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CERTIFICATE OF ANALYSIS

Fluor Hanford Inc
P. O. Box 1000, T6-03
Richland, WA 99352

February 12, 2007

Attention: Steve Trent

SAF Number : W07-001
 Date Samples Received : January 16, 2007
 Number of Samples : Two (2)
 Sample Type : Water
 Data Deliverable : 45 Day Data Package

I. Introduction

Two (2) water samples were received on January 16, 2007 by the STL Knoxville Laboratory for analysis. Upon receipt, the samples were assigned the following laboratory ID number to correspond with the Fluor Hanford Inc. (FHI) specific ID:

<u>STLKL ID#</u>	<u>FHI ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
JMWL4	B1LTD3	Water	01/16/07
JMWL8	B1LTD4	Water	01/16/07

II. Analytical Results/Methodology

STL Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Cert. #05-043-0, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Cert. #PH-0223, Florida DOH Cert. #E87177, Georgia DNR Cert. #906, Hawaii DOH, Illinois EPA Cert. #000687, Indiana DOH Cert. #C-TN-02, Iowa DNR Cert. #375, Kansas DHE Cert. #E-10349, Kentucky DEP Lab ID #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH Cert. #LA030024, Maryland DHMH Cert. #277, Massachusetts DEP Cert. #M-TN009, Michigan DEQ Lab ID #9933, New Jersey DEP Cert. #TN001, New York DOH Lab #10781, North Carolina DPH Lab ID #21705, North Carolina DEHNR Cert. #64, Ohio EPA VAP Cert. #CL0059, Oklahoma DEQ ID #9415, Pennsylvania DEP Cert. #68-00576, South Carolina DHEC Lab ID #84001001, Tennessee DOH Lab ID #02014, Utah DOH Cert. # QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, West Virginia DEP Cert. #345, Wisconsin DNR Lab ID #998044300, Naval Facilities Engineering Service Center and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.





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The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information and analytical results.

The requested analysis was:

Trace Level Organics by 8290

III. Quality Control

The analytical results for the analysis performed includes a minimum of one Laboratory Control Sample (LCS).

Due to limited sample volume, a laboratory control sample/laboratory control sample duplicate was performed instead of a matrix spike/matrix spike duplicate.

Quality control sample results are reported in the same units as sample results.

The percent difference (%D from the ICAL) for 123789-HxCDD on closing standard b070207s1 was +22.3%. When the %D falls between 20 and 25%, the method requires the use of the average (of the bracketing) response factors for all samples on the shift. This adjustment was performed as specified by the method.

IV. Comments

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

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Unless otherwise noted, all holding times and QC criteria were met. The test results shown in this report meet all applicable NELAC requirements. Any exceptions are noted below.

The following flags are used to qualify results for chlorinated dioxin and furan results:

J – The reported result is an estimate. The amount reported is below the Minimum Level (ML). The qualitative definition of the ML is “the lowest level at which the analytical system must give a reliable signal and an acceptable calibration point”. The ML was introduced in EPA Methods 1624 and 1625 in 1980 and was promulgated in these methods in 1984 at 40 CFR Part 136, Appendix A. For the purposes of this report the ML is qualitatively defined as described above, and quantitatively defined as follows:

Minimum Level: The concentration or mass of analyte in the sample that corresponds to the lowest calibration level in the initial calibration. It represents a concentration (in the sample extract) equivalent to that of the lowest calibration standard, after corrections for method-specified sample weights, volumes and cleanup procedures has been employed.

Example: The lowest calibration level for TCDD in the initial calibration is 0.5 pg/uL. A mass of 10 pg of 2,3,7,8-TCDD in the sample would result in a concentration of 0.5 pg/uL in the sample extract (at a final volume of 20 uL). Since the concentration in the sample extract corresponds to the concentration in the lowest calibration standard, the 10 pg mass in the sample components is the ML. If the sample extract is further diluted, the ML will increase by the dilution factor.

Example: A 1/10 dilution is performed on the sample extract described above. The ML for 2,3,7,8-TCDD becomes 100 pg rather than the default of 10 pg.

