H1009

0054050

1.0 GENERAL

Bechtel Hanford Inc. (BHI) Sample Delivery Group H1009 was composed of one water sample designated under SAF No. B00-046 with a Project Designation of: 100-HR-3 ISRM Sampling and Analysis.

The sample was received as stated on the Chain-of-Custody documents. Any discrepancies are noted on the Thermo Retec Sample Receipt Checklist. The results were transmitted to BHI via e-Fax on September 28, 2000.

2.0 ANALYSIS NOTES

2.1 Total Uranium Analyses

No problems were encountered during the course of the analyses.

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1009

SAMPLE SUMMARY

SDG 7479
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1009

CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	LAB SAMPLE ID	SAF NO	CHAIN OF CUSTODY	COLLECTED
B0YVK6	100 Area	WATER		R009051-01	B00-046	B00-046-024	08/28/00 15:00
Method Blank		WATER		R009051-03	B00-046		
Lab Control Sample		WATER		R009051-02	B00-046		
Duplicate (R009051-01)	100 Area	WATER		R009051-04	B00-046		08/28/00 15:00

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CS
Version 3.06
Report date 10/23/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1009

SDG 7479
Contact Melissa C. Mannion

QC SUMMARY

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1009

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	% SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS RECEIVED	DAYS COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7479	B00-046-024	B0YVK6	WATER				09/08/00	11	R009051-01	7479-001
		Method Blank	WATER						R009051-03	7479-003
		Lab Control Sample	WATER						R009051-02	7479-002
		Duplicate (R009051-01)	WATER				09/08/00	11	R009051-04	7479-004

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-QS
Version 3.06
Report date 10/23/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1009

SDG 7479
Contact Melissa C. Mannion

PREP BATCH SUMMARY

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1009

TEST	MATRIX	METHOD	PREPARATION BATCH	ERROR 2σ %	PLANCHETS ANALYZED CLIENT	MORE	RE	BLANK	LCS	DUP/ORIG	MS/ORIG	QUALIFIERS
Kinetic Phosphorimetry												
U_T	WATER	Uranium, Total in Water	6955-019	9.0	1			1	1	1/1		

Duplicates and Matrix Spikes are those with original (Client) sample in this Sample Delivery Group.
Blank and LCS planchets are those in the same preparation batch as some Client, Duplicate or Spike sample.

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-PBS
Version 3.06
Report date 10/23/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1009

WORK SUMMARY

SDG 7479
Contact Melissa C. Mannion

Client Hanford
Contract TRC-SBB-207925
Case no SDG H1009

CLIENT SAMPLE ID / LOCATION / CUSTODY	SAF No	MATRIX	LAB SAMPLE ID / COLLECTED / RECEIVED	PLANCHET	TEST	SUF-FIX	ANALYZED	REVIEWED	BY	METHOD
B0YVK6 100 Area B00-046-024	B00-046	WATER	R009051-01 08/28/00 09/08/00	7479-001	U_T		09/18/00	09/28/00	MCM	Uranium, Total in Water
Method Blank	B00-046	WATER	R009051-03	7479-003	U_T		09/18/00	09/28/00	MCM	Uranium, Total in Water
Lab Control Sample	B00-046	WATER	R009051-02	7479-002	U_T		09/18/00	09/28/00	MCM	Uranium, Total in Water
Duplicate (R009051-01) 100 Area	B00-046	WATER	R009051-04 08/28/00 09/08/00	7479-004	U_T		09/18/00	09/28/00	MCM	Uranium, Total in Water

COUNTS OF TESTS BY SAMPLE TYPE

TEST	SAF No	METHOD	REFERENCE	CLIENT	MORE	RE	BLANK	LCS	DUP SPIKE	TOTAL
U_T	B00-046	Uranium, Total in Water	UTOT_KPA	1			1	1	1	4
TOTALS				1			1	1	1	4

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CWS
Version 3.06
Report date 10/23/00

TMA / RICHMOND
SAMPLE DELIVERY GROUP H1009

R009051-03

Method Blank

METHOD BLANK

SDG	7479	Client/Case no	Hanford SDG H1009
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925
Lab sample id	R009051-03	Client sample id	Method Blank
Dept sample id	7479-003	Material/Matrix	WATER
		SAF No	B00-046

ANALYTE	CAS NO	RESULT ug/L	2σ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI-FIERS	TEST
Total Uranium	7440-61-1	-0.011	0.005	0.012	0.10	U	U_T

