

H1043

**0054015**

Thermo Retec  
W.O. No. R0-09-127-7497

Bechtel Hanford Inc.  
SDG H1043

**Case Narrative**

**Page 1 of 1**

**1.0 GENERAL**

Bechtel Hanford Inc. (BHI) Sample Delivery Group H1043 was composed of two water samples designated under SAF No. B00-046 with a Project Designation of: 100-HR-3 ISRM Sampling and Analysis.

The samples were 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 October 12, 2000.

**RECEIVED**  
DEC 01 2000

**2.0 ANALYSIS NOTES**

**2.1 Total Uranium Analyses**

No problems were encountered during the course of the analyses.

**EDMC**



TMA/RICHMOND

SAMPLE DELIVERY GROUP H1043

SAMPLE SUMMARY

SDG 7497  
Contact Melissa C. Mannion

Client Hanford  
Contract TRC-SBB-207925  
Case no SDG H1043

CLIENT SAMPLE ID	LOCATION	MATRIX	LEVEL	LAB SAMPLE ID	SAP NO	CHAIN OF CUSTODY	COLLECTED
B0XC69	100 Area	WATER		R009127-02	B00-046	B00-046-026	09/12/00 07:15
B0XC70	100 Area	WATER		R009127-01	B00-046	B00-046-026	09/18/00 13:20
Method Blank		WATER		R009127-04	B00-046		
Lab Control Sample		WATER		R009127-03	B00-046		
Duplicate (R009127-01)	100 Area	WATER		R009127-05	B00-046		09/18/00 13:20

Lab id TMANC  
Protocol Hanford  
Version Ver 1.0  
Form DVD-CS  
Version 3.06  
Report date 10/12/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1043

SDG 7497  
 Contact Melissa C. Mannion

Client Hanford  
 Contract TRC-SBB-207925  
 Case no SDG H1043

QC SUMMARY

QC BATCH	CHAIN OF CUSTODY	CLIENT SAMPLE ID	MATRIX	SOLIDS	SAMPLE AMOUNT	BASIS AMOUNT	DAYS SINCE RECEIVED	LAB COLL	LAB SAMPLE ID	DEPARTMENT SAMPLE ID
7497	B00-046-026	BOXC69	WATER				09/22/00 10		R009127-02	7497-002
		BOXC70	WATER				09/22/00 4		R009127-01	7497-001
		Method Blank	WATER						R009127-04	7497-004
		Lab Control Sample	WATER						R009127-03	7497-003
		Duplicate (R009127-01)	WATER				09/22/00 4		R009127-05	7497-005

Lab id TMANC  
 Protocol Hanford  
 Version Ver 1.0  
 Form DVD-QS  
 Version 3.06  
 Report date 10/12/00

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1043

SDG 7497  
Contact Melissa C. Mannion

PREP BATCH SUMMARY

Client Hanford  
Contract TRC-SBB-207925  
Case no SDG H1043

TEST	MATRIX	METHOD	PREPARATION ERROR		PLANCHETS ANALYZED			QUALI-	
			BATCH	2σ %	CLIENT	MORE	RE		BLANK
Kinetic Phosphorimetry									
U_T	WATER	Uranium, Total in Water	6955-087	9.0	2		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 10/12/00

**TMA/RICHMOND**  
SAMPLE DELIVERY GROUP H1043

SDG 7497  
Contact Melissa C. Mannion

Client Hanford  
Contract TRC-SBB-207925  
Case no SDG H1043

**WORK SUMMARY**

CLIENT SAMPLE ID	LAB SAMPLE ID	MATRIX	COLLECTED	SUF-	ANALYZED	REVIEWED	BY	METHOD
LOCATION	RECEIVED	PLANCHET	TEST	FIX				
CUSTODY	SAF No							
B0XC69	R009127-02	7497-002	U_T	10/11/00	10/12/00	MCM		Uranium, Total in Water
100 Area		WATER	09/12/00					
B00-046-026	B00-046		09/22/00					
B0XC70	R009127-01	7497-001	U_T	10/11/00	10/12/00	MCM		Uranium, Total in Water
100 Area		WATER	09/18/00					
B00-046-026	B00-046		09/22/00					
Method Blank	R009127-04	7497-004	U_T	10/11/00	10/12/00	MCM		Uranium, Total in Water
		WATER						
	B00-046							
Lab Control Sample	R009127-03	7497-003	U_T	10/11/00	10/12/00	MCM		Uranium, Total in Water
		WATER						
	B00-046							
Duplicate (R009127-01)	R009127-05	7497-005	U_T	10/11/00	10/12/00	MCM		Uranium, Total in Water
100 Area		WATER	09/18/00					
	B00-046		09/22/00					

