0082884

SAF-RC-075
100-D/DR Burial Grounds & Remaining Sites – Soil Full Protocol
FINAL VALIDATION PACKAGE

COMPLETE COPY OF VALIDATION PACKAGE TO:

Kathy Wendt H4-21 (2 copies)

COMMENTS:

SDG J00499 SAF-RC-075

Waste Site: 116-DR-8

Date: 27 July 2009
To: Washington Closure Hanford Inc. (technical representative)
From: ELR Consulting
Project: 100-D/DR Burial Grounds & Remaining Sites – Soil Full Protocol - Waste Site 116-DR-8
Subject: Metals - Data Package No. J00499-TAL

INTRODUCTION

This memo presents the results of data validation on Data Package No. J00499 prepared by TestAmerica Laboratory Inc. (TAL). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample Date	Media	Validation	Analyte
J18WN4	5/20/09	Soil	C	See note 1
J18WN5	5/20/09	Soil	C	See note 1
J18WN6	5/20/09	Soil	C	See note 1
J18WN7	5/20/09	Soil	C	See note 1
J18WN8	5/20/09	Soil	C	See note 1
J18WN9	5/20/09	Soil	C	See note 1
J18WP0	5/20/09	Soil	C	See note 1
J18WP1	5/20/09	Soil	C	See note 1
J18WP2	5/20/09	Soil	C	See note 1
J18WP3	5/20/09	Soil	C	See note 1
J18WP4	5/20/09	Soil	C	See note 1
J18WP5	5/20/09	Soil	C	See note 1
J18WP6	5/20/09	Soil	C	See note 1
J18WP7	5/20/09	Soil	C	See note 1

1 - ICP metals (6010B) and mercury (7471A).

Data validation was conducted in accordance with the Washington Closure Hanford (WCH) validation statement of work and the 100 Area Remedial Action Sampling and Analysis Plan (DOE/RL-96-22, Rev. 4, February 2005). Appendices 1 through 6 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports
Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Documentation Requested by Client

DATA QUALITY PARAMETERS

- **Holding Times**

Analytical holding times for metals are assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Soil samples must be analyzed within 28 days for mercury and 6 months for ICP metals.

All holding times were acceptable.

- **Preparation (Method) Blanks**

Preparation Blanks

At least one preparation blank, consisting of deionized distilled water processed through each sample preparation and analysis procedure, must be prepared and analyzed with every sample delivery group. In the case of positive blank results, samples with digestate concentrations less than five times the preparation blank value have had their associated values qualified as non-detected and flagged "UJ". Samples with concentrations of greater than five times the highest blank concentration do not require qualification.

In the case of negative blank results, if the absolute value exceeds the contract required detection limit (CRDL), all nondetects are rejected and flagged "UR" and all detects that are less than ten times the absolute value of the associated preparation blank result are qualified as estimates and flagged "J". If the absolute value of the negative preparation blank is greater than the instrument detection limit (IDL) and less than or equal to the CRDL, all nondetects are qualified as estimates and flagged "UJ" and all detects less than ten times the absolute value of the blank are qualified as estimates and flagged "J". If the sample results are greater than ten times the absolute value of the preparation blank, no qualification is necessary.

Due to method blank contamination, the zinc result in sample J18WN4 was qualified as an estimate and flagged "UJ".

All other preparation blank results were acceptable.

Field (Equipment) Blank

One field blank (J18WN4) was submitted for analysis. Barium, chromium, cobalt, lead, manganese, nickel and vanadium were detected in the field blank. Under the WCH statement of work, no qualification is required.

- **Accuracy**

Matrix Spike and Laboratory Control Sample

Matrix spike (MS) and laboratory control sample (LCS) analyses are used to assess the analytical accuracy of the reported data. The matrix spike is used to assess the effect of the matrix on the ability to accurately quantify sample concentrations. Recoveries must fall within the range of 75% to 125%. Samples with a recovery of less than 30% and a sample result below the IDL are rejected and flagged "UR". Samples with a recovery of 30% to 74% and a sample result less than the IDL are qualified "UJ". Samples with a recovery of greater than 125% or less than 74% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a recovery greater than 125% and a sample result less than the IDL, no qualification is required.

All accuracy results were acceptable (the equipment blank was used for the MS analysis).

- **Precision**

Laboratory Duplicate Samples

Analytical precision is expressed by the relative percent differences (RPD) between the recoveries of matrix spike duplicate (MSD) analyses performed on a sample in the analytical batch. Precision may alternatively be assessed using unspiked duplicate analyses performed on a sample in the analytical batch. If both sample and replicate activities (concentrations) are greater than five times the CRDL and the RPD is less than 30%, no qualification is required. If either activity (concentration) is less than five times the CRDL, the RPD control limit is less than or equal to two times the CRDL. If the RPD is outside the applicable control limit, associated results are qualified as estimated detects or estimated non-detects.

Due to an RPD outside QC limits, all manganese (116%) results were qualified as estimates and flagged "J".

All other laboratory duplicate results were acceptable (the equipment blank was used for the laboratory duplicate).

Field Duplicate

One set of field duplicates (J18WP0/J18WP7) was submitted for analysis. Field duplicates are compared using the same criteria as for laboratory duplicates. All field duplicate results were acceptable.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the 100 Area RQLs to ensure that laboratory detection levels meet the required criteria. All results met the RQL.

- **Completeness**

Data package No. J00499 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

The following minor deficiency was noted:

- Due to method blank contamination, the zinc result in sample J18WN4 was qualified as an estimate and flagged "UJ".
- Due to an RPD outside QC limits, all manganese (116%) results were qualified as estimates and flagged "J".

Data flagged "J" indicates that the associated concentration is an estimate, but under the WCH statement of work, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

REFERENCES

Washington Closure Hanford Contract #S00W307A00 (March 2008), *Data Validation Services*, March 2008.

DOE/RL-96-22, Rev. 4, *100 Area Remedial Action Sampling and Analysis Plan*, U.S. Department of Energy, February 2005.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validators in compliance with WCH validation SOW are as follows:

U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated concentration is an estimate, but the data are usable for decision-making purposes.

BJ - Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

Appendix 2

Summary of Data Qualification

METALS DATA QUALIFICATION SUMMARY*

SDG: J00499	REVIEWER: ELR	Project: 116-DR-8	PAGE 1 OF 1
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Zinc	UJ	J18WN4	Method blank contamination
Manganese	J	All	RPD

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Annotated Laboratory Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN4
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-001
Matrix:	SOLID	**Lab WorkOrder:**	LDMDV
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 07:37

Analysis Method: 6010B TOTAL **% Moisture:** 0.0 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.38	0.38	1.5	U	6/1/09	06/01/09 17:24	1
9146376	Arsenic	0.66	0.66	2.0	U	6/1/09	06/01/09 17:24	1
9146376	Barium	1.9	0.076	1.0	M	6/1/09	06/01/09 17:24	1
9146376	Beryllium	0.033	0.033	0.50	U M	6/1/09	06/01/09 17:24	1
9146376	Boron	0.98	0.98	2.0	U	6/1/09	06/01/09 17:24	1
9146376	Cadmium	0.041	0.041	0.50	U	6/1/09	06/01/09 17:24	1
9146376	Chromium	0.15	0.058	1.0	B	6/1/09	06/01/09 17:24	1
9146376	Cobalt	0.13	0.10	1.0	B	6/1/09	06/01/09 17:24	1
9146376	Copper	0.22	0.22	1.0	U	6/1/09	06/01/09 17:24	1
9146376	Lead	0.34	0.27	0.80	B M	6/1/09	06/01/09 17:24	1
9146376	Lithium	0.30	0.30	2.5	U	6/1/09	06/01/09 17:24	1
9146376	Manganese	3.7	0.10	1.0	M J	6/1/09	06/01/09 17:24	1
9146376	Molybdenum	0.26	0.26	2.0	U	6/1/09	06/01/09 17:24	1
9146376	Nickel	0.16	0.12	4.0	B	6/1/09	06/01/09 17:24	1
9146376	Selenium	0.86	0.86	1.3	U	6/1/09	06/01/09 17:24	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/01/09 17:24	1
9146376	Sodium	59	59	120	U	6/1/09	06/01/09 17:24	1
9146376	Vanadium	0.44	0.094	2.0	B	6/1/09	06/01/09 17:24	1
9146376	Zinc	1.4	0.40	1.0	C M UJ	6/1/09	06/02/09 14:55	1

Analysis Method: 7471A TOTAL **% Moisture:** 0.0 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0055	0.0055	0.017	U M	6/4/09	06/04/09 21:40	1

7/23/09

000010

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Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN5
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-002
Matrix:	SOLID	**Lab WorkOrder:**	LDMDW
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 07:58

Analysis Method: 6010B TOTAL **% Moisture:** 0.91 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.68	0.38	1.5	B	6/1/09	06/02/09 15:05	1
9146376	Arsenic	2.1	0.67	2.0		6/1/09	06/02/09 15:05	1
9146376	Barium	56	0.077	1.0		6/1/09	06/02/09 15:05	1
9146376	Beryllium	2.0	0.033	0.50		6/1/09	06/02/09 15:05	1
9146376	Boron	0.99	0.99	2.0	U	6/1/09	06/02/09 15:05	1
9146376	Cadmium	0.041	0.041	0.50	U	6/1/09	06/02/09 15:05	1
9146376	Chromium	7.3	0.059	1.0		6/1/09	06/02/09 15:05	1
9146376	Cobalt	10	0.10	1.0		6/1/09	06/02/09 15:05	1
9146376	Copper	12	0.22	1.0		6/1/09	06/02/09 15:05	1
9146376	Lead	3.9	0.27	0.81		6/1/09	06/02/09 15:05	1
9146376	Lithium	6.6	0.30	2.5		6/1/09	06/02/09 15:05	1
9146376	Manganese	340	0.10	1.0	J	6/1/09	06/02/09 15:05	1
9146376	Molybdenum	0.26	0.26	2.0	U	6/1/09	06/02/09 15:05	1
9146376	Nickel	12	0.12	4.0		6/1/09	06/02/09 15:05	1
9146376	Selenium	0.87	0.87	1.3	U	6/1/09	06/02/09 15:05	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/02/09 15:05	1
9146376	Sodium	320	60	120		6/1/09	06/01/09 17:33	1
9146376	Vanadium	71	0.095	2.0		6/1/09	06/02/09 15:05	1
9146376	Zinc	49	0.40	1.0		6/1/09	06/02/09 15:05	1

Analysis Method: 7471A TOTAL **% Moisture:** 0.91 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0056	0.0056	0.017	U	6/4/09	06/04/09 21:47	1

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000011

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Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN6
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-003
Matrix:	SOLID	**Lab WorkOrder:**	LDMD0
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:01

