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Analytical Data Package Prepared For

Fluor Hanford, Inc.

Analysis Provided By

TestAmerica
2800 George Washington Way
Richland WA, 99354
(509)375-3131
Assigned Laboratory Code: TALR

SDG Number: W05373

Data Package Contains_____Pages

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Fluor Hanford
1200 Jadwin Ave.
Richland, WA 99352

April 23, 2008

Attention: Steve Trent

SAF Number	:	F08-039
Date SDG Closed	:	April 10, 2008
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W05373
Data Deliverable	:	24 Hour / 15 Day

CASE NARRATIVE

I. Introduction

On April 10, 2008 one sample was received at TestAmerica for chemical analysis. Upon receipt, the sample was assigned to lot J8D100187 and assigned the following laboratory ID number to correspond with the Fluor Hanford (FH) specific ID:

FH ID#	STLR ID#	MATRIX	DATE OF RECEIPT
B1V4Y7	KK24C	WATER	4/10/08

II. Sample Receipt

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

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

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The requested analyses were:

Chemical Analysis
Chromium by EPA method SW8466010

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Chemical Analysis
Chromium by EPA method SW8466010
The LCS, batch blank, sample and duplicate sample results are within contractual requirements.

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

Reviewed and approved:

Sandra Seger
Project Manager

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Analysis Date: **4/10/2008**
QC Batch #: **8101271**
Analyte: **Chromium**
MDL 0.0194

Sample ID	Comment	Client ID	Instrum't Reading (mg/L)	Final Vol. (L)	Dilution Factor	Recov'd Cr (mg/L)	Results (ug/L)	Yield
KK24C1AA	10:1 dilution	B1V4Y7	0.2109	1	10	2.109	2109	
KK24C1AC	10:1 dilution MS	B1V4Y7	1.07	1	10	10.7	10700	85.91%
KK24C1AD	10:1 dilution MSD	B1V4Y7	1.076	1	10	10.76	10760	86.51%
KK24C1AE	10:1 dilution - Duplicate	B1V4Y7 DUP	0.2297	1	10	2.297	2297	
KK28W1AA	Reagent Blank		-0.0002	0.05	1	-0.0002	<MDL	
KK28W1AC	LCS		0.9653	0.05	1	0.9653		96.53%

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Richland Laboratory
Data Review Check List
Metals

Batch Number(s): 8101271

Lab Sample Numbers or SDG:

Method/Test/Parameter: **Metals**

Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
A. Initial Calibration				
1. Performed at required frequency with required number of levels?	✓			✓
2. Correlation coefficient within QC limits?	✓			✓
3. Initial calibration verification (ICV) analyzed immediately after calibration and results within QC limits?	✓			✓
4. Initial calibration blank (ICB) analyzed immediately after ICV and concentrations of all parameters ≤ reporting limit?	✓			✓
B. Continuing Calibration				
1. CCV analyzed at required frequency and all parameters within QC limits?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
C. Sample Analysis	✓			
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?				✓
2. Were all sample holding times met?	✓			✓
D. QC Samples				
1. All results for the preparation blank below limits?	✓			✓
2. MS or MS/MSD recoveries within QC limits and %RPD (for MSD) acceptable?	✓			✓
3. LCS percent recovery within QC limits and %RPD (for LCSD) acceptable?	✓			✓
4. Analytical spikes within QC limits where applicable?	✓			✓
5. ICP only: One serial dilution performed per SDG?	✓			✓
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?	✓			✓
7. ICP only: Interference check samples (ICSA, ICSAB) and HICAL analyzed at the required frequencies and within QC limits?	✓			✓

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Review Item	Yes (✓)	No (✓)	N/A (✓)	2nd Level Review (✓)
E. Other	✓			
1. Are all nonconformances included and noted?				✓
2. Is the correct date and time of analysis shown?	✓			✓
3. Did the analyst sign and date the front page of the analytical run?	✓			✓
4. Correct methodology used?	✓			✓
5. Transcriptions checked?	✓			✓
6. Calculations checked at minimum frequency?	✓			✓
7. Units checked?	✓			✓

Comments on any "No" response _____

Analyst: [signature] Date 4/11/8

Second-Level Review: [signature] Date 4/11/8

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Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-039-086

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COLLECTOR NCO Samplers	**COMPANY CONTACT** WIDRIG, DL	**TELEPHONE NO.** 376-2858	**PROJECT COORDINATOR** TRENT, SJ
SAMPLING LOCATION DR-5 filtered	**PROJECT DESIGNATION** DR-5 GW Treatment Facility Regen Waste Characterization - Special Sampli		**SAF NO.** F08-039
ICE CHEST NO. GRP-05-010	**FIELD LOGBOOK NO.** HNF-N-428 J	**ACTUAL SAMPLE DEPTH** N/A	**COA** 122569ES10
SHIPPED TO TestAmerica Incorporated, Richland	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 1A