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	2			1	1	1		5
TOTALS				2			1	1	1		5

WORK SUMMARY

Page 1

SUMMARY DATA SECTION

Page 6

Lab id TMANC  
Protocol Hanford  
Version Ver 1.0  
Form DVD-CWS  
Version 3.06  
Report date 10/12/00

TMA / RICHMOND  
SAMPLE DELIVERY GROUP H1043

R009127-04

Method Blank

METHOD BLANK

SDG <u>7497</u>	Client/Case no <u>Hanford</u>	<u>SDG H1043</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>TRC-SBB-207925</u>	
Lab sample id <u>R009127-04</u>	Client sample id <u>Method Blank</u>	
Dept sample id <u>7497-004</u>	Material/Matrix <u>WATER</u>	
	SAF No <u>B00-046</u>	

ANALYTE	CAS NO	RESULT ug/L	2 $\sigma$ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI- FIERS	TEST
Total Uranium	7440-61-1	0	0.006	0.013	0.10	U	U_T

100-HR-3 ISRM Sampling and Analysis

QC-BLANK #35969
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Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>10/12/00</u>

TMA/RICHMOND

SAMPLE DELIVERY GROUP H1043

R009127-03

Lab Control Sample

LAB CONTROL SAMPLE

SDG <u>7497</u>	Client/Case no <u>Hanford</u>	<u>SDG H1043</u>
Contact <u>Melissa C. Mannion</u>	Case no <u>TRC-SBB-207925</u>	
Lab sample id <u>R009127-03</u>	Client sample id <u>Lab Control Sample</u>	
Dept sample id <u>7497-003</u>	Material/Matrix <u>WATER</u>	
	SAF No <u>B00-046</u>	

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	80.5	10	<u>0.13</u>	0.10	U_T	82.5	3.3	98	77-123	80-120

100-HR-3 ISRM Sampling and Analysis

QC-LCS #35968
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Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-LCS</u>
Version <u>3.06</u>
Report date <u>10/12/00</u>

**TMA/RICHMOND**  
SAMPLE DELIVERY GROUP H1043

R009127-05

B0XC70

**DUPLICATE**

SDG <u>7497</u>		Client/Case no <u>Hanford</u> <u>SDG H1043</u>
Contact <u>Melissa C. Mannion</u>		Case no <u>TRC-SBB-207925</u>
DUPLICATE	ORIGINAL	
Lab sample id <u>R009127-05</u>	Lab sample id <u>R009127-01</u>	Client sample id <u>B0XC70</u>
Dept sample id <u>7497-005</u>	Dept sample id <u>7497-001</u>	Location/Matrix <u>100 Area</u> <u>WATER</u>
	Received <u>09/22/00</u>	Collected <u>09/18/00 13:20</u>
		Custody/SAF No <u>B00-046-026</u> <u>B00-046</u>

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 TOT	PROT LIMIT
Total Uranium	2.14	0.28	<u>0.28</u>	0.10	U_T	1.84	0.24	<u>0.13</u>		15	34	

100-HR-3 ISRM Sampling and Analysis

QC-DUP#1 35970

Lab id TMANC  
 Protocol Hanford  
 Version Ver 1.0  
 Form DVD-DUP  
 Version 3.06  
 Report date 10/12/00

**T M A / R I C H M O N D**  
**SAMPLE DELIVERY GROUP H1043**

R009127-02

BOXC69

**D A T A   S H E E T**

SDG <u>7497</u>	Client/Case no <u>Hanford</u>	SDG <u>H1043</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>TRC-SBB-207925</u>	
Lab sample id <u>R009127-02</u>	Client sample id <u>BOXC69</u>	
Dept sample id <u>7497-002</u>	Location/Matrix <u>100 Area</u>	<u>WATER</u>
Received <u>09/22/00</u>	Collected <u>09/12/00 07:15</u>	
	Custody/SAF No <u>B00-046-026</u>	<u>B00-046</u>

ANALYTE	CAS NO	RESULT ug/L	2 $\sigma$ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI- FIERS	TEST
Total Uranium	7440-61-1	2.46	0.32	<u>0.13</u>	0.10		U_T