E – The reported result is an estimate. The amount reported is above the UCL described below.

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The E qualifier is applied on the basis of the **Upper Calibration Level (UCL)**. The quantitative definition of the UCL is listed below:

Upper Calibration Level: The concentration or mass of analyte in the sample that corresponds to the highest calibration level in the initial calibration. It is equivalent to the concentration of the highest calibration standard, assuming that all method-specified sample weights, volumes, and cleanup procedures have been employed.

Example:

The maximum calibration level for TCDD in the initial calibration is 200 pg/uL. A mass of 4000 pg of 2,3,7,8-TCDD in the sampling components would result in a concentration of 200 pg/uL in the sample extract (at a final volume of 20 uL). Since the concentration in the sample extract corresponds to the concentration in the highest calibration standard, the 4000 pg mass in the sample components is the UCL. If the sample extract is further diluted, the ML will increase by the dilution factor.

Example:

A 1/10 dilution is performed on the sample extract described above. The UCL for 2,3,7,8-TCDD becomes 40,000 pg rather than the default of 4000 pg. In this examples all positive 2,3,7,8-TCDD results above 40,000 pg are flagged with an E.

B – The analyte is present in the associated method blank at a reportable level. For this analysis, there is no method specified reporting level, other than the qualitative criterion that peaks must exhibit a signal-to-noise ratio of 2.5-to-1. Therefore, the presence of any amount of the analyte present in the blank will result a B qualifier on all associated samples.

If the blank has analytes present above the ML (described above) the need for corrective action beyond qualifying the associated data is evaluated. The determination is made whether the amount in the blank is less than 5% of the lowest amount in associated client samples or regulatory limit. If this is the case, sample processing may continue with the

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qualification of the data. If the amount in the blank is greater than 5% of the lowest amount in associated client samples or regulatory limit, corrective action must be taken. The corrective actions may include extracting a second aliquot of sample if available, or notifying the client to assess the impact on the project objectives.

Note: Some laboratories do not report contamination in the blank unless it is above their lower calibration limit, or an established percentage of the level in the samples, or an established percentage of the regulatory limit. Likewise, some laboratories set a reporting limit at one half the lower calibration limit.

Q – Estimated maximum possible concentration. This qualifier is used when the result is generated from chromatographic data that does not meet all the qualitative criteria for a positive identification given in the method. The criteria include the following areas:

- Ion abundance ratios must be within specified limits (+/-15% of theoretical ion abundance ratio.)
- Retention time criteria (relative to the method-specified isotope labeled retention time standard).
- Co-maximization criterion. The two quantitation ion peaks must reach their maxima within 2 seconds of each other.
- Polychlorinated dibenzofuran purity. No peak can be identified as a polychlorinated dibenzofuran if a polychlorinated diphenyl ether peak maximizes within +/- 2 seconds of the furan candidate.

S – Ion suppression evident. The trace indicating the signal from the lock mass of the calibration compound shows a deflection at the retention time of the analyte. This may indicate a temporary suppression of the instrument sensitivity, due to a matrix-borne interference.

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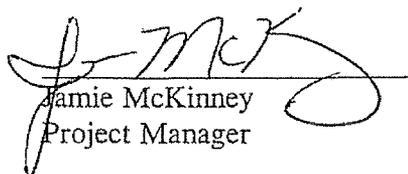
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C – Coeluting Isomer. The isomer is known to coelute with another member of its homologue group, or the peak shape is shouldered, indicating the likelihood of a coeluting isomer

X – Other. See explanation in narrative.