Analysis Method: 6010B TOTAL **% Moisture:** 1.9 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.51	0.39	1.5	B	6/1/09	06/01/09 17:35	1
9146376	Arsenic	2.7	0.67	2.0		6/1/09	06/01/09 17:35	1
9146376	Barium	51	0.077	1.0		6/1/09	06/01/09 17:35	1
9146376	Beryllium	0.75	0.034	0.51		6/1/09	06/01/09 17:35	1
9146376	Boron	1.0	1.0	2.0	U	6/1/09	06/01/09 17:35	1
9146376	Cadmium	0.042	0.042	0.51	U	6/1/09	06/01/09 17:35	1
9146376	Chromium	4.5	0.059	1.0		6/1/09	06/01/09 17:35	1
9146376	Cobalt	9.1	0.10	1.0		6/1/09	06/01/09 17:35	1
9146376	Copper	11	0.22	1.0		6/1/09	06/01/09 17:35	1
9146376	Lead	2.4	0.28	0.82		6/1/09	06/01/09 17:35	1
9146376	Lithium	3.9	0.31	2.5		6/1/09	06/01/09 17:35	1
9146376	Manganese	280	0.10	1.0	J	6/1/09	06/01/09 17:35	1
9146376	Molybdenum	0.26	0.26	2.0	U	6/1/09	06/01/09 17:35	1
9146376	Nickel	9.8	0.13	4.1		6/1/09	06/01/09 17:35	1
9146376	Selenium	0.88	0.88	1.3	U	6/1/09	06/01/09 17:35	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/01/09 17:35	1
9146376	Sodium	320	60	120		6/1/09	06/01/09 17:35	1
9146376	Vanadium	70	0.096	2.0		6/1/09	06/01/09 17:35	1
9146376	Zinc	48	0.41	1.0		6/1/09	06/03/09 00:42	1

Analysis Method: 7471A TOTAL **% Moisture:** 1.9 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0056	0.0056	0.017	U	6/4/09	06/04/09 21:50	1

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000012

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Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN7
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-004
Matrix:	SOLID	**Lab WorkOrder:**	LDMD1
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:32

Analysis Method: 6010B TOTAL **% Moisture:** 1.1 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.52	0.38	1.5	B	6/1/09	06/01/09 17:38	1
9146376	Arsenic	2.4	0.67	2.0		6/1/09	06/01/09 17:38	1
9146376	Barium	55	0.077	1.0		6/1/09	06/01/09 17:38	1
9146376	Beryllium	0.70	0.033	0.51		6/1/09	06/01/09 17:38	1
9146376	Boron	1.2	0.99	2.0	B	6/1/09	06/01/09 17:38	1
9146376	Cadmium	0.041	0.041	0.51	U	6/1/09	06/01/09 17:38	1
9146376	Chromium	7.9	0.059	1.0		6/1/09	06/01/09 17:38	1
9146376	Cobalt	8.4	0.10	1.0		6/1/09	06/01/09 17:38	1
9146376	Copper	14	0.22	1.0		6/1/09	06/01/09 17:38	1
9146376	Lead	4.5	0.27	0.81		6/1/09	06/01/09 17:38	1
9146376	Lithium	7.4	0.30	2.5		6/1/09	06/01/09 17:38	1
9146376	Manganese	290	0.10	1.0	J	6/1/09	06/01/09 17:38	1
9146376	Molybdenum	0.26	0.26	2.0	U	6/1/09	06/01/09 17:38	1
9146376	Nickel	12	0.12	4.0		6/1/09	06/01/09 17:38	1
9146376	Selenium	0.87	0.87	1.3	U	6/1/09	06/01/09 17:38	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/01/09 17:38	1
9146376	Sodium	340	60	120		6/1/09	06/01/09 17:38	1
9146376	Vanadium	57	0.095	2.0		6/1/09	06/01/09 17:38	1
9146376	Zinc	55	0.40	1.0		6/1/09	06/03/09 00:44	1

Analysis Method: 7471A TOTAL **% Moisture:** 1.1 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0056	0.0056	0.017	U	6/4/09	06/04/09 21:52	1

K 7/23/09

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Washington Closure Hanford LLC

Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN8
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-005
Matrix:	SOLID	**Lab WorkOrder:**	LDMD2
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:51

Analysis Method: 6010B TOTAL **% Moisture:** 2.9 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.45	0.39	1.5	B	6/1/09	06/01/09 17:40	1
9146376	Arsenic	2.3	0.68	2.1		6/1/09	06/01/09 17:40	1
9146376	Barium	62	0.078	1.0		6/1/09	06/01/09 17:40	1
9146376	Beryllium	0.69	0.034	0.51		6/1/09	06/01/09 17:40	1
9146376	Boron	1.0	1.0	2.1	U	6/1/09	06/01/09 17:40	1
9146376	Cadmium	0.042	0.042	0.51	U	6/1/09	06/01/09 17:40	1
9146376	Chromium	7.8	0.060	1.0		6/1/09	06/01/09 17:40	1
9146376	Cobalt	8.1	0.10	1.0		6/1/09	06/01/09 17:40	1
9146376	Copper	15	0.22	1.0		6/1/09	06/01/09 17:40	1
9146376	Lead	3.9	0.28	0.82		6/1/09	06/01/09 17:40	1
9146376	Lithium	6.9	0.31	2.6		6/1/09	06/01/09 17:40	1
9146376	Manganese	300	0.10	1.0	J	6/1/09	06/01/09 17:40	1
9146376	Molybdenum	0.27	0.27	2.1	U	6/1/09	06/01/09 17:40	1
9146376	Nickel	11	0.13	4.1		6/1/09	06/01/09 17:40	1
9146376	Selenium	0.89	0.89	1.3	U	6/1/09	06/01/09 17:40	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/01/09 17:40	1
9146376	Sodium	200	61	120		6/1/09	06/01/09 17:40	1
9146376	Vanadium	54	0.097	2.1		6/1/09	06/01/09 17:40	1
9146376	Zinc	45	0.41	1.0		6/1/09	06/03/09 00:47	1

Analysis Method: 7471A TOTAL **% Moisture:** 2.9 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0057	0.0057	0.018	U	6/4/09	06/04/09 21:59	1

7/23/09

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Washington Closure Hanford LLC

Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN9
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-006
Matrix:	SOLID	**Lab WorkOrder:**	LDMD3
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 10:25

Analysis Method: 6010B TOTAL **% Moisture:** 1.7 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.48	0.39	1.5	B	6/1/09	06/01/09 17:52	1
9146376	Arsenic	1.2	0.67	2.0	B	6/1/09	06/01/09 17:52	1
9146376	Barium	76	0.077	1.0		6/1/09	06/01/09 17:52	1
9146376	Beryllium	0.81	0.034	0.51		6/1/09	06/01/09 17:52	1
9146376	Boron	1.0	1.0	2.0	U	6/1/09	06/01/09 17:52	1
9146376	Cadmium	0.042	0.042	0.51	U	6/1/09	06/01/09 17:52	1
9146376	Chromium	5.2	0.059	1.0		6/1/09	06/01/09 17:52	1
9146376	Cobalt	8.6	0.10	1.0		6/1/09	06/01/09 17:52	1
9146376	Copper	13	0.22	1.0		6/1/09	06/01/09 17:52	1
9146376	Lead	3.1	0.27	0.81		6/1/09	06/01/09 17:52	1
9146376	Lithium	150	0.31	2.5		6/1/09	06/01/09 17:52	1
9146376	Manganese	310	0.10	1.0	J	6/1/09	06/01/09 17:52	1
9146376	Molybdenum	0.27	0.26	2.0	B	6/1/09	06/01/09 17:52	1
9146376	Nickel	7.9	0.13	4.1		6/1/09	06/01/09 17:52	1
9146376	Selenium	0.87	0.87	1.3	U	6/1/09	06/01/09 17:52	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/01/09 17:52	1
9146376	Sodium	1000	60	120		6/1/09	06/01/09 17:52	1
9146376	Vanadium	69	0.096	2.0		6/1/09	06/01/09 17:52	1
9146376	Zinc	54	0.40	1.0		6/1/09	06/03/09 00:59	1

Analysis Method: 7471A TOTAL **% Moisture:** 1.7 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0056	0.0056	0.017	U	6/4/09	06/04/09 22:01	1

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP0
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-007
Matrix:	SOLID	**Lab WorkOrder:**	LDMD5
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 12:49

Analysis Method: 6010B TOTAL **% Moisture:** 1.6 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.58	0.39	1.5	B	6/1/09	06/01/09 17:54	1
9146376	Arsenic	1.4	0.67	2.0	B	6/1/09	06/01/09 17:54	1
9146376	Barium	50	0.077	1.0		6/1/09	06/01/09 17:54	1
9146376	Beryllium	0.74	0.034	0.51		6/1/09	06/01/09 17:54	1
9146376	Boron	1.0	1.0	2.0	U	6/1/09	06/01/09 17:54	1
9146376	Cadmium	0.042	0.042	0.51	U	6/1/09	06/01/09 17:54	1
9146376	Chromium	7.2	0.059	1.0		6/1/09	06/01/09 17:54	1
9146376	Cobalt	8.3	0.10	1.0		6/1/09	06/01/09 17:54	1
9146376	Copper	12	0.22	1.0		6/1/09	06/01/09 17:54	1
9146376	Lead	2.2	0.27	0.81		6/1/09	06/01/09 17:54	1
9146376	Lithium	5.1	0.30	2.5		6/1/09	06/01/09 17:54	1
9146376	Manganese	290	0.10	1.0	J	6/1/09	06/01/09 17:54	1
9146376	Molybdenum	0.26	0.26	2.0	U	6/1/09	06/01/09 17:54	1
9146376	Nickel	12	0.13	4.1		6/1/09	06/01/09 17:54	1
9146376	Selenium	0.87	0.87	1.3	U	6/1/09	06/01/09 17:54	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/01/09 17:54	1
9146376	Sodium	270	60	120		6/1/09	06/01/09 17:54	1
9146376	Vanadium	67	0.096	2.0		6/1/09	06/01/09 17:54	1
9146376	Zinc	47	0.40	1.0		6/1/09	06/03/09 01:01	1

Analysis Method: 7471A TOTAL **% Moisture:** 1.6 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0056	0.0056	0.017	U	6/4/09	06/04/09 22:04	1

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Washington Closure Hanford LLC

Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP1
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-008
Matrix:	SOLID	**Lab WorkOrder:**	LDMD6
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 13:31

Analysis Method: 6010B TOTAL **% Moisture:** 3.2 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.44	0.39	1.5	B	6/1/09	06/01/09 17:56	1
9146376	Arsenic	2.0	0.68	2.1	B	6/1/09	06/01/09 17:56	1
9146376	Barium	66	0.079	1.0		6/1/09	06/01/09 17:56	1
9146376	Beryllium	0.72	0.034	0.52		6/1/09	06/01/09 17:56	1
9146376	Boron	1.0	1.0	2.1	U	6/1/09	06/01/09 17:56	1
9146376	Cadmium	0.042	0.042	0.52	U	6/1/09	06/01/09 17:56	1
9146376	Chromium	6.7	0.060	1.0		6/1/09	06/01/09 17:56	1
9146376	Cobalt	8.3	0.10	1.0		6/1/09	06/01/09 17:56	1
9146376	Copper	13	0.22	1.0		6/1/09	06/01/09 17:56	1
9146376	Lead	3.7	0.28	0.83		6/1/09	06/01/09 17:56	1
9146376	Lithium	5.2	0.31	2.6		6/1/09	06/01/09 17:56	1
9146376	Manganese	290	0.10	1.0	J	6/1/09	06/01/09 17:56	1
9146376	Molybdenum	0.27	0.27	2.1	U	6/1/09	06/01/09 17:56	1
9146376	Nickel	11	0.13	4.1		6/1/09	06/01/09 17:56	1
9146376	Selenium	0.89	0.89	1.3	U	6/1/09	06/01/09 17:56	1
9146376	Silver	0.17	0.17	1.0	U	6/1/09	06/01/09 17:56	1
9146376	Sodium	250	61	120		6/1/09	06/01/09 17:56	1
9146376	Vanadium	60	0.097	2.1		6/1/09	06/01/09 17:56	1
9146376	Zinc	48	0.41	1.0		6/1/09	06/03/09 01:04	1