100-HR-3 ISRM Sampling and Analysis

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>10/12/00</u>

TMA / RICHMOND  
SAMPLE DELIVERY GROUP H1043

R009127-01

BOXC70

DATA SHEET

SDG <u>7497</u>	Client/Case no <u>Hanford</u>	SDG <u>H1043</u>
Contact <u>Melissa C. Mannion</u>	Contract <u>TRC-SBB-207925</u>	
Lab sample id <u>R009127-01</u>	Client sample id <u>BOXC70</u>	
Dept sample id <u>7497-001</u>	Location/Matrix <u>100 Area</u>	<u>WATER</u>
Received <u>09/22/00</u>	Collected <u>09/18/00 13:20</u>	
	Custody/SAF No <u>B00-046-026</u>	<u>B00-046</u>

ANALYTE	CAS NO	RESULT ug/L	2σ ERR (COUNT)	MDA ug/L	RDL ug/L	QUALI- FIERS	TEST
Total Uranium	7440-61-1	1.84	0.24	<u>0.13</u>	0.10		U_T

100-HR-3 ISRM Sampling and Analysis

Lab id <u>TMANC</u>
Protocol <u>Hanford</u>
Version <u>Ver 1.0</u>
Form <u>DVD-DS</u>
Version <u>3.06</u>
Report date <u>10/12/00</u>

**TMA/RICHMOND**

SAMPLE DELIVERY GROUP H1043

**METHOD SUMMARY**

URANIUM, TOTAL IN WATER  
KINETIC PHOSPHORIMETRY

Test U T Matrix WATER  
SDG 7497  
Contact Melissa C. Mannion

Client Hanford  
Contract TRC-SBB-207925  
Contract SDG H1043

**RESULTS**

CLIENT SAMPLE ID	LAB SAMPLE ID	RAW TEST	SUF- FIX	PLANCHET	Total Uranium
Preparation batch 6955-087					
BOXC69	R009127-02			7497-002	2.46
BOXC70	R009127-01			7497-001	1.84
BLK (QC ID=35969)	R009127-04			7497-004	U
LCS (QC ID=35968)	R009127-03			7497-003	ok
Duplicate (R009127-01)	R009127-05			7497-005	ok
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	ANAL- YZED	DETECTOR	
Preparation batch 6955-087		2σ prep error 9.0 %		Reference Lab Notebook 6955 pg. 087												
BOXC69	R009127-02			<u>0.13</u>	0.0200								29	10/11/00	10/11 KPA-001	
BOXC70	R009127-01			<u>0.13</u>	0.0200								23	10/11/00	10/11 KPA-001	
BLK (QC ID=35969)	R009127-04			0.013	0.0200									10/11/00	10/11 KPA-001	
LCS (QC ID=35968)	R009127-03			<u>0.13</u>	0.0200									10/11/00	10/11 KPA-001	
Duplicate (R009127-01)	R009127-05			<u>0.28</u>	0.0200								23	10/11/00	10/11 KPA-001	
		(QC ID=35970)														
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	MDA <u>0.14</u> ± <u>0.19</u>
FOR 5 SAMPLES	YIELD _____ ± _____

Lab id TMANC  
Protocol Hanford  
Version Ver 1.0  
Form DVD-CMS  
Version 3.06  
Report date 10/12/00

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-046-026		Page 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		H1043 (7497)		SAF No. B00-046		Air Quality <input type="checkbox"/>	
Ice Chest No. 23-482154 (505)		Field Logbook No. EL-1515		COA T10HR3C140		Method of Shipment Federal Express			
Shipped To TMA/REGRA TMA TMA 9-20-00		Offsite Property No. A000299		Bill of Lading/Air Bill No. 42357593-9161					
POSSIBLE SAMPLE HAZARDS/REMARKS  Special Handling and/or Storage				Preservation		HNO3 to pH 2			
				Type of Container		GP			
				No. of Container(s)		1			
				Volume		100mL			
SAMPLE ANALYSIS				Total Uranium (Uranium)					
Sample No.		Matrix *	Sample Date	Sample Time					
R-9.00.00 BOYKS BOX 70		WATER	9/18/00	1220	✓				
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS	
Relinquished By Gregory B. Deroos		Date/Time 9/20/00		Received By MAYNARD		Date/Time 9-20-00		** No radiological sampling is required prior to shipping samples off-site.  Samples stored in Ref. # 2C at the 3728 Shipping Facility on 9/20/00 Collector not available to relinquish samples on 9/21/00 for shipment.  PT 9-21-00	
Relinquished By MAYNARD		Date/Time 9-20-00		Received By Stored in REF # 2C		Date/Time 9-20-00			
Relinquished By Removed		Date/Time 9/21/00		Received By R. Thoren		Date/Time 9-21-00			
Relinquished By R. Thoren		Date/Time 9-21-00		Received By FED EX		Date/Time 09/21/00			
Relinquished By Fed Express		Date/Time 09/22/00		Received By E. Leguina		Date/Time 9/22/00			
Relinquished By		Date/Time		Received By		Date/Time			
LABORATORY SECTION		Received By				Title		Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By		Date/Time	