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:


Jamie McKinney
Project Manager

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Sample Data Summary

Fluor Hanford Inc
Sample ID: B1LTD3
Trace Level Organic Compounds

Lot - Sample #....:	H7A160151 - 001	Work Order #....:	JMWL41AA	Matrix....:	WATER
Date Sampled....:	01/15/07	Date Received....:	01/16/07	Dilution Factor:	1
Prep Date....:	01/23/07	Analysis Date....:	02/07/07		
Prep Batch #:	7023244				
Initial Wgt/Vol :	1050 mL	Instrument ID....:	M2A	Method:	SW846 8290
Analyst ID....:	Melissa A. Davidson				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		9.5	4.4	pg/L
Total TCDD	ND		9.5	4.4	pg/L
1,2,3,7,8-PeCDD	ND		48	1.9	pg/L
Total PeCDD	ND		48	1.9	pg/L
1,2,3,4,7,8-HxCDD	ND		48	1.6	pg/L
1,2,3,6,7,8-HxCDD	ND		48	1.9	pg/L
1,2,3,7,8,9-HxCDD	ND		48	1.6	pg/L
Total HxCDD	ND		48	1.7	pg/L
1,2,3,4,6,7,8-HpCDD	ND		48	1.6	pg/L
Total HpCDD	ND		48	1.6	pg/L
OCDD	ND		95	2.1	pg/L
2,3,7,8-TCDF	ND		9.5	2.7	pg/L
Total TCDF	ND		9.5	2.7	pg/L
1,2,3,7,8-PeCDF	ND		48	1.3	pg/L
2,3,4,7,8-PeCDF	ND		48	1.1	pg/L
Total PeCDF	2.9	Q J	48	1.2	pg/L
1,2,3,4,7,8-HxCDF	ND		48	0.85	pg/L
1,2,3,6,7,8-HxCDF	ND		48	0.86	pg/L
2,3,4,6,7,8-HxCDF	ND		48	0.93	pg/L
1,2,3,7,8,9-HxCDF	ND		48	1.3	pg/L
Total HxCDF	ND		48	0.95	pg/L
1,2,3,4,6,7,8-HpCDF	5.1	B J	48	1.8	pg/L
1,2,3,4,7,8,9-HpCDF	ND		48	2.1	pg/L
Total HpCDF	5.1	B J	48	1.9	pg/L
OCDF	16	Q B J	95	2.3	pg/L

Fluor Hanford Inc
Sample ID: B1LTD3
Trace Level Organic Compounds

Lot - Sample #....: H7A160151 - 001
 Date Sampled....: 01/15/07
 Prep Date....: 01/23/07
 Prep Batch #: 7023244
 Initial Wgt/Vol : 1050 mL
 Analyst ID....: Melissa A. Davidson

Work Order #....: JMWL41AA
 Date Received....: 01/16/07
 Analysis Date....: 02/07/07
 Instrument ID....: M2A

Matrix....: WATER
 Dilution Factor: 1
 Method: SW846 8290

<u>INTERNAL STANDARDS</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C-2,3,7,8-TCDD	61	40 - 135
13C-1,2,3,7,8-PeCDD	60	40 - 135
13C-1,2,3,4,7,8-HxCDD	78	40 - 135
13C-1,2,3,6,7,8-HxCDD	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	71	40 - 135
13C-OCDD	52	40 - 135
13C-2,3,7,8-TCDF	68	40 - 135
13C-1,2,3,7,8-PeCDF	63	40 - 135
13C-2,3,4,7,8-PeCDF	61	40 - 135
13C-1,2,3,4,7,8-HxCDF	78	40 - 135
13C-1,2,3,6,7,8-HxCDF	75	40 - 135
13C-2,3,4,6,7,8-HxCDF	77	40 - 135
13C-1,2,3,7,8,9-HxCDF	70	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	66	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	68	40 - 135

QUALIFIERS

- B Method blank contamination. The associated method blank contains the target analyte at a reportable level.
 J Estimated Result.
 Q Estimated maximum possible concentration (EMPC).

