

Analytical Data Package Prepared For

**Fluor Hanford, Inc.**

Analysis Provided By

*TestAmerica Richland*

2800 George Washington Way

Richland WA, 99354

(509)375-3131

Assigned Laboratory Code: TALR

SDG Number: W05346

Data Package Contains 11 Pages

## Certificate of Analysis

Fluor Hanford  
1200 Jadwin Ave.  
Richland, WA 99352

February 28, 2008

Attention: Steve Trent

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SAF Number	:	F08-039
Date SDG Closed	:	February 25, 2008
Number of Samples	:	Two (2)
Sample Type	:	Water
SDG Number	:	W05346
Data Deliverable	:	24 Hour / 15 Day

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### CASE NARRATIVE

#### I. Introduction

On February 25, 2008 two samples were received at TestAmerica Laboratories Richland (TALR) for chemical analysis. Upon receipt, the samples were assigned to lot J8B250109 and assigned the following laboratory ID number to correspond with the Fluor Hanford (FH) specific ID:

<u>FH ID#</u>	<u>STLR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
B1TFL7	KHKR7	WATER	2/25/08
B1TFL9	KHKTD	WATER	2/25/08

#### II. Sample Receipt

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

#### III. Analytical Results/Methodology

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

February 28, 2008

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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**

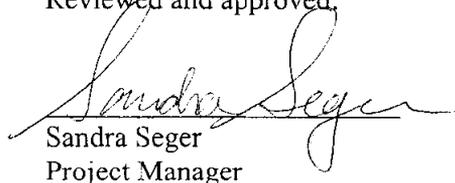
**Chemical Analysis**

Chromium by EPA method SW8466010

The LCS and batch blank 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

Analysis Date: 2/25/2008  
 QC Batch #: 8056367  
 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
khkr71aa	10:1 dilution	B1TFL7	0.0521	1	10	0.521	521	
khktd1aa	10:1 dilution	B1TFL9	0.0552	1	10	0.552	552	
khktd1ac	10:1 dilution - Duplicate	B1TFL9	0.0553	1	10	0.553	553	
khiae1aa	Reagent Blank		-0.017	0.05	1	-0.017	<MDL	
khiae1ac	LCS		1.112	0.05	1	1.112		111.20%

**Richland Laboratory  
 Data Review Check List  
 Metals**

Batch Number(s) 8056367				
Lab Sample Numbers or SDG:				
Method/Test/Parameter: Metals				
Review Item	Yes (✓)	No (✓)	N/A (✓)	2 <sup>nd</sup> Level Review (✓)
<b>A. Initial Calibration</b>	✓			✓
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>B. Continuing Calibration</b>	✓			✓
1. CCV analyzed at required frequency and all parameters within QC limits?	✓			✓
2. CCB analyzed at required frequency and all results ≤ reporting limit?	✓			✓
<b>C. Sample Analysis</b>	✓			✓
1. Were any samples with concentrations above the linear range for any parameter diluted and reanalyzed?	✓			✓
2. Were all sample holding times met?	✓			✓
<b>D. QC Samples</b>	✓			✓
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?	✓			✓

Review Item	Yes (✓)	No (✓)	N/A (✓)	2 <sup>nd</sup> Level Review (✓)
<b>E. Other</b>	✓			
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

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Analyst: *Alan P. Mitchell*

Date 2/25/08

Second-Level Review: *Sandra Segur*

Date: 2/28/08

COLLECTOR: NCO Samplers  
 COMPANY CONTACT: WIDRIG, DL  
 PROJECT COORDINATOR: TRENT, SJ  
 PRICE CODE: 1A  
 DATA TURNAROUND: 24 Hours / 15 Days  
 AIR QUALITY:   
 METHOD OF SHIPMENT: GOVERNMENT VEHICLE

SAMPLING LOCATION: DR-5 filtered  
 PROJECT DESIGNATION: DR-5 GW Treatment Facility Regen Waste Characterization - Special Sampli  
 FIELD LOGBOOK NO.: 4 NF-N-4283  
 ACTUAL SAMPLE DEPTH: N/A  
 SAF NO.: F08-039  
 COA: 122569ES10  
 BILL OF LADING/AIR BILL NO.: N/A

ICE CHEST NO.: GRP-05-010  
 OFFSITE PROPERTY NO.: N/A

SHIPPED TO: TestAmerica Incorporated, Richland

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

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: 28FE508

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1TFL7	WATER	2/25/08	0650 ✓

CHAIN OF POSSESSION

RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME
<i>Gregory S. Wilson</i>	2/25/08 10:48	<i>John Oxtaeson</i>	2/25/08 7:50
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.

J8B250109  
 W05346  
 DUE 2-26-08  
 KHKR7

LABORATORY SECTION: RECEIVED BY

FINAL SAMPLE DISPOSITION: DISPOSAL METHOD

TITLE: DISPOSED BY

DATE/TIME: DATE/TIME

COLLECTOR  
NCO Samplers

COMPANY CONTACT  
WIDRIG, DL

TELEPHONE NO.  
376-2858

PROJECT COORDINATOR  
TRENT, SJ

PRICE CODE  
1A

AIR QUALITY

DATA  
TURNAROUND  
24 Hours /  
15 Days

SAMPLING LOCATION  
DR-5 un-filtered

PROJECT DESIGNATION  
DR-5 GW Treatment Facility Regen Waste Characterization - Special Sampli