Analysis Method: 7471A TOTAL **% Moisture:** 3.2 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0057	0.0057	0.018	U	6/4/09	06/04/09 22:06	1

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Washington Closure Hanford LLC

Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP2
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-009
Matrix:	SOLID	**Lab WorkOrder:**	LDMD7
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 13:45

Analysis Method: 6010B TOTAL **% Moisture:** 2.0 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.47	0.39	1.5	B	6/1/09	06/01/09 17:59	1
9146376	Arsenic	2.2	0.67	2.0		6/1/09	06/01/09 17:59	1
9146376	Barium	60	0.078	1.0		6/1/09	06/01/09 17:59	1
9146376	Beryllium	0.81	0.034	0.51		6/1/09	06/01/09 17:59	1
9146376	Boron	1.0	1.0	2.0	U	6/1/09	06/01/09 17:59	1
9146376	Cadmium	0.042	0.042	0.51	U	6/1/09	06/01/09 17:59	1
9146376	Chromium	5.8	0.059	1.0		6/1/09	06/01/09 17:59	1
9146376	Cobalt	9.4	0.10	1.0		6/1/09	06/01/09 17:59	1
9146376	Copper	14	0.22	1.0		6/1/09	06/01/09 17:59	1
9146376	Lead	3.4	0.28	0.82		6/1/09	06/01/09 17:59	1
9146376	Lithium	5.9	0.31	2.5		6/1/09	06/01/09 17:59	1
9146376	Manganese	320	0.10	1.0	J	6/1/09	06/01/09 17:59	1
9146376	Molybdenum	0.64	0.27	2.0	B	6/1/09	06/01/09 17:59	1
9146376	Nickel	14	0.13	4.1		6/1/09	06/01/09 17:59	1
9146376	Selenium	0.88	0.88	1.3	U	6/1/09	06/01/09 17:59	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/01/09 17:59	1
9146376	Sodium	310	60	120		6/1/09	06/01/09 17:59	1
9146376	Vanadium	67	0.096	2.0		6/1/09	06/01/09 17:59	1
9146376	Zinc	52	0.41	1.0		6/1/09	06/03/09 01:06	1

Analysis Method: 7471A TOTAL **% Moisture:** 2.0 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0056	0.0056	0.017	U	6/4/09	06/04/09 22:08	1

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Washington Closure Hanford LLC

Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP3
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-010
Matrix:	SOLID	**Lab WorkOrder:**	LDMD9
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 13:15

Analysis Method: 6010B TOTAL **% Moisture:** 5.8 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.40	0.40	1.6	U	6/1/09	06/01/09 18:01	1
9146376	Arsenic	3.3	0.70	2.1		6/1/09	06/01/09 18:01	1
9146376	Barium	50	0.081	1.1		6/1/09	06/01/09 18:01	1
9146376	Beryllium	0.54	0.035	0.53		6/1/09	06/01/09 18:01	1
9146376	Boron	2.2	1.0	2.1		6/1/09	06/01/09 18:01	1
9146376	Cadmium	0.044	0.044	0.53	U	6/1/09	06/01/09 18:01	1
9146376	Chromium	9.1	0.062	1.1		6/1/09	06/01/09 18:01	1
9146376	Cobalt	6.6	0.11	1.1		6/1/09	06/01/09 18:01	1
9146376	Copper	16	0.23	1.1		6/1/09	06/01/09 18:01	1
9146376	Lead	4.1	0.29	0.85		6/1/09	06/01/09 18:01	1
9146376	Lithium	8.0	0.32	2.7		6/1/09	06/01/09 18:01	1
9146376	Manganese	250	0.11	1.1	J	6/1/09	06/01/09 18:01	1
9146376	Molybdenum	0.28	0.28	2.1	U	6/1/09	06/01/09 18:01	1
9146376	Nickel	10	0.13	4.2		6/1/09	06/01/09 18:01	1
9146376	Selenium	0.91	0.91	1.4	U	6/1/09	06/01/09 18:01	1
9146376	Silver	0.17	0.17	1.1	U	6/1/09	06/01/09 18:01	1
9146376	Sodium	310	63	130		6/1/09	06/01/09 18:01	1
9146376	Vanadium	43	0.10	2.1		6/1/09	06/01/09 18:01	1
9146376	Zinc	47	0.42	1.1		6/1/09	06/03/09 01:09	1

Analysis Method: 7471A TOTAL **% Moisture:** 5.8 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0095	0.0059	0.018	B	6/4/09	06/04/09 22:10	1

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Washington Closure Hanford LLC

Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP4
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-011
Matrix:	SOLID	**Lab WorkOrder:**	LDMEA
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 14:10

Analysis Method: 6010B TOTAL **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.39	0.39	1.5	U	6/1/09	06/01/09 18:04	1
9146376	Arsenic	2.1	0.67	2.0		6/1/09	06/01/09 18:04	1
9146376	Barium	77	0.077	1.0		6/1/09	06/01/09 18:04	1
9146376	Beryllium	0.69	0.034	0.51		6/1/09	06/01/09 18:04	1
9146376	Boron	1.1	1.0	2.0	B	6/1/09	06/01/09 18:04	1
9146376	Cadmium	0.042	0.042	0.51	U	6/1/09	06/01/09 18:04	1
9146376	Chromium	10	0.059	1.0		6/1/09	06/01/09 18:04	1
9146376	Cobalt	7.6	0.10	1.0		6/1/09	06/01/09 18:04	1
9146376	Copper	13	0.22	1.0		6/1/09	06/01/09 18:04	1
9146376	Lead	4.3	0.28	0.81		6/1/09	06/01/09 18:04	1
9146376	Lithium	7.2	0.31	2.5		6/1/09	06/01/09 18:04	1
9146376	Manganese	300	0.10	1.0	J	6/1/09	06/01/09 18:04	1
9146376	Molybdenum	0.26	0.26	2.0	U	6/1/09	06/01/09 18:04	1
9146376	Nickel	11	0.13	4.1		6/1/09	06/01/09 18:04	1
9146376	Selenium	0.88	0.88	1.3	U	6/1/09	06/01/09 18:04	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/01/09 18:04	1
9146376	Sodium	240	60	120		6/1/09	06/01/09 18:04	1
9146376	Vanadium	54	0.096	2.0		6/1/09	06/01/09 18:04	1
9146376	Zinc	46	0.41	1.0		6/1/09	06/03/09 01:11	1

Analysis Method: 7471A TOTAL **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0056	0.0056	0.017	U	6/4/09	06/04/09 22:13	1

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Washington Closure Hanford LLC

Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP5
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-012
Matrix:	SOLID	**Lab WorkOrder:**	LDMEC
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 14:28

Analysis Method: 6010B TOTAL **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.39	0.39	1.5	U	6/1/09	06/01/09 18:06	1
9146376	Arsenic	2.4	0.67	2.0		6/1/09	06/01/09 18:06	1
9146376	Barium	66	0.077	1.0		6/1/09	06/01/09 18:06	1
9146376	Beryllium	0.54	0.034	0.51		6/1/09	06/01/09 18:06	1
9146376	Boron	1.7	1.0	2.0	B	6/1/09	06/01/09 18:06	1
9146376	Cadmium	0.042	0.042	0.51	U	6/1/09	06/01/09 18:06	1
9146376	Chromium	9.9	0.059	1.0		6/1/09	06/01/09 18:06	1
9146376	Cobalt	6.7	0.10	1.0		6/1/09	06/01/09 18:06	1
9146376	Copper	13	0.22	1.0		6/1/09	06/01/09 18:06	1
9146376	Lead	5.5	0.27	0.81		6/1/09	06/01/09 18:06	1
9146376	Lithium	6.9	0.31	2.5		6/1/09	06/01/09 18:06	1
9146376	Manganese	270	0.10	1.0	J	6/1/09	06/01/09 18:06	1
9146376	Molybdenum	0.26	0.26	2.0	U	6/1/09	06/01/09 18:06	1
9146376	Nickel	11	0.13	4.1		6/1/09	06/01/09 18:06	1
9146376	Selenium	0.88	0.88	1.3	U	6/1/09	06/01/09 18:06	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/01/09 18:06	1
9146376	Sodium	230	60	120		6/1/09	06/01/09 18:06	1
9146376	Vanadium	43	0.096	2.0		6/1/09	06/01/09 18:06	1
9146376	Zinc	43	0.41	1.0		6/1/09	06/03/09 01:13	1

Analysis Method: 7471A TOTAL **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0056	0.0056	0.017	U	6/4/09	06/04/09 22:15	1

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Washington Closure Hanford LLC

Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP6
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-013
Matrix:	SOLID	**Lab WorkOrder:**	LDMED
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 10:39

Analysis Method: 6010B TOTAL **% Moisture:** 2.1 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.39	0.39	1.5	U	6/1/09	06/01/09 18:09	1
9146376	Arsenic	1.9	0.67	2.0	B	6/1/09	06/01/09 18:09	1
9146376	Barium	57	0.078	1.0		6/1/09	06/01/09 18:09	1
9146376	Beryllium	0.68	0.034	0.51		6/1/09	06/01/09 18:09	1
9146376	Boron	1.0	1.0	2.0	U	6/1/09	06/01/09 18:09	1
9146376	Cadmium	0.042	0.042	0.51	U	6/1/09	06/01/09 18:09	1
9146376	Chromium	6.6	0.059	1.0		6/1/09	06/01/09 18:09	1
9146376	Cobalt	7.9	0.10	1.0		6/1/09	06/01/09 18:09	1
9146376	Copper	13	0.22	1.0		6/1/09	06/01/09 18:09	1
9146376	Lead	3.9	0.28	0.82		6/1/09	06/01/09 18:09	1
9146376	Lithium	5.2	0.31	2.6		6/1/09	06/01/09 18:09	1
9146376	Manganese	270	0.10	1.0	J	6/1/09	06/01/09 18:09	1
9146376	Molybdenum	0.27	0.27	2.0	U	6/1/09	06/01/09 18:09	1
9146376	Nickel	9.3	0.13	4.1		6/1/09	06/01/09 18:09	1
9146376	Selenium	0.88	0.88	1.3	U	6/1/09	06/01/09 18:09	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/01/09 18:09	1
9146376	Sodium	250	60	120		6/1/09	06/01/09 18:09	1
9146376	Vanadium	57	0.096	2.0		6/1/09	06/01/09 18:09	1
9146376	Zinc	46	0.41	1.0		6/1/09	06/03/09 01:16	1

Analysis Method: 7471A TOTAL **% Moisture:** 2.1 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0056	0.0056	0.017	U	6/4/09	06/04/09 22:22	1

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Washington Closure Hanford LLC

Metals Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP7
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-014
Matrix:	SOLID	**Lab WorkOrder:**	LDMEE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 12:49