Fluor Hanford Inc
Sample ID: B1LTD4
Trace Level Organic Compounds

Lot - Sample #....:	H7A160151 - 002	Work Order #....:	JMWL81AA	Matrix....:	WATER
Date Sampled....:	01/15/07	Date Received....:	01/16/07	Dilution Factor:	1
Prep Date....:	01/23/07	Analysis Date....:	02/07/07		
Prep Batch #:	7023244				
Initial Wgt/Vol :	1050 mL	Instrument ID....:	M2A	Method:	SW846 8290
Analyst ID....:	Melissa A. Davidson				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		9.5	4.5	pg/L
Total TCDD	ND		9.5	4.5	pg/L
1,2,3,7,8-PeCDD	ND		48	1.7	pg/L
Total PeCDD	ND		48	1.7	pg/L
1,2,3,4,7,8-HxCDD	ND		48	1.6	pg/L
1,2,3,6,7,8-HxCDD	ND		48	1.8	pg/L
1,2,3,7,8,9-HxCDD	ND		48	1.6	pg/L
Total HxCDD	ND		48	1.7	pg/L
1,2,3,4,6,7,8-HpCDD	ND		48	1.3	pg/L
Total HpCDD	ND		48	1.3	pg/L
OCDD	ND		95	1.9	pg/L
2,3,7,8-TCDF	ND		9.5	2.9	pg/L
Total TCDF	ND		9.5	2.9	pg/L
1,2,3,7,8-PeCDF	ND		48	1.1	pg/L
2,3,4,7,8-PeCDF	ND		48	0.86	pg/L
Total PeCDF	ND		48	0.97	pg/L
1,2,3,4,7,8-HxCDF	ND		48	0.84	pg/L
1,2,3,6,7,8-HxCDF	ND		48	0.81	pg/L
2,3,4,6,7,8-HxCDF	ND		48	0.85	pg/L
1,2,3,7,8,9-HxCDF	ND		48	0.97	pg/L
Total HxCDF	ND		48	0.86	pg/L
1,2,3,4,6,7,8-HpCDF	3.4	Q B J	48	1.4	pg/L
1,2,3,4,7,8,9-HpCDF	ND		48	1.5	pg/L
Total HpCDF	3.4	Q B J	48	1.4	pg/L
OCDF	9.5	B J	95	2.2	pg/L

Fluor Hanford Inc
Sample ID: B1LTD4
Trace Level Organic Compounds

Lot - Sample #....:	H7A160151 - 002	Work Order #....:	JMWL81AA	Matrix....:	WATER
Date Sampled....:	01/15/07	Date Received....:	01/16/07	Dilution Factor:	1
Prep Date....:	01/23/07	Analysis Date....:	02/07/07		
Prep Batch #:	7023244				
Initial Wgt/Vol :	1050 mL	Instrument ID....:	M2A	Method:	SW846 8290
Analyst ID....:	Melissa A. Davidson				

<u>INTERNAL STANDARDS</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C-2,3,7,8-TCDD	69	40 - 135
13C-1,2,3,7,8-PeCDD	68	40 - 135
13C-1,2,3,4,7,8-HxCDD	79	40 - 135
13C-1,2,3,6,7,8-HxCDD	75	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78	40 - 135
13C-OCDD	61	40 - 135
13C-2,3,7,8-TCDF	78	40 - 135
13C-1,2,3,7,8-PeCDF	73	40 - 135
13C-2,3,4,7,8-PeCDF	75	40 - 135
13C-1,2,3,4,7,8-HxCDF	78	40 - 135
13C-1,2,3,6,7,8-HxCDF	75	40 - 135
13C-2,3,4,6,7,8-HxCDF	81	40 - 135
13C-1,2,3,7,8,9-HxCDF	82	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	71	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	79	40 - 135

QUALIFIERS

- B Method blank contamination. The associated method blank contains the target analyte at a reportable level.
 J Estimated Result.
 Q Estimated maximum possible concentration (EMPC).

Method Blank Report
Trace Level Organic Compounds

Lot - Sample #....: H7A230000 - 244B Work Order #....: JM78G1AA Matrix....: WATER
 Dilution Factor: 1
 Prep Date....: 01/23/07 Analysis Date....: 02/06/07
 Prep Batch #: 7023244
 Initial Wgt/Vol : 1000 mL Instrument ID....: M2A Method: SW846 8290
 Analyst ID....: Patricia(Trish) M. Parsly

