

RECEIVED JUNE 30, 2008

0081375

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: W05429

*F08-039*

**RECEIVED**  
JAN 22 2009  
**EDMC**

## Certificate of Analysis

Fluor Hanford  
1200 Jadwin Ave.  
Richland, WA 99352

June 27, 2008

Attention: Steve Trent

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SAF Number	:	F08-039
Date SDG Closed	:	June 19, 2008
Number of Samples	:	One (1)
Sample Type	:	Water
SDG Number	:	W05429
Data Deliverable	:	24 Hour / 15 Day

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### CASE NARRATIVE

#### I. Introduction

On June 19, 2008 one sample was received at TestAmerica for chemical analysis. Upon receipt, the sample was assigned to lot J8F190211 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>
B1W1X4	KP8G3	WATER	6/19/08

#### 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.

June 27, 2008

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.

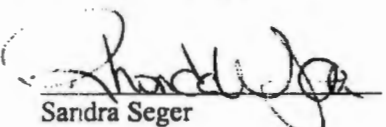
**V. Comments**

**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:

for   
Sandra Seger  
Project Manager

Analysis Date: 6/19/2008  
 QC Batch #: 8171360  
 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
J8F190211-001	10:1 dilution	B1W1X4'	0.0132	1	10	0.132	< 194	
J8F190211-001-S	10:1 dilution MS	B1W1X4'	0.8664	1	10	8.664	8664	86.64%
J8F190211-001-D	10:1 dilution MSD	B1W1X4'	0.8746	1	10	8.746	8746	87.46%
J8F190211-001-X	10:1 dilution - Duplicate	B1W1X4 DUP'	0.0132	1	10	0.132	< 194	
J8F190000-360-B	Reagent Blank		0.0001	0.05	1	0.0001	<MDL	
J8F190000-360-C	LCS		0.9689	0.05	1	0.9689		96.89%

## Richland Laboratory Data Review Check List Metals

Batch Number(s): 817136C				
Lab Sample Numbers or SDGs: 08 F190211   W05429				
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 $\leq$ 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 $\leq$ 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?			✓	N/A
6. ICP only: CRDL standard (CRI or CRA) analyzed at required frequency?			✓	N/A
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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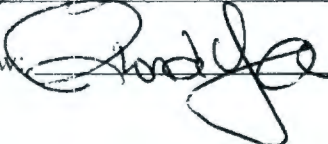
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Analyst: 

Date 6/19/08

Second-Level Review: 

Date: 6/19/08

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-039-104

PAGE 1 OF 1

**COLLECTOR**  
NCO Samplers

**SAMPLING LOCATION**  
DR-5 filtered

**ICE CHEST NO.**  
GRP-05-00

**COMPANY CONTACT**  
WIDRIG, DL

**TELEPHONE NO.**  
376-2858

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

**FIELD LOGBOOK NO.**  
HMF-N-428 3

**ACTUAL SAMPLE DEPTH**  
N/A

**OFFSITE PROPERTY NO.**  
N/A

**PROJECT COORDINATOR**  
TRENT, SJ

**SAF NO.**  
F08-039

**COA**  
122569ES10

**BILL OF LADING/AIR BILL NO.**  
N/A

**PRICE CODE** 1A

**AIR QUALITY**

**DATA TURNAROUND**  
24 Hours / 15 Days

**METHOD OF SHIPMENT**  
GOVERNMENT VEHICLE

**SHIPPED TO**  
TestAmerica Incorporated, Richland

**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 may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

**SPECIAL HANDLING AND/OR STORAGE**  
12JUN08

**PRESERVATION** HNO3 to pH <2

**TYPE OF CONTAINER** G/P

**NO. OF CONTAINER(S)** 1

**VOLUME** 500mL

**SAMPLE ANALYSIS** [CP Metals - 6010A (TAL) (Chromium)]

SAMPLE NO.	MATRIX*
B1W1X4	WATER

SAMPLE DATE	SAMPLE TIME
6-19-08	0815

**CHAIN OF POSSESSION**

RELINQUISHED BY/REMOVED FROM  
*R.R. FOX*

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/REMOVED FROM

**SIGN/ PRINT NAMES**

RECEIVED BY/STORED IN  
*TAL*

RECEIVED BY/STORED IN

RECEIVED BY/STORED IN

RECEIVED BY/STORED IN

RECEIVED BY/STORED IN

RECEIVED BY/STORED IN

RECEIVED BY/STORED IN

DATE/TIME  
6-19-08 1110

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

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.