Analysis Method: 6010B TOTAL **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.57	0.39	1.5	B	6/1/09	06/01/09 18:11	1
9146376	Arsenic	1.4	0.67	2.0	B	6/1/09	06/01/09 18:11	1
9146376	Barium	48	0.077	1.0		6/1/09	06/01/09 18:11	1
9146376	Beryllium	0.76	0.034	0.51		6/1/09	06/01/09 18:11	1
9146376	Boron	1.0	1.0	2.0	U	6/1/09	06/01/09 18:11	1
9146376	Cadmium	0.042	0.042	0.51	U	6/1/09	06/01/09 18:11	1
9146376	Chromium	6.1	0.059	1.0		6/1/09	06/01/09 18:11	1
9146376	Cobalt	8.4	0.10	1.0		6/1/09	06/01/09 18:11	1
9146376	Copper	11	0.22	1.0		6/1/09	06/01/09 18:11	1
9146376	Lead	2.3	0.27	0.81		6/1/09	06/01/09 18:11	1
9146376	Lithium	4.6	0.31	2.5		6/1/09	06/01/09 18:11	1
9146376	Manganese	280	0.10	1.0	J	6/1/09	06/01/09 18:11	1
9146376	Molybdenum	0.26	0.26	2.0	U	6/1/09	06/01/09 18:11	1
9146376	Nickel	11	0.13	4.1		6/1/09	06/01/09 18:11	1
9146376	Selenium	0.88	0.88	1.3	U	6/1/09	06/01/09 18:11	1
9146376	Silver	0.16	0.16	1.0	U	6/1/09	06/01/09 18:11	1
9146376	Sodium	250	60	120		6/1/09	06/01/09 18:11	1
9146376	Vanadium	67	0.096	2.0		6/1/09	06/01/09 18:11	1
9146376	Zinc	46	0.41	1.0		6/1/09	06/03/09 01:18	1

Analysis Method: 7471A TOTAL **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0056	0.0056	0.017	U	6/4/09	06/04/09 22:24	1

7/23/09

000023

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

CASE NARRATIVE
J00499 / RC-075 / D9E220401

The following report contains the analytical results for fifteen soil samples submitted to TestAmerica by Washington Closure Hanford. The samples were received May 22, 2009, according to documented sample acceptance procedures.

Client ID	Lab ID	Analyses Requested	Analyses Performed
J18WN4	D9E220401-001	6010/7471/8270A	6010B/7471A/8270C
J18WN5	D9E220401-002	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN6	D9E220401-003	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN7	D9E220401-004	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN8	D9E220401-005	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN9	D9E220401-006	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP0	D9E220401-007	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP1	D9E220401-008	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP2	D9E220401-009	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP3	D9E220401-010	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP4	D9E220401-011	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP5	D9E220401-012	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP6	D9E220401-013	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP7	D9E220401-014	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18X44	D9E220401-015	8260A	8260B

Dilution factors and qualifiers are provided to assist in the interpretation of the results. In some cases, due to interferences or analytes present above the linear calibration curve, samples must be analyzed at a dilution. For samples analyzed at a dilution, the reporting limits are adjusted relative to the dilution required. Dilutions made for reasons other than the presence of target compounds are addressed in the Supplemental QC Information section.

This report includes reporting limits (RLs) less than TestAmerica Denver's practical quantitation limits. These reporting limits are being used specifically at the client's request to meet the needs of this project. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards. Please note that Non-Detect (U) results have been evaluated down to the Method Detection Limit (MDL) and should be considered Non-Detect (U) at the MDL. The results, RLs and MDLs included in this report have been adjusted for dry weight.

TestAmerica utilizes USEPA approved methods in all analytical work. The results apply only to the samples included in this report and meet all requirements of NELAC. All data have been reviewed for compliance with the laboratory QA/QC plan and have been found to be compliant with laboratory protocols, with the exception of any items noted below.

SUPPLEMENTAL QC INFORMATION

Sample Receipt

Samples were received in good condition at a temperature of 3.6°C. No anomalies were encountered during sample receipt.

GCMS Volatiles – SW846 8260B

Low levels of Methylene chloride, a common laboratory contaminant, are present in the method blank associated with QC batch 9154075. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

GCMS Volatiles – SW846 8260B (cont.)
The MSD aliquot of the MS/MSD performed on sample J18WN5 exhibited a percent recovery outside the QC control limits for 1,1-Dichloroethene. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GCMS Semivolatiles – SW846 8270C
Compounds Benzo(b)fluoranthene and Benzo(k)fluoranthene were unresolved in sample J18WN4 due to matrix interferences. It can be noted that these compounds were adequately resolved in associated standards, indicating the instrument is achieving separation. The combined peak was reported as Benzo(b)fluoranthene, while Benzo(k)fluoranthene was reported as undetected even though it may be present. Associated results in the analytical report have been flagged with a "K".

Sample J18WN5 exhibited surrogate recoveries outside the QC control limits, biased high. As no detectable concentrations are present at levels greater than the reporting limits in the sample, corrective action is deemed unnecessary.

No other anomalies were encountered.

GC Semivolatiles – SW846 8082 – PCBs
Surrogate Decachlorobiphenyl was recovered outside the QC control limits, biased high, in sample J18WP2. This is an indicator that data may be biased high. As no detectable concentrations are present in the sample, corrective action is deemed unnecessary. The laboratory noted that the sample chromatogram shows obvious evidence of matrix interference.

A Continuing Calibration Verification (CCV) standard exhibited %Difference (%D) values >15%, biased high, for Aroclor 1260 and surrogate Tetrachloro-m-xylene. The overall mean %D is ≤15%; therefore, method criteria have been met and corrective action is deemed unnecessary.

No other anomalies were encountered.

Total Metals – SW846 6010B/7471A
Low levels of Zinc are present in the method blank associated with QC batch 9146376. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

The duplicate analysis of sample J18WN4 exhibited RPD data outside the QC control limits for Barium, Beryllium, Lead, Manganese, Zinc and Mercury. In some cases, the RPD was calculated based on a value below the method detection limit, and as such, could not be reliably calculated. There is no indication that the analytical systems were operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

I certify that this data package 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:

Kae E. Yoder
Project Manager

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 1 of 2

Collector J Sellers	Company Contact D.W.Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH
Price Code 8 L	Data Turnaround 21 days		
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 116-DR-8, Verification I, excavation		SAF No. RC-075
Ice Chest No.	Field Logbook No. EL-1607-6	COA R116R8N6W0	Method of Shipment
Shipped To EBERLINE SERVICES, LLC IONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No. See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL
SAMPLE ANALYSIS	See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 1260A (TCL)	See item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium
Sample No. / Matrix * / Sample Date / Sample Time										
J18WN4 / SOIL / 5/20/09 / 0737	✓			✓						
J18WN5 / SOIL / ↓ / 0758	✓	✓	✓	✓	✓					
J18WN6 / SOIL / ↓ / 0901	✓	✓	✓	✓	✓					
J18WN7 / SOIL / ↓ / 0932	✓	✓	✓	✓	✓					
J18WN8 / SOIL / ↓ / 0951	✓	✓	✓	✓	✓					

EB
A1
A2
A3
A4

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
J. Sellers, [signature]	5-20-09 1006	DWShea DWShea	5/20/09 1006
DWShea DWShea	5/20/09 1641	Fridge 1B	5/20/09 1641
Fridge 1B / J. E. Benhal	5-21-09 0830	J. E. Benhal	5-21-09 0830
J. E. Benhal	5-21-09 1000	DAVID HARBISON	5-21-09 1000
DAVID HARBISON	5-21-09 1000		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]: Mercury - 7471 - (CV) [Mercury] DWShea 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108 metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499

Matrix *

S=Soil
SS=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By: [signature]	Title	Date/Time: 5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

000027

5

TestAmerica

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 2 of 3

Collector: J Sellers	Company Contact: D.W.Shea — Telephone No.: 521-6014	Project Coordinator: KESSNER, JH	Price Code: 8L — Data Turnaround: 21 days
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 116-DR-8, Verification I. excavation	SAF No.: RC-075	
Ice Chest No.	Field Logbook No.: EL-1607-6 — COA: R116R8N6W0	Method of Shipment	
Shipped To: EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS
potentially radioactive

Special Handling and/or Storage

820000

SAMPLE ANALYSIS													
			Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
			Type of Container	G/P	G/P	sG	sG	G	G/P	G/P	G/P	G/P	G/P
			No. of Container(s)	1	1	1	1	1	1	1	1	1	1
			Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL
				See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium
Sample No.	Matrix *	Sample Date	Sample Time										
J18WN9	SOIL	5/20/09	1025	✓	✓	✓	✓	✓					
J18WP0	SOIL		1249	✓	✓	✓	✓	✓					
J18WP1	SOIL		1331	✓	✓	✓	✓	✓					
J18WP2	SOIL		1345	✓	✓	✓	✓	✓					
J18WP3	SOIL		1325	✓	✓	✓	✓	✓					

A5
A6
A7
A8
A9

CHAIN OF POSSESSION — Sign/Print Names DWShea 5/20/09

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
J. Sellers	5-20-09 1440	DWSHEA	5/20/09 1440
DWShea	5/20/09 1641	Fridge 18	5/20/09 1641
Fridge 18/J.E. Benhal	5-21-09 0830	J.E. Benhal	5-21-09 0830
J.E. Benhal	5-21-09 1000	DAVID HARBINSON	5-21-09 1000
DAVID HARBINSON	5-21-09 100		

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108 metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

JU0499

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
	Lenny Bindell		5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica

3.6 CHK
IRZAB 5-22-09

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 2 of 2

Collector J Sellers	Company Contact D.W.Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH
Price Code 8L	Data Turnaround 21 days		
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 116-DR-8, Verification I, excavation		SAF No. RC-075
Ice Chest No.	Field Logbook No. EL-1607-6	COA R116R8N6W0	Method of Shipment
Shipped To EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No. See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS
potentially radioactive

Special Handling and/or Storage

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL
SAMPLE ANALYSIS	See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63; Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium

620009

Sample No.	Matrix *	Sample Date	Sample Time											
J16WP4	SOIL	5/20/09	1345	✓	✓	✓	✓	✓					A	H10
J18WP5	SOIL		1428	✓	✓	✓	✓	✓						A11
J18WP6	SOIL		1039	✓	✓	✓	✓	✓						A12
J18WP7	SOIL		1249	✓	✓	✓	✓	✓						D

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: J. Sellers	5-20-09 1440	Received By/Stored In: DWSHEA DWSHEA	5/20/09 1440
Relinquished By/Removed From: DWSHEA DWSHEA	5/20/09 1641	Received By/Stored In: Fridge 18	5/20/09 1641
Relinquished By/Removed From: Fridge 18 / J.E. Bernhard	5-21-09 0830	Received By/Stored In: J.E. Bernhard	5-21-09 0830
Relinquished By/Removed From: J.E. Bernhard	5-21-09 1015	Received By/Stored In: David HARDINSON	5-21-09 1015
Relinquished By/Removed From: David HARDINSON	5-21-09 1015	Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SK3 5/21/09

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) ~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~ Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~ Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc1; Mercury - 7471 - (CV) (Mercury) DWShea 5/12/09
(2) Gamma Spec - Add-on (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108 metastable, Sodium-22, Zirconium-95~~) DWShea 5/12/09

J00499

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By: Nancy Bindell	Title	Date/Time: 5/22/09 0900	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time	

WCH-EE-011

TestAmerica

Appendix 5

Data Validation Supporting Documentation

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 116-DR-8			DATA PACKAGE: J00499		
VALIDATOR: ELR		LAB: TAL		DATE: 7/22/09	
			SDG: J00499		