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		10	4.9	pg/L
Total TCDD	ND		10	4.9	pg/L
1,2,3,7,8-PeCDD	ND		50	1.8	pg/L
Total PeCDD	ND		50	1.8	pg/L
1,2,3,4,7,8-HxCDD	ND		50	2.0	pg/L
1,2,3,6,7,8-HxCDD	ND		50	2.2	pg/L
1,2,3,7,8,9-HxCDD	ND		50	1.8	pg/L
Total HxCDD	ND		50	2.0	pg/L
1,2,3,4,6,7,8-HpCDD	ND		50	1.6	pg/L
Total HpCDD	ND		50	1.6	pg/L
OCDD	6.3	Q J	100	2.1	pg/L
2,3,7,8-TCDF	ND		10	3.1	pg/L
Total TCDF	ND		10	3.1	pg/L
1,2,3,7,8-PeCDF	ND		50	1.5	pg/L
2,3,4,7,8-PeCDF	ND		50	1.3	pg/L
Total PeCDF	ND		50	1.4	pg/L
1,2,3,4,7,8-HxCDF	2.2	Q J	50	1.3	pg/L
1,2,3,6,7,8-HxCDF	ND		50	1.4	pg/L
2,3,4,6,7,8-HxCDF	ND		50	1.4	pg/L
1,2,3,7,8,9-HxCDF	ND		50	1.9	pg/L
Total HxCDF	5.7	J Q	50	1.5	pg/L
1,2,3,4,6,7,8-HpCDF	15	Q J	50	2.1	pg/L
1,2,3,4,7,8,9-HpCDF	ND		50	2.1	pg/L
Total HpCDF	15	Q J	50	2.1	pg/L
OCDF	16	J	100	1.9	pg/L

Method Blank Report
Trace Level Organic Compounds

Lot - Sample #....: H7A230000 - 244B Work Order #....: JM78G1AA Matrix....: WATER
 Dilution Factor: 1
 Prep Date....: 01/23/07 Analysis Date....: 02/06/07
 Prep Batch #: 7023244
 Initial Wgt/Vol : 1000 mL Instrument ID....: M2A Method: SW846 8290
 Analyst ID....: Patricia(Trish) M. Parsly

<u>INTERNAL STANDARDS</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
13C-2,3,7,8-TCDD	81	40 - 135
13C-1,2,3,7,8-PeCDD	79	40 - 135
13C-1,2,3,4,7,8-HxCDD	84	40 - 135
13C-1,2,3,6,7,8-HxCDD	78	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	100	40 - 135
13C-OCDD	79	40 - 135
13C-2,3,7,8-TCDF	84	40 - 135
13C-1,2,3,7,8-PeCDF	79	40 - 135
13C-2,3,4,7,8-PeCDF	72	40 - 135
13C-1,2,3,4,7,8-HxCDF	87	40 - 135
13C-1,2,3,6,7,8-HxCDF	81	40 - 135
13C-2,3,4,6,7,8-HxCDF	86	40 - 135
13C-1,2,3,7,8,9-HxCDF	73	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	77	40 - 135
13C-1,2,3,4,7,8,9-HpCDF	91	40 - 135

QUALIFIERS

- J Estimated Result.
 Q Estimated maximum possible concentration (EMPC).

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...: H7A160151 Work Order # ...: JM78G1AC-LCS Matrix: WATER
 LCS Lot-Sample#: H7A230000 - 244 JM78G1AD-LCSD
 Prep Date: 01/23/07 Analysis Date ..: 02/06/07
 Prep Batch # ...: 7023244
 Dilution Factor : 1
 Analyst ID.....: Scott A. Harris Instrument ID..: M2A Method.....: SW846 8290
 Initial Wgt/Vol: 1000 mL