100-HR-3 ISRM Sampling and Analysis

QC-BLANK 35832

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	10/23/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1009

R009051-02

Lab Control Sample

LAB CONTROL SAMPLE

SDG 7479
Contact Melissa C. Mannion

Client/Case no Hanford SDG H1009
Case no TRC-SBB-207925

Lab sample id R009051-02
Dept sample id 7479-002

Client sample id Lab Control Sample
Material/Matrix WATER
SAF No B00-046

ANALYTE	RESULT ug/L	2σ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI-FIERS	TEST	ADDED ug/L	2σ ERR ug/L	REC %	3σ LMTS (TOTAL)	PROTOCOL LIMITS
Total Uranium	88.0	10	0.12	0.10		U_T	82.5	3.3	107	76-124	80-120

100-HR-3 ISRM Sampling and Analysis

QC-LCS 35831

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-LCS
Version 3.06
Report date 10/23/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1009

R009051-04 B0YVK6

DUPLICATE

SDG 7479 Client/Case no Hanford SDG H1009

Contact Melissa C. Mannion Case no TRC-SBB-207925

DUPLICATE	ORIGINAL	
Lab sample id R009051-04	Lab sample id R009051-01	Client sample id B0YVK6
Dept sample id 7479-004	Dept sample id 7479-001	Location/Matrix 100 Area WATER
	Received 09/08/00	Collected 08/28/00 15:00
		Custody/SAF No B00-046-024 B00-046

ANALYTE	DUPLICATE ug/L	2σ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI-FIERS	TEST	ORIGINAL ug/L	2σ ERR (COUNT)	MDA ug/L	QUALI-FIERS	RPD %	3σ PROT TOT LIMIT
Total Uranium	0.018	0.006	0.012	0.10	J	U_T	0.018	0.006	0.012	J	0	73

100-HR-3 ISRM Sampling and Analysis

QC-DUP#1 35833

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-DUP
Version 3.06
Report date 10/23/00

TMA / RICHMOND

SAMPLE DELIVERY GROUP H1009

R009051-01 B0YVK6

DATA SHEET

SDG	7479	Client/Case no	Hanford SDG H1009
Contact	Melissa C. Mannion	Contract	TRC-SBB-207925
Lab sample id	R009051-01	Client sample id	B0YVK6
Dept sample id	7479-001	Location/Matrix	100 Area WATER
Received	09/08/00	Collected	08/28/00 15:00
		Custody/SAF No	B00-046-024 B00-046

ANALYTE	CAS NO	RESULT ug/L	2σ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI-FIERS	TEST
Total Uranium	7440-61-1	0.018	0.006	0.012	0.10	J	U_T

100-HR-3 ISRM Sampling and Analysis

Lab id	TMANC
Protocol	Hanford
Version	Ver 1.0
Form	DVD-DS
Version	3.06
Report date	10/23/00

Test U T Matrix WATER
SDG 7479
Contact Melissa C. Mannion

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1009

METHOD SUMMARY

URANIUM, TOTAL IN WATER

KINETIC PHOSPHORIMETRY

Client Hanford
Contract TRC-SBB-207925
Contract SDG H1009

RESULTS

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	PLANCHET	Total Uranium
Preparation batch 6955-019					
B0YVK6	R009051-01			7479-001	0.018 J
BLK (QC ID=35832)	R009051-03			7479-003	U
LCS (QC ID=35831)	R009051-02			7479-002	ok
Duplicate (R009051-01)	R009051-04			7479-004	ok J
Nominal values and limits from method				RDLs (ug/L)	0.10
100-HR-3 ISRM Sampling and Analysis					

METHOD PERFORMANCE

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF-FIX	MDA ug/L	ALIQ L	PREP FAC	DILU-TION	YIELD %	EFF %	COUNT min	FWHM keV	DRIFT KeV	DAYS HELD	PREPARED	ANAL-YZED	DETECTOR
Preparation batch 6955-019	2σ prep error 9.0 %			Reference Lab Notebook 6955 pg. 019												
B0YVK6	R009051-01			0.012	0.0200								21	09/18/00	09/18	KPA-001
BLK (QC ID=35832)	R009051-03			0.012	0.0200									09/18/00	09/18	KPA-001
LCS (QC ID=35831)	R009051-02			0.12	0.0200									09/18/00	09/18	KPA-001
Duplicate (R009051-01) (QC ID=35833)	R009051-04			0.012	0.0200								21	09/18/00	09/18	KPA-001
Nominal values and limits from method				0.10	0.0200								180			