ANALYSES PERFORMED					
SW-846/ICP	SW-846/GFAA	SW-846/Hg	SW-846 Cyanide		

SAMPLES/MATRIX					
J18WN4	J18WN5	J18WN6	J18WN7	J18WN8	J18WN9
J18WP0	J18WP1	J18WP2	J18WP3	J18WP4	J18WP5
J18WP6	J18WP7				
					Soil

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? ..... Yes No N/A

Comments:

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations performed on all instruments? ..... Yes No N/A

Initial calibrations acceptable? ..... Yes No N/A

ICP interference checks acceptable? ..... Yes No N/A

ICV and CCV checks performed on all instruments? ..... Yes No N/A

ICV and CCV checks acceptable? ..... Yes No N/A

Standards traceable? ..... Yes No N/A

Standards expired? ..... Yes No N/A

Calculation check acceptable? ..... Yes No N/A

Comments:

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

ICB and CCB checks performed for all applicable analyses? (Levels D, E) ..... Yes No N/A

ICB and CCB results acceptable? (Levels D, E) ..... Yes No N/A

Laboratory blanks analyzed? ..... Yes No N/A

Laboratory blank results acceptable? ..... Yes No N/A

Field blanks analyzed? (Levels C, D, E) ..... Yes No N/A

Field blank results acceptable? (Levels C, D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: Zn - N4 - U5 all

FB - N4 barium, ~~beryllium~~ beryllium, chromium, cobalt, lead, manganese, nickel + vanadium

4. ACCURACY (Levels C, D, and E)

MS/MSD samples analyzed? ..... Yes No N/A

MS/MSD results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

LCS/BSS samples analyzed? ..... Yes No N/A

LCS/BSS results acceptable? ..... Yes No N/A

Standards traceable? (Levels D, E) ..... Yes No N/A

Standards expired? (Levels D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments: no PAS

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

Duplicate RPD values acceptable?	Yes	No	N/A
Duplicate results acceptable?	Yes	No	N/A
MS/MSD standards NIST traceable? (Levels D, E)	Yes	No	N/A
MS/MSD standards expired? (Levels D, E)	Yes	No	N/A
Field duplicate RPD values acceptable?	Yes	No	N/A
Field split RPD values acceptable?	Yes	No	N/A
Transcription/calculation errors? (Levels D, E)	Yes	No	N/A

Comments: Manganese (11620) ~ J all

6. ICP QUALITY CONTROL (Levels D and E)

ICP serial dilution samples analyzed?	Yes	No	N/A
ICP serial dilution %D values acceptable?	Yes	No	N/A
ICP post digestion spike required?	Yes	No	N/A
ICP post digestion spike values acceptable?	Yes	No	N/A
Standards traceable?	Yes	No	N/A
Standards expired?	Yes	No	N/A
Transcription/calculation errors?	Yes	No	N/A

Comments:

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

7. FURNACE AA QUALITY CONTROL (Levels D and E)

Duplicate injections performed as required? ..... Yes No N/A

Duplicate injection %RSD values acceptable? ..... Yes No N/A

Analytical spikes performed as required? ..... Yes No N/A

Analytical spike recoveries acceptable? ..... Yes No N/A

Standards traceable? ..... Yes No N/A

Standards expired? ..... Yes No N/A

MSA performed as required? ..... Yes No N/A

MSA results acceptable? ..... Yes No N/A

Transcription/calculation errors? ..... Yes No N/A

Comments: _____

8. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A

Sample holding times acceptable? ..... Yes No N/A

Comments: _____

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

9. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

Results reported for all requested analyses? ..... Yes No N/A

Results supported in the raw data? (Levels D, E) ..... Yes No N/A

Samples properly prepared? (Levels D, E) ..... Yes No N/A

Detection limits meet RDL? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

Appendix 6

Additional Documentation Requested by Client

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC
Metals Method Blank Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Lab Sample ID: D9E260000-376B **Work Order:** LDP6A **Analysis Method:** 6010B TOTAL **Matrix:** SOLID **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9146376	Antimony	0.38	0.38	1.5	U	06/01/09	06/01/09 17:19	1
9146376	Arsenic	0.66	0.66	2.0	U	06/01/09	06/01/09 17:19	1
9146376	Lead	0.27	0.27	0.80	U	06/01/09	06/01/09 17:19	1
9146376	Lithium	0.30	0.30	2.5	U	06/01/09	06/01/09 17:19	1
9146376	Manganese	0.10	0.10	1.0	U	06/01/09	06/01/09 17:19	1
9146376	Molybdenum	0.26	0.26	2.0	U	06/01/09	06/01/09 17:19	1
9146376	Barium	0.076	0.076	1.0	U	06/01/09	06/01/09 17:19	1
9146376	Nickel	0.12	0.12	4.0	U	06/01/09	06/01/09 17:19	1
9146376	Beryllium	0.033	0.033	0.50	U	06/01/09	06/01/09 17:19	1
9146376	Selenium	0.86	0.86	1.3	U	06/01/09	06/01/09 17:19	1
9146376	Silver	0.16	0.16	1.0	U	06/01/09	06/01/09 17:19	1
9146376	Sodium	59	59	120	U	06/01/09	06/01/09 17:19	1
9146376	Vanadium	0.094	0.094	2.0	U	06/01/09	06/01/09 17:19	1
9146376	Chromium	0.058	0.058	1.0	U	06/01/09	06/01/09 17:19	1
9146376	Boron	0.98	0.98	2.0	U	06/01/09	06/01/09 17:19	1
9146376	Cadmium	0.041	0.041	0.50	U	06/01/09	06/01/09 17:19	1
9146376	Cobalt	0.10	0.10	1.0	U	06/01/09	06/01/09 17:19	1
9146376	Copper	0.22	0.22	1.0	U	06/01/09	06/01/09 17:19	1
9146376	Zinc	0.58	0.40	1.0	B	06/01/09	06/02/09 14:51	1

Lab Sample ID: D9E270000-165B **Work Order:** LDQ8X **Analysis Method:** 7471A TOTAL **Matrix:** SOLID **Unit:** mg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.0055	0.0055	0.017	U	06/04/09	06/04/09 21:36	1

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Metals Laboratory Control Sample Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Lab Sample ID: D9E260000-376C **WorkOrder:** LDP6A **Analysis Method:** 6010B TOTAL **Matrix:** SOLID **Unit:** mg/kg

QC Batch	Analyte	True	Found	%Rec	Q	Limits	Prep Date	Analysis Date	Dilution
9146376	Antimony	50.0	50.0	100		82 - 110	06/01/09	06/01/09 17:22	1
9146376	Arsenic	100	95.7	96		85 - 110	06/01/09	06/01/09 17:22	1
9146376	Lead	50.0	46.0	92		86 - 110	06/01/09	06/01/09 17:22	1
9146376	Lithium	100	98.4	98		90 - 110	06/01/09	06/01/09 17:22	1
9146376	Manganese	50.0	44.8	90		88 - 110	06/01/09	06/01/09 17:22	1
9146376	Molybdenum	100	95.4	95		86 - 110	06/01/09	06/01/09 17:22	1
9146376	Barium	200	197	98		87 - 112	06/01/09	06/01/09 17:22	1
9146376	Nickel	50.0	45.7	91		87 - 110	06/01/09	06/01/09 17:22	1
9146376	Beryllium	5.00	4.62	92		84 - 114	06/01/09	06/01/09 17:22	1
9146376	Selenium	200	190	95		83 - 110	06/01/09	06/01/09 17:22	1
9146376	Silver	5.00	4.66	93		87 - 114	06/01/09	06/01/09 17:22	1
9146376	Sodium	5000	5150	103		90 - 112	06/01/09	06/01/09 17:22	1
9146376	Vanadium	50.0	46.2	92		88 - 110	06/01/09	06/01/09 17:22	1
9146376	Chromium	20.0	19.1	95		84 - 114	06/01/09	06/01/09 17:22	1
9146376	Boron	100	99.4	99		81 - 110	06/01/09	06/01/09 17:22	1
9146376	Cadmium	10.0	9.40	94		87 - 110	06/01/09	06/01/09 17:22	1
9146376	Cobalt	50.0	46.6	93		87 - 110	06/01/09	06/01/09 17:22	1
9146376	Copper	25.0	25.0	100		88 - 110	06/01/09	06/01/09 17:22	1
9146376	Zinc	50.0	46.9	94		76 - 114	06/01/09	06/02/09 14:53	1

Lab Sample ID: D9E270000-165C **WorkOrder:** LDQ8X **Analysis Method:** 7471A TOTAL **Matrix:** SOLID **Unit:** mg/kg

QC Batch	Analyte	True	Found	%Rec	Q	Limits	Prep Date	Analysis Date	Dilution
9147165	Mercury	0.417	0.430	103		87 - 111	06/04/09	06/04/09 21:38	1

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Washington Closure Hanford LLC

Metals Matrix Spike Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

lient Sample ID: J18WN4 **Lab WorkOrder:** LDMDV **% Moisture:** 0.0 **Basis:** Dry

ab Sample ID: D9E220401-001S **Analysis Method** 6010B TOTAL **Matrix:** SOLID **Unit:** mg/kg

C Batch ID: 9146376

Analyte	Spike Amount	Sample Result	Q	MS Result	% Rec	Q	QC Limit	Prep Date	Analysis Date	Dilution
Antimony	50.0	0.38	U	47.2	94		20 - 200	06/01/09	06/02/09 15:00	1
Arsenic	100	0.66	U	96.1	96		76 - 111	06/01/09	06/02/09 15:00	1
Barium	200	1.9	M	201	99		52 - 159	06/01/09	06/02/09 15:00	1
Beryllium	5.00	0.033	U M	4.87	97		72 - 105	06/01/09	06/02/09 15:00	1
Boron	100	0.98	U	96.3	96		75 - 107	06/01/09	06/02/09 15:00	1
Cadmium	10.0	0.041	U	9.58	96		40 - 130	06/01/09	06/02/09 15:00	1
Chromium	20.0	0.15	B	19.0	94		70 - 200	06/01/09	06/01/09 17:28	1
Cobalt	50.0	0.13	B	47.8	95		72 - 106	06/01/09	06/02/09 15:00	1
Copper	25.0	0.22	U	25.0	100		37 - 187	06/01/09	06/02/09 15:00	1
Lead	50.0	0.34	B M	47.6	95		70 - 200	06/01/09	06/02/09 15:00	1
Lithium	100	0.30	U	98.7	99		84 - 109	06/01/09	06/02/09 15:00	1
Manganese	50.0	3.7	M	54.1	101		40 - 200	06/01/09	06/02/09 15:00	1
Molybdenum	100	0.26	U	96.7	97		75 - 103	06/01/09	06/02/09 15:00	1
Nickel	50.0	0.16	B	47.5	95		61 - 126	06/01/09	06/02/09 15:00	1
Selenium	200	0.86	U	190	95		76 - 104	06/01/09	06/02/09 15:00	1
Silver	5.00	0.16	U	4.96	98		75 - 141	06/01/09	06/02/09 15:00	1
Sodium	5000	59	U	5090	101		78 - 111	06/01/09	06/02/09 15:00	1
Vanadium	50.0	0.44	B	48.7	97		50 - 169	06/01/09	06/02/09 15:00	1
Zinc	50.0	1.4	C M	47.6	92		70 - 200	06/01/09	06/02/09 15:00	1

ient Sample ID: J18WN4 **Lab WorkOrder:** LDMDV **% Moisture:** 0.0 **Basis:** Dry