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-046-026		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		H1043 (7497)		SAF No. B00-046		Air Quality <input type="checkbox"/>																																																													
Ice Chest No. 23-482154 (50FF)		Field Logbook No. EL-1515		COA T10HR3C140		Method of Shipment Federal Express																																																															
Shipped To EMA/RECRE TMA		Offsite Property No. A000277		Bill of Lading/Air Bill No. 42357953-9161																																																																	
TMS 9-20-00 POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation		HNO3 to pH 2																																																																	
Special Handling and/or Storage		Type of Container		GP																																																																	
		No. of Container(s)		1																																																																	
		Volume		~100mL 125 TMS 9-20-00																																																																	
		Total Uranium (Uranium)																																																																			
SAMPLE ANALYSIS																																																																					
<table border="1"> <thead> <tr> <th>Sample No.</th> <th>Matrix *</th> <th>Sample Date</th> <th>Sample Time</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>9200 B0040 Box 10A</td> <td>WATER</td> <td>9/12/00</td> <td>0715</td> <td>✓</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>										Sample No.	Matrix *	Sample Date	Sample Time							9200 B0040 Box 10A	WATER	9/12/00	0715	✓																																													
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9200 B0040 Box 10A	WATER	9/12/00	0715	✓																																																																	
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS		Matrix *																																																											
Relinquished By		Date/Time		Received By		Date/Time		** No radiological sampling is required prior to shipping samples off-site.  Samples stored in Ref. # 2C at the 3728 Shipping Facility on 9/20/00. Collector not available to relinquish samples on 9/21/00 or shipment.		S=Soil SE=Sediment SD=Solid S=Sedgde W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other																																																											
TMS 9-20-00		9/20/00 1010		TMS 9-20-00		9-20-00																																																															
TMS 9-20-00		9-20-00 1120		TMS 9-20-00		9-20-00 1120																																																															
Removed from		9-20-00 0800		R. L. Thoren		9-21-00 0800																																																															
R. Thoren		9-21-00 0800		Fedex		09/21/00																																																															
E. Legrow		9/21/00		E. Legrow		9/22/00																																																															
LABORATORY SECTION		Received By		Title				Date/Time																																																													
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time																																																													

SAMPLE RECEIPT CHECKLIST

SAMPLE RECEIPT

Client: BECHTEL HANFORD INC Date/Time received 09/22/10 9:30 AM

CoC No. B00-046-026

Container I.D. No. 23-482154 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; 2
- 7. Number of containers per sample: 1 (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: \_\_\_\_\_

*sample # 10 contact*  
 The chain of custody doesn't match with sample container.  
 Chain of custody is BOX 70 container B04V K9

- 13. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date \_\_\_\_\_
- 14. Received by \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

*Client notified. Label on sample changed. MW 9/22/10*  
 LOGIN  
 TNU W.O. No. \_\_\_\_\_ Group No. \_\_\_\_\_ Client W.O. No. \_\_\_\_\_

PROGRAM MANAGER

Sample holding times exceeded? Yes [ ] No [ ]

Client Notified: Name \_\_\_\_\_ Date/time \_\_\_\_\_



Attachment

Control #: B00-139 Revision #: 0

<b>Old Sample Number</b>	<b>Sample Date</b>	<b>New Sample Number</b>
B0YVK8	9/18/00	B0XC75
B0YVK9	9/18/00	B0XC70
B0YVL0	9/12/00	B0XC69
B0YVL0	9/19/00	B0XC65
B0YVL1	9/18/00	B0XC63
B0YVL2	9/19/00	B0XC66
B0YVL3	9/19/00	B0XC67
B0YVL4	9/19/00	B0XC68
B0YVL5	9/19/00	B0XC64