PROCEDURES	REFERENCE	UTOT_KPA
	CP-040	Environmental Water Dissolution, rev 3
	CP-044	Sample Preparation for Total Uranium by Kinetic Phosphorimetry, rev 2
	CP-928	Total Uranium by Kinetic Phosphorimetry, rev 2

AVERAGES ± 2 SD FOR 4 SAMPLES
MDA 0.039 ± 0.11
YIELD _____ ± _____

Lab id TMANC
Protocol Hanford
Version Ver 1.0
Form DVD-CMS
Version 3.06
Report date 10/23/00

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B00-046-024	1 of 1
Collector: Hughes/Deroos/Pfister/Pinkal/Ehrgott	Company Contact: Steve Trent — Telephone No.: 372-9379	Project Coordinator: TRENT, SJ	Price Code: 7L — Data Turnaround: 21 Days
Project Designation: 100-HR-3 ISRM Sampling and Analysis	Sampling Location: 100 Area — H1009 (7479)	SAF No.: B00-046	Air Quality: ☐
Ice Chest No.: SM1-189 (1 OF 1)	Field Logbook No.: EL-1515 — COA: T10HR3C140	Method of Shipment: Federal Express	
Shipped To: TMA/RECRA	Offsite Property No.: A0000316	Bill of Lading/Air Bill No.: 42357953-8831	

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	HNO3 to pH <2									
	Type of Container	G/P									
	No. of Container(s)	1									
Special Handling and/or Storage	Volume	~~100mL~~ 500ml RT 9/7/00									
SAMPLE ANALYSIS	Total Uranium (Uranium)										

Sample No.	Matrix *	Sample Date	Sample Time									
B0YVK6	WATER	8/28/00	1500	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By / Date/Time	Received By / Date/Time		
Gregory S. Deroos 9/6/00 1225	Doug Bowers 9-6-00/1225		
Relinquished By: Doug Bowers / Date/Time: 9-6-00/1440	Received By: Staged IN / Date/Time: Ref 1A 3728 9-6-00/1440		
Relinquished By: Removed from / Date/Time: 0900	Received By: R. Thoren / Date/Time: 0900		
Ref 1A 3728 9.7.00	R. Thoren 9.7.00		
Relinquished By: R. Thoren / Date/Time: 0900	Received By: FEDEX / Date/Time: 09/07/00		
R. Thoren 9.7.00			
Relinquished By: FED. Express / Date/Time: 09/08/00 9:45	Received By: E. Dejow / Date/Time: 09/08/00 9:45		
Relinquished By / Date/Time	Received By / Date/Time		

SPECIAL INSTRUCTIONS

** No radiological sampling is required prior to shipping samples off-site.

Samples stored in Ref.# 1A at the 3728 Shipping Facility on 9/6/00
Collector not available to relinquish samples on 9/7/00 for shipment. RT 9.7.00

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

BHI-EE-011 (10/99)

Thermo NUtech - Richmond

SAMPLE RECEIPT CHECKLIST

SAMPLE RECEIPT

Client: BECHTEL HANFORD Date/Time received 09/08/00 9.45 AM

CoC No. B00-046-024

Container I.D. No. _____ Requested TAT (Days) 21 P.O. Received Yes [ ] No [ ]

INSPECTION

1. Custody seals on shipping container intact? Yes [ ] No [ ] N/A [ ]
2. Custody seals on shipping container dated & signed? Yes [ ] No [ ] N/A [ ]
3. Custody seals on sample containers intact? Yes [ ] No [ ] N/A [ ]
4. Custody seals on sample containers dated & signed? Yes [ ] No [ ] N/A [ ]
5. Cooler Temperature: _____ Packing material is: Wet [ ] Dry [ ]
6. Number of samples in shipping container: 1
7. Number of containers per sample: 1 (EACH) (Or see CoC _____)
8. Paperwork agrees with samples? Yes [ ] No [ ]
9. Samples have: Tape [ ] Hazard labels [ ] Rad labels [ ] Appropriate sample labels [ ]
10. Samples are: In good condition [ ] Leaking [ ] Broken Container [ ] Missing [ ]
11. Describe any anomalies: _____

13. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date _____
14. Received by E. Segner Date: 09/08/0 Time: 9.45 AM

LOGIN

TNU W.O. No. _____ Group No. _____ Client W.O. No. _____

PROGRAM MANAGER

Sample holding times exceeded? Yes [ ] No [ ]

Client Notified: Name _____ Date/time _____