ıb Sample ID: D9E220401-001S **Analysis Method** 7471A TOTAL **Matrix:** SOLID **Unit:** mg/kg

C Batch ID: 9147165

Analyte	Spike Amount	Sample Result	Q	MS Result	% Rec	Q	QC Limit	Prep Date	Analysis Date	Dilution
Mercury	0.417	0.0055	U M	0.377	90		87 - 111	06/04/09	06/04/09 21:43	1

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Metals Duplicate Sample Analysis Data Sheet

ab Name: TESTAMERICA DENVER Lot/SDG Number: D9E220401

ent Sample ID: J18WN4 DUP Lab WorkOrder: LDMDV % Moisture: 0.0 Basis: Dry

b Sample ID: D9E220401-001X Analysis Method: 6010B TOTAL Matrix: SOLID Unit: mg/kg

atch	Analyte	RPD Limit	Sample Result	Q	Duplicate Result	RPD	Q	Prep Date	Analysis Date	Dilution
6376	Antimony	40	0.38	U	0.38	0	U	06/01/09	06/01/09 17:30	1
6376	Arsenic	30	0.66	U	0.66	0	U	06/01/09	06/01/09 17:30	1
6376	Lead	40	0.34	B M	0.82	84	M	06/01/09	06/01/09 17:30	1
6376	Lithium	30	0.30	U	0.30	0	U	06/01/09	06/01/09 17:30	1
6376	Manganese	40	3.7	M	14	116	M	06/01/09	06/01/09 17:30	1
6376	Molybdenum	30	0.26	U	0.26	0	U	06/01/09	06/01/09 17:30	1
6376	Barium	30	1.9	M	2.9	41	M	06/01/09	06/01/09 17:30	1
6376	Nickel	30	0.16	B	0.21	29	B	06/01/09	06/01/09 17:30	1
6376	Beryllium	30	0.033	U M	0.063	200	B M	06/01/09	06/01/09 17:30	1
6376	Selenium	30	0.86	U	0.86	0	U	06/01/09	06/01/09 17:30	1
6376	Silver	30	0.16	U	0.16	0	U	06/01/09	06/01/09 17:30	1
6376	Sodium	30	59	U	59	0	U	06/01/09	06/01/09 17:30	1
6376	Vanadium	30	0.44	B	0.44	0.91	B	06/01/09	06/01/09 17:30	1
6376	Chromium	40	0.15	B	0.15	0.67	B	06/01/09	06/01/09 17:30	1
6376	Boron	30	0.98	U	0.98	0	U	06/01/09	06/01/09 17:30	1
6376	Cadmium	30	0.041	U	0.041	0.0	U	06/01/09	06/01/09 17:30	1
6376	Cobalt	30	0.13	B	0.16	20	B	06/01/09	06/01/09 17:30	1
6376	Copper	30	0.22	U	0.22	0	U	06/01/09	06/01/09 17:30	1
6376	Zinc	40	1.4	C M	2.4	52	C M	06/01/09	06/02/09 15:02	1

ent Sample ID: J18WN4 DUP Lab WorkOrder: LDMDV % Moisture: 0.0 Basis: Dry

b Sample ID: D9E220401-001X Analysis Method: 7471A TOTAL Matrix: SOLID Unit: mg/kg

atch	Analyte	RPD Limit	Sample Result	Q	Duplicate Result	RPD	Q	Prep Date	Analysis Date	Dilution
7165	Mercury	20	0.0055	U M	0.020	200	M	06/04/09	06/04/09 21:45	1

Date: 27 July 2009
To: Washington Closure Hanford Inc. (technical representative)
From: ELR Consulting
Project: 100-D/DR Burial Grounds & Remaining Sites – Soil Full Protocol - Waste Site 116-DR-8
Subject: Semivolatile Organic - Data Package No. J00499-TAL

INTRODUCTION

This memo presents the results of data validation on Data Package No. J00499 prepared by TestAmerica Laboratory Inc. (TAL). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample Date	Media	Validation	Analyte
J18WN4	5/20/09	Soil	C	See note 1
J18WN5	5/20/09	Soil	C	See note 1
J18WN6	5/20/09	Soil	C	See note 1
J18WN7	5/20/09	Soil	C	See note 1
J18WN8	5/20/09	Soil	C	See note 1
J18WN9	5/20/09	Soil	C	See note 1
J18WP0	5/20/09	Soil	C	See note 1
J18WP1	5/20/09	Soil	C	See note 1
J18WP2	5/20/09	Soil	C	See note 1
J18WP3	5/20/09	Soil	C	See note 1
J18WP4	5/20/09	Soil	C	See note 1
J18WP5	5/20/09	Soil	C	See note 1
J18WP6	5/20/09	Soil	C	See note 1
J18WP7	5/20/09	Soil	C	See note 1

1 – Semivolatiles by 8270C

Data validation was conducted in accordance with the Washington Closure Hanford (WCH) validation statement of work and the 100 Area Remedial Action Sampling and Analysis Plan (DOE/RL-96-22, February 2005). Appendices 1 through 5 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports
Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Data Requested by Client

DATA QUALITY OBJECTIVES

Holding Times

Analytical holding times were assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Samples must be extracted within 14 days of the date of sample collection and analyzed within 40 days from the date of extraction.

If holding times are exceeded, but not by greater than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detectable sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

All holding times were acceptable.

Method Blanks

Method blank analyses are conducted to determine the extent of laboratory contamination introduced through sampling, sample preparation and analysis. At least one acceptable method blank analysis must be conducted for every 20 samples. No contaminants should be present in the method blank. Analytical results for analytes present in any sample at less than five times the concentration of that analyte found in the associated blank are qualified as non-detects and flagged "U". Common laboratory contaminants present in samples at less than ten times the concentration of that analyte found in the associated blank are qualified as non-detects. If a sample result is less than the CRQL and is less than five times (or less than ten times for lab contaminants) the highest associated blank result, the sample result value is raised to the CRQL level and qualified as undetected "U".

All method blank results were acceptable.

Field Blanks

One field (equipment) blank (J18WN4) was submitted for analysis. Benzo(a)anthracene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, and pyrene were detected in the equipment blank. Under the WCH statement of work, no qualification is required. No other analytes were detected in the equipment blank.

- **Accuracy**

Matrix Spike/Matrix Spike Duplicate & Blank Spike Recoveries

Matrix spike/matrix spike duplicate analyses are used to assess the analytical accuracy of the reported data and the effect of the matrix on the ability to accurately quantify sample concentrations. Matrix spike/matrix spike duplicate analyses are performed in duplicate using five compounds for which percent recoveries must be within a range of 50-150% or within laboratory control limits. If spike recoveries are outside control limits, detected sample results less than five times the spike concentration are qualified as estimates and flagged "J". Undetected sample results with spike recoveries below control limits are qualified as estimates and flagged "UJ". Undetected sample results are not qualified if the spike recovery is above control limits. Sample results greater than five times the spike concentration require no qualification.

All accuracy results were acceptable acceptable (the equipment blank was used for the MD/MSD).

Surrogate Recovery

The analyses of surrogate compounds provide a measure of performance for individual samples. Matrix-specific surrogate compound recovery control windows have been established by the EPA CLP program. If two surrogates of the same class of compounds (base/neutral or acid) are out of control limits, all associated sample results greater than the contract required quantitation limit (CRQL) are qualified as estimates and flagged "J". Sample results less than the CRQL and below the lower control limit are qualified as estimates and flagged "UJ". Sample results less than the CRQL with recoveries above the upper control limit require no qualification. If a surrogate recovery is less than 10%, detects are qualified as estimates and flagged "J" and nondetects are rejected and flagged "UR".

Due to surrogate recoveries outside QC limits (121% & 131%), the 1,2-dichlorobenzene, acenaphthene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, ideno(1,2,3-cd)pyrene, chrysene, and pyrene in sample J18WN5 were qualified as estimates and flagged "J".

All other surrogate results were acceptable.

- **Precision**

Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike (MS)/matrix spike duplicate (MSD) results provide matrix-specific information on the precision of the method for specific target compound classes. Precision is expressed by the relative percent difference (RPD) between the recoveries

of duplicate matrix spike analyses performed on a sample. Samples results must be within RPD limits of +/-30%. If RPD values are out of specification and the sample concentration is less than five times the spike concentration, all associated detected sample results are qualified as estimates and flagged "J". If RPD values are out of specification and the sample concentration is greater than five times the spike concentration, no qualification is required.

All duplicate results were acceptable acceptable (the equipment blank was used for the laboratory duplicate).

Field Duplicate Samples

One set of field duplicates (J18WP0/J18WP7) was submitted for analysis. Field duplicates are compared using the same criteria as for laboratory duplicates. All field duplicate results were acceptable.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the required quantitation limits (RQL's) to ensure that laboratory detection levels meet the required criteria. Seventy semivolatile analytes exceeded the RQL. Under the WCH statement of work, no qualification is required. All other undetected analytes met the RQL.

- **Completeness**

Data package No. J00499 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

The following minor deficiency was noted:

- Due to surrogate recoveries outside QC limits (121% & 131%), the 1,2-dichlorobenzene, acenaphthene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, ideno(1,2,3-cd)pyrene, chrysene, and pyrene in sample J18WN5 were qualified as estimates and flagged "J".

Data flagged "J" indicates that the associated concentration is an estimate, but under the WCH statement of work, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

Seventy semivolatile analytes exceeded the RQL. Under the WCH statement of work, no qualification is required.

REFERENCES

Washington Closure Hanford Contract #S00W307A00 (March 2008), *Data Validation Services*, March 2008.

DOE/RL-96-22, Rev. 4, *100 Area Remedial Action Sampling and Analysis Plan*, U.S. Department of Energy, February 2005.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validators in compliance with the WCH validation SOW are as follows:

U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the same quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications usable for decision-making purposes).