ICE CHEST NO.  
GRP-05-010

FIELD LOGBOOK NO.  
HNF-A-4283

ACTUAL SAMPLE DEPTH  
N/A

SAF NO.  
F08-039

COA  
122569E510

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

SHIPPED TO  
TestAmerica Incorporated, Richland

OFFSITE PROPERTY NO.  
N/A

BILL OF LADING/AIR BILL NO.  
N/A

**MATRIX\***

**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)

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

PRESERVATION  
HM03 to pH <2

TYPE OF CONTAINER  
G/P

NO. OF CONTAINER(S)  
1

VOLUME  
500ml

SAMPLE ANALYSIS  
ICP Metals - 601.0A (TAL) (Chromium)

**SPECIAL HANDLING AND/OR STORAGE**  
28FEB08

SAMPLE NO.	MATRIX*	DATE/TIME	SAMPLE DATE	SAMPLE TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
B1TFL9	WATER		2/25/08	0645	Gregory B. [Signature]	2/25/08 0720	Gregory B. [Signature]	2/25/08 0720

**CHAIN OF POSSESSION**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Gregory B. [Signature]	2/25/08 0720	Gregory B. [Signature]	2/25/08 0720

**SPECIAL INSTRUCTIONS**

\*\* Special Instructions: The laboratory is to filter the samples and preserve them with acid before analysis.

J8B250109  
W05346  
DUE 2-26-08  
KHKT D

LABORATORY SECTION RECEIVED BY

ORIGINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE

DISPOSED BY

DATE/TIME

DATE/TIME



# Sample Check-in List DUE 2-26-08

Date/Time Received: 2-25-08 0750 GM Screen Result 0.2 K

Client: FLH SDG #: W05346 NA [ ] SAF #: F08-039 NA [ ]

Work Order Number: J8B250109 Chain of Custody # F08-039-071,-073

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: 2
- 7. Sample holding times exceeded? NA  Yes [ ] No [ ]
- 8. Samples have:
  - Tape \_\_\_\_\_ Hazard Lables \_\_\_\_\_
  - Custody Seals \_\_\_\_\_ Appropriate Sample Lables \_\_\_\_\_
- 9. Samples are:
  - In Good Condition \_\_\_\_\_ Leaking \_\_\_\_\_
  - \_\_\_\_\_ Broken \_\_\_\_\_ Have Air Bubbles \_\_\_\_\_
  - (Only for samples requiring no head space.)
- 10. Sample pH taken? NA [ ] pH<2  pH>2 [ ] pH>9 [ ] Amount HNO<sub>3</sub> 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: [Signature] Date: 2-25-08

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on \_\_\_\_\_ by \_\_\_\_\_ Person Contacted \_\_\_\_\_

[ ] No action necessary; process as is.

Project Manager \_\_\_\_\_ Date \_\_\_\_\_

2/25/2008 2:22:53 PM **Sample Preparation/Analysis** Balance Id: \_\_\_\_\_  
 108302, Fluor Hanford Inc , Waste Pipet #: \_\_\_\_\_  
 Management Federal Servi 88 NO SAMPLE PREPARATION PERFORMED / DIRECT INJECTION  
 EA Chromium, Hexavalent (7196A)  
 AnalyteDueDate: 02/26/2008 01 STANDARD TEST SET Sep1 DT/Tm Tech: \_\_\_\_\_  
 PM, Quote: SS , 29754 Sep2 DT/Tm Tech: \_\_\_\_\_  
 Prep Tech: \_\_\_\_\_

Batch: 8056367 WATER ug/L  
 SEQ Batch, Test: None All Tests: 8056367 88EA, \_\_\_\_\_

Work Order, Lot, Sample Date/Time	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:
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1 KHKR7-1-AA  
 J8B250109-1-SAMP  
 02/25/2008 06:50  
 AmiRec: 500MLP #Containers: 1  
 Scr: Alpha: Beta:

2 KHKTD-1-AA  
 J8B250109-2-SAMP  
 02/25/2008 06:45  
 AmiRec: 500MLP #Containers: 1  
 Scr: Alpha: Beta:

3 KHKTD-1-AC-X  
 J8B250109-2-DUP  
 02/25/2008 06:45  
 AmiRec: 500MLP #Containers: 1  
 Scr: Alpha: Beta:

4 KHLAE-1-AA-B  
 J8B250000-367-BLK  
 02/25/2008 06:45  
 AmiRec: 500MLP #Containers: 1  
 Scr: Alpha: Beta:

5 KHLAE-1-AC-C  
 J8B250000-367-LCS  
 02/25/2008 06:45  
 AmiRec: 500MLP #Containers: 1  
 Scr: Alpha: Beta:

**Comments:**  
 All Clients for Batch:  
 108302, Fluor Hanford Inc Waste Management Federal Servi, SS , 29754  
 KHKR71AA-SAMP Constituent List:

2/25/2008 2:22:54 PM

### Sample Preparation/Analysis

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

Balance Id:

Pipet #:

AnalytDueDate: 02/26/2008

Sep1 DT/Tm Tech:

Batch: 8056367

ug/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:

Work Order, Lot, Sample Date/Time	Total Amt/Unit	Decay to SaDt: Y	Blk Subt.: N	QC Tracer Prep Date	Count Time Min	Detector Id	Count On   Off (24hr) Circle	CR Analyst, Init/Date	Comments:
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KHLAE1AA-BLK:

KHLAE1AC-LCS:

KHKR71AA-SAMP Calc Info:

Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

KHLAE1AA-BLK:

Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

KHLAE1AC-LCS:

Uncert Level (#s): 2    Decay to SaDt: Y    Blk Subt.: N    Sci.Not.: Y    ODRs: B

Approved By \_\_\_\_\_ Date: \_\_\_\_\_