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS
2,3,7,8-TCDD	200	230	pg/L	117	(72 - 122)		
	200	230	pg/L	115	(72 - 122)	2.3	(0 - 15)
1,2,3,7,8-PeCDD	1000	1100	pg/L	112	(72 - 122)		
	1000	1100	pg/L	111	(72 - 122)	1.1	(0 - 15)
1,2,3,4,7,8-HxCDD	1000	1100	pg/L	111	(69 - 119)		
	1000	1100	pg/L	105	(69 - 119)	5.6	(0 - 15)
1,2,3,6,7,8-HxCDD	1000	1100	pg/L	113	(72 - 122)		
	1000	1100	pg/L	109	(72 - 122)	3.8	(0 - 15)
1,2,3,7,8,9-HxCDD	1000	1200	pg/L	119	(71 - 129)		
	1000	1200	pg/L	116	(71 - 129)	2.7	(0 - 15)
1,2,3,4,6,7,8-HpCDD	1000	1100	pg/L	108	(66 - 116)		
	1000	1000	pg/L	105	(66 - 116)	3.1	(0 - 15)
OCDD	2000	2200	pg/L	112	(70 - 120)		
	2000	2200	pg/L	109	(70 - 120)	2.8	(0 - 15)
2,3,7,8-TCDF	200	240	pg/L	119	(74 - 124)		
	200	240	pg/L	118	(74 - 124)	0.40	(0 - 15)
1,2,3,7,8-PeCDF	1000	1100	pg/L	112	(69 - 119)		
	1000	1100	pg/L	109	(69 - 119)	2.9	(0 - 15)
2,3,4,7,8-PeCDF	1000	1100	pg/L	109	(70 - 120)		
	1000	1100	pg/L	109	(70 - 120)	0.080	(0 - 15)
1,2,3,4,7,8-HxCDF	1000	1100	pg/L	108	(70 - 120)		
	1000	1100	pg/L	108	(70 - 120)	0.46	(0 - 15)
1,2,3,6,7,8-HxCDF	1000	1100	pg/L	109	(69 - 119)		
	1000	1100	pg/L	108	(69 - 119)	1.0	(0 - 15)
2,3,4,6,7,8-HxCDF	1000	1100	pg/L	109	(69 - 119)		
	1000	1100	pg/L	107	(69 - 119)	1.8	(0 - 15)
1,2,3,7,8,9-HxCDF	1000	1100	pg/L	112	(70 - 120)		
	1000	1100	pg/L	107	(70 - 120)	5.0	(0 - 15)
1,2,3,4,6,7,8-HpCDF	1000	1100	pg/L	114	(68 - 118)		
	1000	1100	pg/L	108	(68 - 118)	5.2	(0 - 15)
1,2,3,4,7,8,9-HpCDF	1000	1100	pg/L	111	(69 - 119)		
	1000	1100	pg/L	106	(69 - 119)	4.1	(0 - 15)
OCDF	2000	2400	pg/L	118	(61 - 128)		
	2000	2300	pg/L	117	(61 - 128)	1.4	(0 - 15)
INTERNAL STANDARD				PERCENT RECOVERY	RECOVERY LIMITS		
13C-2,3,7,8-TCDD				80	(40 - 135)		
				77	(40 - 135)		
13C-1,2,3,7,8-PeCDD				82	(40 - 135)		
				80	(40 - 135)		
13C-1,2,3,4,7,8-HxCDD				89	(40 - 135)		

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...: H7A160151
 LCS Lot-Sample#: H7A230000 - 244

Work Order # ...: JM78G1AC-LCS
 JM78G1AD-LCSD

Matrix: WATER

<u>INTERNAL STANDARD</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
	88	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	83	(40 - 135)
	82	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	95	(40 - 135)
	89	(40 - 135)
13C-OCDD	79	(40 - 135)
	72	(40 - 135)
13C-2,3,7,8-TCDF	94	(40 - 135)
	88	(40 - 135)
13C-1,2,3,7,8-PeCDF	85	(40 - 135)
	89	(40 - 135)
13C-2,3,4,7,8-PeCDF	90	(40 - 135)
	88	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	91	(40 - 135)
	86	(40 - 135)
13C-1,2,3,6,7,8-HxCDF	88	(40 - 135)
	81	(40 - 135)
13C-2,3,4,6,7,8-HxCDF	91	(40 - 135)
	90	(40 - 135)
13C-1,2,3,7,8,9-HxCDF	90	(40 - 135)
	89	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	88	(40 - 135)
	84	(40 - 135)
13C-1,2,3,4,7,8,9-HpCDF	97	(40 - 135)
	93	(40 - 135)

Notes:

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Sample Receipt Documentation