Appendix 2

Summary of Data Qualification

SEMIVOLATILE ORGANIC DATA QUALIFICATION SUMMARY*

SDG: J00499	REVIEWER: ELR	Project: 116-DR-8	PAGE 1 OF 1
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
1,2-dichlorobenzene, acenaphthene benzo(a)anthracene benzo(a)pyrene benzo(b)fluoranthene benzo(g,h,i)perylene ideno(1,2,3-cd)pyrene chrysene pyrene	J	J18WN5	Surrogate recovery

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Annotated Laboratory Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

1/22/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN4
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-001
Matrix:	SOLID	**Lab WorkOrder:**	LDMDV1A0
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 07:37

Analysis Method: 8270C **% Moisture:** 0.0 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	26	26	310	U	5/29/09	06/10/09 19:53	0.94
9149250	1,2-Dichlorobenzene	21	21	310	U	5/29/09	06/10/09 19:53	0.94
9149250	1,3-Dichlorobenzene	11	11	310	U	5/29/09	06/10/09 19:53	0.94
9149250	1,4-Dichlorobenzene	13	13	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2,4,5-Trichlorophenol	9.4	9.4	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2,4,6-Trichlorophenol	9.4	9.4	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2,4-Dichlorophenol	9.4	9.4	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2,4-Dimethylphenol	62	62	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2,4-Dinitrophenol	310	310	780	U	5/29/09	06/10/09 19:53	0.94
9149250	2,4-Dinitrotoluene	62	62	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2,6-Dinitrotoluene	26	26	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2-Chloronaphthalene	9.4	9.4	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2-Chlorophenol	20	20	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2-Methylnaphthalene	18	18	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2-Methylphenol	12	12	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2-Nitroaniline	47	47	310	U	5/29/09	06/10/09 19:53	0.94
9149250	2-Nitrophenol	9.4	9.4	310	U	5/29/09	06/10/09 19:53	0.94
9149250	3,3'-Dichlorobenzidine	85	85	620	U	5/29/09	06/10/09 19:53	0.94
9149250	3-Methylphenol & 4-Methylphenol	33	33	330	U	5/29/09	06/10/09 19:53	0.94
9149250	3-Nitroaniline	69	69	310	U	5/29/09	06/10/09 19:53	0.94
9149250	4,6-Dinitro-2-methylphenol	310	310	620	U	5/29/09	06/10/09 19:53	0.94
9149250	4-Bromophenyl phenyl ether	18	18	310	U	5/29/09	06/10/09 19:53	0.94
9149250	4-Chloro-3-methylphenol	62	62	310	U	5/29/09	06/10/09 19:53	0.94
9149250	4-Chloroaniline	77	77	310	U	5/29/09	06/10/09 19:53	0.94
9149250	4-Chlorophenyl phenyl ether	20	20	310	U	5/29/09	06/10/09 19:53	0.94
9149250	4-Nitroaniline	68	68	310	U	5/29/09	06/10/09 19:53	0.94
9149250	4-Nitrophenol	91	91	620	U	5/29/09	06/10/09 19:53	0.94
9149250	Acenaphthene	9.7	9.7	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Acenaphthylene	16	16	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Anthracene	16	16	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Benzo(a)anthracene	25	19	310	J	5/29/09	06/10/09 19:53	0.94
9149250	Benzo(a)pyrene	19	19	310	U	5/29/09	06/10/09 19:53	0.94

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THE LEADER IN ENVIRONMENTAL TESTING

K 7/23/09

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN4
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-001
Matrix:	SOLID	**Lab WorkOrder:**	LDMDV1A0
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 07:37

Analysis Method: 8270C **% Moisture:** 0.0 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Benzo(b)fluoranthene	39	25	310	J K	5/29/09	06/10/09 19:53	0.94
9149250	Benzo(ghi)perylene	17	15	310	J	5/29/09	06/10/09 19:53	0.94
9149250	Benzo(k)fluoranthene	38	38	310	U K	5/29/09	06/10/09 19:53	0.94
9149250	bis(2-Chloroethoxy)methane	22	22	310	U	5/29/09	06/10/09 19:53	0.94
9149250	bis(2-Chloroethyl) ether	16	16	310	U	5/29/09	06/10/09 19:53	0.94
9149250	bis(2-Chloroisopropyl) ether	22	22	310	U	5/29/09	06/10/09 19:53	0.94
9149250	bis(2-Ethylhexyl) phthalate	43	43	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Butyl benzyl phthalate	40	40	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Carbazole	34	34	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Chrysene	33	25	310	J	5/29/09	06/10/09 19:53	0.94
9149250	Dibenz(a,h)anthracene	18	18	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Dibenzofuran	19	19	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Diethyl phthalate	24	24	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Dimethyl phthalate	22	22	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Di-n-butyl phthalate	27	27	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Di-n-octyl phthalate	14	14	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Fluoranthene	34	34	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Fluorene	17	17	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Hexachlorobenzene	27	27	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Hexachlorobutadiene	9.4	9.4	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Hexachlorocyclopentadiene	47	47	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Hexachloroethane	20	20	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Indeno(1,2,3-cd)pyrene	21	21	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Isophorone	16	16	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Naphthalene	29	29	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Nitrobenzene	21	21	310	U	5/29/09	06/10/09 19:53	0.94
9149250	N-Nitrosodi-n-propylamine	29	29	310	U	5/29/09	06/10/09 19:53	0.94
9149250	N-Nitrosodiphenylamine	20	20	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Pentachlorophenol	310	310	620	U	5/29/09	06/10/09 19:53	0.94
9149250	Phenanthrene	16	16	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Phenol	17	17	310	U	5/29/09	06/10/09 19:53	0.94
9149250	Pyrene	13	11	310	J	5/29/09	06/10/09 19:53	0.94

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN4
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-001
Matrix:	SOLID	**Lab WorkOrder:**	LDMDV1A0
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 07:37

Analysis Method: 8270C **% Moisture:** 0.0 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	9-Octadecenamide, (z)-	170			J N	5/29/09	06/10/09 19:53	0.94
9149250	Hexadecane	25			J N	5/29/09	06/10/09 19:53	0.94
9149250	Hexatriacontane	29			J N	5/29/09	06/10/09 19:53	0.94
9149250	Octadecane	22			J N	5/29/09	06/10/09 19:53	0.94

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	81	44	120	
2-Fluorophenol	82	49	120	
2,4,6-Tribromophenol	76	44	120	
Nitrobenzene-d5	78	47	120	
Phenol-d5	83	49	120	
Terphenyl-d14	91	50	120	

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THE LEADER IN ENVIRONMENTAL TESTING

W 7/23/09

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN5
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-002
Matrix:	SOLID	**Lab WorkOrder:**	LDMDW1AA
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 07:58

Analysis Method: 8270C **% Moisture:** 0.91 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	27	27	320	U	5/29/09	06/10/09 20:54	0.97
9149250	1,2-Dichlorobenzene	26	22	320	~~J~~ J	5/29/09	06/10/09 20:54	0.97
9149250	1,3-Dichlorobenzene	12	12	320	U	5/29/09	06/10/09 20:54	0.97
9149250	1,4-Dichlorobenzene	13	13	320	U	5/29/09	06/10/09 20:54	0.97
9149250	2,4,5-Trichlorophenol	10	9.8	320	J	5/29/09	06/10/09 20:54	0.97
9149250	2,4,6-Trichlorophenol	9.8	9.8	320	U	5/29/09	06/10/09 20:54	0.97
9149250	2,4-Dichlorophenol	11	9.8	320	J	5/29/09	06/10/09 20:54	0.97
9149250	2,4-Dimethylphenol	65	65	320	U	5/29/09	06/10/09 20:54	0.97
9149250	2,4-Dinitrophenol	330	330	810	U	5/29/09	06/10/09 20:54	0.97
9149250	2,4-Dinitrotoluene	65	65	320	U	5/29/09	06/10/09 20:54	0.97
9149250	2,6-Dinitrotoluene	27	27	320	U	5/29/09	06/10/09 20:54	0.97
9149250	2-Chloronaphthalene	11	9.8	320	J	5/29/09	06/10/09 20:54	0.97
9149250	2-Chlorophenol	21	21	320	U	5/29/09	06/10/09 20:54	0.97
9149250	2-Methylnaphthalene	19	19	320	U	5/29/09	06/10/09 20:54	0.97
9149250	2-Methylphenol	13	13	320	U	5/29/09	06/10/09 20:54	0.97
9149250	2-Nitroaniline	49	49	320	U	5/29/09	06/10/09 20:54	0.97
9149250	2-Nitrophenol	9.8	9.8	320	U	5/29/09	06/10/09 20:54	0.97
9149250	3,3'-Dichlorobenzidine	88	88	650	U	5/29/09	06/10/09 20:54	0.97
9149250	3-Methylphenol & 4-Methylphenol	33	33	330	U	5/29/09	06/10/09 20:54	0.97
9149250	3-Nitroaniline	71	71	320	U	5/29/09	06/10/09 20:54	0.97
9149250	4,6-Dinitro-2-methylphenol	320	320	650	U	5/29/09	06/10/09 20:54	0.97
9149250	4-Bromophenyl phenyl ether	19	19	320	U	5/29/09	06/10/09 20:54	0.97
9149250	4-Chloro-3-methylphenol	65	65	320	U	5/29/09	06/10/09 20:54	0.97
9149250	4-Chloroaniline	80	80	320	U	5/29/09	06/10/09 20:54	0.97
9149250	4-Chlorophenyl phenyl ether	21	21	320	U	5/29/09	06/10/09 20:54	0.97
9149250	4-Nitroaniline	71	71	320	U	5/29/09	06/10/09 20:54	0.97
9149250	4-Nitrophenol	95	95	650	U	5/29/09	06/10/09 20:54	0.97
9149250	Acenaphthene	12	10	320	~~J~~ J	5/29/09	06/10/09 20:54	0.97
9149250	Acenaphthylene	17	17	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Anthracene	17	17	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Benzo(a)anthracene	42	20	320	~~J~~ J	5/29/09	06/10/09 20:54	0.97
9149250	Benzo(a)pyrene	28	20	320	~~J~~ J	5/29/09	06/10/09 20:54	0.97

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN5
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-002
Matrix:	SOLID	**Lab WorkOrder:**	LDMDW1AA
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 07:58

Analysis Method: 8270C **% Moisture:** 0.91 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Benzo(b)fluoranthene	34	26	320	J	5/29/09	06/10/09 20:54	0.97
9149250	Benzo(ghi)perylene	27	16	320	J	5/29/09	06/10/09 20:54	0.97
9149250	Benzo(k)fluoranthene	39	39	320	U	5/29/09	06/10/09 20:54	0.97
9149250	bis(2-Chloroethoxy)methane	23	23	320	U	5/29/09	06/10/09 20:54	0.97
9149250	bis(2-Chloroethyl) ether	16	16	320	U	5/29/09	06/10/09 20:54	0.97
9149250	bis(2-Chloroisopropyl) ether	23	23	320	U	5/29/09	06/10/09 20:54	0.97
9149250	bis(2-Ethylhexyl) phthalate	45	45	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Butyl benzyl phthalate	42	42	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Carbazole	35	35	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Chrysene	48	26	320	J	5/29/09	06/10/09 20:54	0.97
9149250	Dibenz(a,h)anthracene	25	19	320	J	5/29/09	06/10/09 20:54	0.97
9149250	Dibenzofuran	20	20	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Diethyl phthalate	25	25	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Dimethyl phthalate	33	23	320	J	5/29/09	06/10/09 20:54	0.97
9149250	Di-n-butyl phthalate	28	28	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Di-n-octyl phthalate	14	14	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Fluoranthene	35	35	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Fluorene	18	18	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Hexachlorobenzene	28	28	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Hexachlorobutadiene	9.8	9.8	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Hexachlorocyclopentadiene	49	49	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Hexachloroethane	21	21	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Indeno(1,2,3-cd)pyrene	22	22	320	J	5/29/09	06/10/09 20:54	0.97
9149250	Isophorone	17	17	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Naphthalene	30	30	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Nitrobenzene	22	22	320	U	5/29/09	06/10/09 20:54	0.97
9149250	N-Nitrosodi-n-propylamine	30	30	320	U	5/29/09	06/10/09 20:54	0.97
9149250	N-Nitrosodiphenylamine	21	21	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Pentachlorophenol	320	320	650	U	5/29/09	06/10/09 20:54	0.97
9149250	Phenanthrene	17	17	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Phenol	18	18	320	U	5/29/09	06/10/09 20:54	0.97
9149250	Pyrene	20	12	320	J	5/29/09	06/10/09 20:54	0.97

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WN5
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-002
Matrix:	SOLID	Lab WorkOrder:	LDMDW1AA
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 07:58