J8F190211  
W05429  
DUE 62008  
K88G3

**LABORATORY SECTION**

**FINAL SAMPLE DISPOSITION**

**RECEIVED BY**

**DISPOSAL METHOD**

**TITLE**

**DISPOSED BY**

**DATE/TIME**

**DATE/TIME**



### Sample Check-in List

Date/Time Received: 6/19/08 1110 GM Screen Result 0.1K

Client: FLH SDG #: W05429 NA [ ] SAF #: F08-039 NA [ ]

Work Order Number: J8F190211 Chain of Custody # F08-039-104

Shipping Container ID: \_\_\_\_\_ Air Bill # \_\_\_\_\_

- 1. Custody Seals on shipping container intact? NA [ ] Yes [X] No [ ]
- 2. Custody Seals dated and signed? NA [ ] Yes [X] No [ ]
- 3. Chain of Custody record present? NA [ ] Yes [X] No [ ]
- 4. Cooler Temperature: \_\_\_\_\_ NA [X] 5. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [ ]
- 6. Number of samples in shipping container: 1
- 7. Sample holding times exceeded? NA [X] Yes [ ] No [ ]
- 8. Samples have:
  - Tape
  - Custody Seals
  - Hazard Labels
  - Appropriate Sample Labels
- 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 [X] 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 [X]
- 13. Description of anomalies (include sample numbers): \_\_\_\_\_

Sample Custodian: [Signature] Date: 6/19/08

Client Sample ID	Analysis Requested	Condition	Comments/Action

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

[ ] No action necessary, process as is.

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



TestAmerica

6/19/2008 1:09:27 PM

### Sample Preparation/Analysis

Balance Id:

108302, Fluor Hanford Inc  
Management Federal Servi

, Waste

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

Pipet #:

AnalyDueDate: 06/20/2008

Sep1 DT/Tm Tech:

Batch: 8171360 WATER ug/L

PM, Quote: SS , 29754

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

Prep Tech:



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 KP8G3-1-AA

J8F190211-1-SAMP

06/19/2008 08:15		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
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2 KP8G3-1-AC-S

J8F190211-1-MS

06/19/2008 08:15		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
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3 KP8G3-1-AD-D

J8F190211-1-MSD

06/19/2008 08:15		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
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4 KP8G3-1-AE-X

J8F190211-1-DUP

06/19/2008 08:15		AmtRec: 500MLP	#Containers: 1			Scr:	Alpha:	Beta:
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5 KP8MF-1-AA-B

J8F190000-360-BLK

06/19/2008 08:15		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
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6 KP8MF-1-AC-C

J8F190000-360-LCS

06/19/2008 08:15		AmtRec:	#Containers: 1			Scr:	Alpha:	Beta:
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TestAmerica

6/19/2008 1:09:27 PM

### Sample Preparation/Analysis

Balance Id:

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

Pipet #:

AnalyDueDate: 06/20/2008

Sep1 DT/Tm Tech:

Batch: 8171360

ug/L

Sep2 DT/Tm Tech:

SEQ Batch, Test: None

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:
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Comments:

All Clients for Batch:

108302, Fluor Hanford Inc

Waste Management Federal Servi, SS , 29754

KP8G31AA-SAMP Constituent List:

KP8G31AC-MS Constituent List:

KP8G31AD-MSD:

KP8MF1AA-BLK:

KP8MF1AC-LCS:

KP8G31AA-SAMP Calc Info:

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

KP8G31AC-MS Calc Info:

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

KP8G31AD-MSD:

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

KP8MF1AA-BLK:

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

KP8MF1AC-LCS:

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

Approved By

Date:

10