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST H7A1601S1		C.O.C. #	W07-001-204
Collector FLUOR HANFORD M.R. WEIL		Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
SAF No. W07-001	Sampling Origin Hanford Site	Purchase Order/Charge Code		
Project Title RCRA, JANUARY 2007	Logbook: HNF-N-506-3	Ice Chest No. GWD-06-7 Temp.		
Shipped To (Lab) Severn Trent Knoxville	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No. 7929-1593-7753		
Protocol RCRA	Priority: 45 Days	Offsite Property No.		
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 INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days. WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1LTD3		W	1/15/07	0914	2x1000-mL aG	8290_DIOXINS_GCMS: List-1 (25)	Cool 4C
B1LTD3		W	↓	↓	1x20-mL P	Activity Scan	None
<div style="border: 1px solid black; padding: 10px; display: inline-block;"> <p style="font-size: 2em; margin: 0;">DIW</p> <p style="margin: 0;">1/15/07</p> </div>							CUSTODY SEALS INTACT RECEIVED AT 1°C BSK 1-16-07 COOLER FEDEX # 7929 1593 7753

Relinquished By FLUOR HANFORD M.R. WEIL	Print 	Sign 	Date/Time JAN 15 2007	Relinquished By A. Smith S. Smith S. Smith	Print 	Sign 	Date/Time 01-15-07	Matrix * S = Soil DS = Drum Solid SF = Sediment DI = Drum Liquid SO = Solid T = Tissue SL = Sludge W = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By			Date/Time 1500	Relinquished By			Date/Time	
Relinquished By			Date/Time	Relinquished By			Date/Time	
Relinquished By			Date/Time	Relinquished By			Date/Time	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
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STL KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Client: FLYOR HANFORD

Project: _____

Lot Number: H7AW0151

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Do sample container labels match COC? (IDs, Dates, Times)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 1a Do not match COC <input type="checkbox"/> 1b Incomplete information <input type="checkbox"/> 1c Marking smeared <input type="checkbox"/> 1d Label torn <input type="checkbox"/> 1e No label <input type="checkbox"/> 1f COC not received <input type="checkbox"/> 1g Other:	11
2. Is the cooler temperature within limits? (> freezing temp. of water to 6°C; NC, 1668, 1613B: 0-4°C; VOST: 10°C; MA: 2-6°C)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 2a Temp Blank = _____ <input type="checkbox"/> 2b Cooler Temp = _____	
3. Were samples received with correct chemical preservative (excluding Encore)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> 3a Sample preservative = _____	
4. Were custody seals present/intact on cooler and/or containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 4a Not present <input type="checkbox"/> 4b Not intact <input type="checkbox"/> 4c Other:	
5. Were all of the samples listed on the COC received?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 5a Samples received-not on COC <input type="checkbox"/> 5b Samples not received-on COC	
6. Were all of the sample containers received intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 6a Leaking <input type="checkbox"/> 6b Broken	
7. Were VOA samples received without headspace?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> 7a Headspace (VOA only)	
8. Were samples received in appropriate containers?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 8a Improper container	
9. Did you check for residual chlorine, if necessary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> 9a Could not be determined due to matrix interference	
10. Were samples received within holding time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> 10a Holding time expired	
11. For rad samples, was sample activity info. provided?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Incomplete information	
12. For SOG water samples (1613B, 1668A, 8290, LR PAHs), do samples have visible solids present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	If yes & appears to be >1%, was SOG notified? _____	
13. Are the shipping containers intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 13a Leaking <input type="checkbox"/> 13b Other:	
14. Was COC relinquished? (Signed/Dated/Timed)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 14a Not relinquished	
15. Are tests/parameters listed for each sample?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 15a Incomplete information	
16. Is the matrix of the samples noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 15a Incomplete information	
17. Is the date/time of sample collection noted?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 15a Incomplete information	
18. Is the client and project name/# identified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 15a Incomplete information	
19. Was the sampler identified on the COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Quote #: <u>SX 3102</u> PM Instructions: _____					

Sample Receiving Associate: *Bryan Dawson* Date: 1-16-07

QA026R18.doc, 1/30/06