: 104 (75%-125%)		06/21/1522:50
				Uncert:	+/-1.64				
				TPU:	+/-1.64				
QC1203338834	LCS								
Carbon-14		109			113	pCi/g	REC: 104 (80%-120%)		06/21/1523:31
				Uncert:	+/-3.51				
				TPU:	+/-9.00				
Batch	1486509								
QC1203338894	MB								
Tritium			U	-3.8	pCi/g			GXR1	06/22/1522:10
				Uncert:	+/-9.26				
				TPU:	+/-9.26				
QC1203338895	374988001	DUP							
Tritium		60.5		78.7	pCi/g				06/22/1522:32
				Uncert:	+/-17.2		RPD: 26	(0% - 100%)	
				TPU:	+/-22.0		RER: 1.08	(0-2)	
QC1203338896	374988001	MS							
Tritium		89.0		60.5	156	pCi/g	REC: 107 (75%-125%)		06/22/1522:53
				Uncert:	+/-17.2				
				TPU:	+/-22.0				
QC1203338897	LCS								
Tritium		57.0			54.4	pCi/g	REC: 95 (80%-120%)		06/22/1523:15
				Uncert:	+/-12.7				
				TPU:	+/-17.7				

Notes:

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- * Duplicate analysis not within control limits
- + Correlation coefficient for Method of Standard Additions (MSA) is < 0.995
- B The analyte was detected at a value less than the contract required detection limit (RDL), but greater than or equal to the IDL/MDL (as appropriate).
- B The associated QC sample blank has a result >= 2X the MDA and, after corrections, result is >= MDA for this sample
- C Target analyte was detected in the sample and the associated blank. The associated blank concentration is >= EQL or is > 5% of the measured concentration and/or decision level for associated samples.
- D Results are reported from a diluted aliquot of sample.

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QC Summary

Workorder: 374988

Page 6 of 6

Parmname	NOM	Sample	Qual	QC	Units	QC Criteria	Range	Analyst	Date	Time
E										
	Reported value is estimated due to interferences. See comment in narrative.									
M										
	Duplicate precision not met.									
N										
	Spike Sample recovery is outside control limits.									
S										
	Reported value determined by the Method of Standard Additions (MSA)									
U										
	Analyzed for but not detected above limiting criteria. Includes MDL, MDA, PQL, zero, counting error, and total analytical error.									
UX										
	Gamma Spectroscopy--Uncertain identification									
W										
	Post-digestion spike recovery for GFAA out of control limit. Sample absorbency < 50% of spike absorbency.									
X										
	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Y										
	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									
Z										
	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier									

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

** Indicates analyte is a surrogate compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.