AIR QUALITY ☐

DATA TURNAROUND 24 Hours / 15 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
10APR08

PRESERVATION	HNO3 to pH <2
TYPE OF CONTAINER	G/P
NO. OF CONTAINER(S)	1
VOLUME	500mL
SAMPLE ANALYSIS	ICP Metals - 6010A (TAL) {Chromium}

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1V4Y7	WATER	4/10/08	0805 ✓

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CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Gregory R. Robbins/Tm R. Robbins	4/10/08 0925	R. J. WILANE TAL	4 10 08 0925
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
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The field samplers are requested to filter the sample with a 0.45 micron filter and preserve with HNO3 to a pH less than 2.

JSD100187
W05373
DUE 41108
KK24C

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD | DISPOSED BY | DATE/TIME

A-6003-618(01/06)

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Sample Check-in List

Date/Time Received: 4 10 08 0925 GM Screen Result 0.1K

Client: FLH SDG #: _____ NA[ ] SAF #: F08-039 NA [ ]

Work Order Number: _____ Chain of Custody # F08-039-086

Shipping Container ID: _____ Air Bill # _____

1. Custody Seals on shipping container intact? NA [ ] Yes [✓] No [ ]
2. Custody Seals dated and signed? NA [ ] Yes [✓] No [ ]
3. Chain of Custody record present? NA [ ] Yes [✓] No [ ]
4. Cooler Temperature: _____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 1
7. Sample holding times exceeded? NA [✓] Yes [ ] No [ ]
8. Samples have:
   - ____ Tape
   - ✓ Custody Seals
   - ____ Hazard Lables
   - ✓ Appropriate Sample Lables
9. Samples are:
   - ✓ In Good Condition
   - ____ Broken
   - ____ Leaking
   - ____ Have Air Bubbles (Only for samples requiring no head space.)
10. Sample pH taken? NA [ ] pH<2 [✓] pH>2 [ ] pH>9 [ ] Amount HNO_3 Added _____
11. Sample Location, Sample Collector Listed? *
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: _____ Date: 41008

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person Contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, Rev. 7, 1/08

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4/10/2008 11:05:33 AM

Sample Preparation/Analysis

108302, Fluor Hanford Inc Management Federal Servi , Waste

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
01 STANDARD TEST SET

AnalyDueDate: 04/11/2008

Batch: 8101271 WATER ug/L
SEQ Batch. Test: None All Tests: 8101271 88EA,

PM, Quote: SS , 29754

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

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Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:
1 KK24C-1-AA J8D100187-1-SAMP 04/10/2008 08:05		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
2 KK24C-1-AC-S J8D100187-1-MS 04/10/2008 08:05		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
3 KK24C-1-AD-D J8D100187-1-MSD 04/10/2008 08:05		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
4 KK24C-1-AE-X J8D100187-1-DUP 04/10/2008 08:05		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
5 KK28W-1-AA-B J8D100000-271-BLK 04/10/2008 08:05		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
6 KK28W-1-AC-C J8D100000-271-LCS 04/10/2008 08:05		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:

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4/10/2008 11:05:33 AM

Sample Preparation/Analysis

88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION
EA Chromium, Hexavalent (7196A)
01 STANDARD TEST SET

AnalyDueDate: 04/11/2008

Batch: 8101271 ug/L
SEQ Batch, Test: None

Balance Id:
Pipet #:
Sep1 DT/Tm Tech:
Sep2 DT/Tm Tech:
Prep Tech:

Work Order, Lot, Sample DateTime	Total Amt/Unit	Initial Aliquot Amt/Unit	QC Tracer Prep Date	Count Time Min	Detector Id	Count On | Off (24hr) Circle	CR Analyst, Init/Date	Comments:

Comments:

All Clients for Batch:
108302, Fluor Hanford Inc Waste Management Federal Servi, SS , 29754

KK24C1AA-SAMP Constituent List:

KK24C1AC-MS Constituent List:

KK24C1AD-MSD:

KK28W1AA-BLK:

KK28W1AC-LCS:

KK24C1AA-SAMP Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KK24C1AC-MS Calc Info:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KK24C1AD-MSD:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KK28W1AA-BLK:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B
KK28W1AC-LCS:
Uncert Level (#s).: 2 Decay to SaDt: Y Blk Subt.: N Sci.Not.: Y ODRs: B

Approved By Date:

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