Analysis Method: 8270C % Moisture: 0.91 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Naphthalene, 1-methyl-	12			J N	5/29/09	06/10/09 20:54	0.97
9149250	Unknown	140			J N	5/29/09	06/10/09 20:54	0.97

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	115	44	120	
2-Fluorophenol	121	49	120	*
2,4,6-Tribromophenol	112	44	120	
Nitrobenzene-d5	115	47	120	
Phenol-d5	120	49	120	
Terphenyl-d14	131	50	120	*

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/22/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN6
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-003
Matrix:	SOLID	**Lab WorkOrder:**	LDMD01AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:01

Analysis Method: 8270C **% Moisture:** 1.9 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	27	27	320	U	5/29/09	06/10/09 21:14	0.95
9149250	1,2-Dichlorobenzene	21	21	320	U	5/29/09	06/10/09 21:14	0.95
9149250	1,3-Dichlorobenzene	12	12	320	U	5/29/09	06/10/09 21:14	0.95
9149250	1,4-Dichlorobenzene	13	13	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2,4,5-Trichlorophenol	9.7	9.7	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2,4,6-Trichlorophenol	9.7	9.7	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2,4-Dichlorophenol	9.7	9.7	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2,4-Dimethylphenol	64	64	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2,4-Dinitrophenol	320	320	800	U	5/29/09	06/10/09 21:14	0.95
9149250	2,4-Dinitrotoluene	64	64	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2,6-Dinitrotoluene	27	27	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2-Chloronaphthalene	9.7	9.7	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2-Chlorophenol	20	20	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2-Methylnaphthalene	18	18	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2-Methylphenol	13	13	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2-Nitroaniline	48	48	320	U	5/29/09	06/10/09 21:14	0.95
9149250	2-Nitrophenol	9.7	9.7	320	U	5/29/09	06/10/09 21:14	0.95
9149250	3,3'-Dichlorobenzidine	87	87	640	U	5/29/09	06/10/09 21:14	0.95
9149250	3-Methylphenol & 4-Methylphenol	34	34	340	U	5/29/09	06/10/09 21:14	0.95
9149250	3-Nitroaniline	71	71	320	U	5/29/09	06/10/09 21:14	0.95
9149250	4,6-Dinitro-2-methylphenol	320	320	640	U	5/29/09	06/10/09 21:14	0.95
9149250	4-Bromophenyl phenyl ether	18	18	320	U	5/29/09	06/10/09 21:14	0.95
9149250	4-Chloro-3-methylphenol	64	64	320	U	5/29/09	06/10/09 21:14	0.95
9149250	4-Chloroaniline	79	79	320	U	5/29/09	06/10/09 21:14	0.95
9149250	4-Chlorophenyl phenyl ether	20	20	320	U	5/29/09	06/10/09 21:14	0.95
9149250	4-Nitroaniline	70	70	320	U	5/29/09	06/10/09 21:14	0.95
9149250	4-Nitrophenol	94	94	640	U	5/29/09	06/10/09 21:14	0.95
9149250	Acenaphthene	10	10	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Acenaphthylene	16	16	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Anthracene	16	16	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Benzo(a)anthracene	19	19	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Benzo(a)pyrene	19	19	320	U	5/29/09	06/10/09 21:14	0.95

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WN6
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-003
Matrix:	SOLID	Lab WorkOrder:	LDMD01AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 09:01

Analysis Method: 8270C % Moisture: 1.9 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Benzo(b)fluoranthene	30	25	320	J	5/29/09	06/10/09 21:14	0.95
9149250	Benzo(ghi)perylene	15	15	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Benzo(k)fluoranthene	39	39	320	U	5/29/09	06/10/09 21:14	0.95
9149250	bis(2-Chloroethoxy)methane	22	22	320	U	5/29/09	06/10/09 21:14	0.95
9149250	bis(2-Chloroethyl) ether	16	16	320	U	5/29/09	06/10/09 21:14	0.95
9149250	bis(2-Chloroisopropyl) ether	22	22	320	U	5/29/09	06/10/09 21:14	0.95
9149250	bis(2-Ethylhexyl) phthalate	45	45	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Butyl benzyl phthalate	42	42	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Carbazole	35	35	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Chrysene	29	26	320	J	5/29/09	06/10/09 21:14	0.95
9149250	Dibenz(a,h)anthracene	18	18	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Dibenzofuran	19	19	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Diethyl phthalate	25	25	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Dimethyl phthalate	22	22	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Di-n-butyl phthalate	28	28	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Di-n-octyl phthalate	14	14	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Fluoranthene	35	35	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Fluorene	17	17	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Hexachlorobenzene	28	28	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Hexachlorobutadiene	9.7	9.7	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Hexachlorocyclopentadiene	48	48	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Hexachloroethane	21	21	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Indeno(1,2,3-cd)pyrene	21	21	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Isophorone	16	16	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Naphthalene	30	30	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Nitrobenzene	21	21	320	U	5/29/09	06/10/09 21:14	0.95
9149250	N-Nitrosodi-n-propylamine	30	30	320	U	5/29/09	06/10/09 21:14	0.95
9149250	N-Nitrosodiphenylamine	20	20	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Pentachlorophenol	320	320	640	U	5/29/09	06/10/09 21:14	0.95
9149250	Phenanthrene	16	16	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Phenol	17	17	320	U	5/29/09	06/10/09 21:14	0.95
9149250	Pyrene	12	12	320	U	5/29/09	06/10/09 21:14	0.95

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN6
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-003
Matrix:	SOLID	**Lab WorkOrder:**	LDMD01AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:01

Analysis Method: 8270C **% Moisture:** 1.9 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
149250	No Tics Detected				U	5/29/09	06/10/09 21:14	0.95

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	77	44	120	
2-Fluorophenol	80	49	120	
2,4,6-Tribromophenol	77	44	120	
Nitrobenzene-d5	77	47	120	
Phenol-d5	81	49	120	
Terphenyl-d14	95	50	120	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WN7
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-004
Matrix:	SOLID	Lab WorkOrder:	LDMD11AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 09:32

Analysis Method: 8270C % Moisture: 1.1 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	27	27	320	U	5/29/09	06/10/09 21:34	0.97
9149250	1,2-Dichlorobenzene	22	22	320	U	5/29/09	06/10/09 21:34	0.97
9149250	1,3-Dichlorobenzene	12	12	320	U	5/29/09	06/10/09 21:34	0.97
9149250	1,4-Dichlorobenzene	13	13	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2,4,5-Trichlorophenol	9.8	9.8	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2,4,6-Trichlorophenol	9.8	9.8	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2,4-Dichlorophenol	9.8	9.8	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2,4-Dimethylphenol	65	65	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2,4-Dinitrophenol	330	330	810	U	5/29/09	06/10/09 21:34	0.97
9149250	2,4-Dinitrotoluene	65	65	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2,6-Dinitrotoluene	27	27	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2-Chloronaphthalene	9.8	9.8	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2-Chlorophenol	21	21	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2-Methylnaphthalene	19	19	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2-Methylphenol	13	13	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2-Nitroaniline	49	49	320	U	5/29/09	06/10/09 21:34	0.97
9149250	2-Nitrophenol	9.8	9.8	320	U	5/29/09	06/10/09 21:34	0.97
9149250	3,3'-Dichlorobenzidine	88	88	650	U	5/29/09	06/10/09 21:34	0.97
9149250	3-Methylphenol & 4-Methylphenol	33	33	330	U	5/29/09	06/10/09 21:34	0.97
9149250	3-Nitroaniline	72	72	320	U	5/29/09	06/10/09 21:34	0.97
9149250	4,6-Dinitro-2-methylphenol	320	320	650	U	5/29/09	06/10/09 21:34	0.97
9149250	4-Bromophenyl phenyl ether	19	19	320	U	5/29/09	06/10/09 21:34	0.97
9149250	4-Chloro-3-methylphenol	65	65	320	U	5/29/09	06/10/09 21:34	0.97
9149250	4-Chloroaniline	80	80	320	U	5/29/09	06/10/09 21:34	0.97
9149250	4-Chlorophenyl phenyl ether	21	21	320	U	5/29/09	06/10/09 21:34	0.97
9149250	4-Nitroaniline	71	71	320	U	5/29/09	06/10/09 21:34	0.97
9149250	4-Nitrophenol	95	95	650	U	5/29/09	06/10/09 21:34	0.97
9149250	Acenaphthene	10	10	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Acenaphthylene	17	17	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Anthracene	17	17	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Benzo(a)anthracene	20	20	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Benzo(a)pyrene	20	20	320	U	5/29/09	06/10/09 21:34	0.97

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN7
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-004
Matrix:	SOLID	**Lab WorkOrder:**	LDMD11AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:32

Analysis Method: 8270C **% Moisture:** 1.1 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Benzo(b)fluoranthene	32	26	320	J	5/29/09	06/10/09 21:34	0.97
9149250	Benzo(ghi)perylene	16	16	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Benzo(k)fluoranthene	39	39	320	U	5/29/09	06/10/09 21:34	0.97
9149250	bis(2-Chloroethoxy)methane	23	23	320	U	5/29/09	06/10/09 21:34	0.97
9149250	bis(2-Chloroethyl) ether	16	16	320	U	5/29/09	06/10/09 21:34	0.97
9149250	bis(2-Chloroisopropyl) ether	23	23	320	U	5/29/09	06/10/09 21:34	0.97
9149250	bis(2-Ethylhexyl) phthalate	45	45	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Butyl benzyl phthalate	42	42	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Carbazole	35	35	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Chrysene	27	26	320	J	5/29/09	06/10/09 21:34	0.97
9149250	Dibenz(a,h)anthracene	19	19	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Dibenzofuran	20	20	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Diethyl phthalate	25	25	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Dimethyl phthalate	23	23	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Di-n-butyl phthalate	28	28	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Di-n-octyl phthalate	14	14	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Fluoranthene	35	35	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Fluorene	18	18	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Hexachlorobenzene	28	28	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Hexachlorobutadiene	9.8	9.8	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Hexachlorocyclopentadiene	49	49	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Hexachloroethane	21	21	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Indeno(1,2,3-cd)pyrene	22	22	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Isophorone	17	17	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Naphthalene	30	30	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Nitrobenzene	22	22	320	U	5/29/09	06/10/09 21:34	0.97
9149250	N-Nitrosodi-n-propylamine	30	30	320	U	5/29/09	06/10/09 21:34	0.97
9149250	N-Nitrosodiphenylamine	21	21	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Pentachlorophenol	320	320	650	U	5/29/09	06/10/09 21:34	0.97
9149250	Phenanthrene	17	17	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Phenol	18	18	320	U	5/29/09	06/10/09 21:34	0.97
9149250	Pyrene	12	12	320	U	5/29/09	06/10/09 21:34	0.97

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN7
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-004
Matrix:	SOLID	**Lab WorkOrder:**	LDMD11AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:32

Analysis Method: 8270C **% Moisture:** 1.1 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	9-Octadecenamide, (z)-	230			J N	5/29/09	06/10/09 21:34	0.97

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	81	44	120	
2-Fluorophenol	82	49	120	
2,4,6-Tribromophenol	80	44	120	
Nitrobenzene-d5	81	47	120	
Phenol-d5	84	49	120	
Terphenyl-d14	99	50	120	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN8
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-005
Matrix:	SOLID	**Lab WorkOrder:**	LDMD21AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:51

Analysis Method: 8270C **% Moisture:** 2.9 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	28	28	330	U	5/29/09	06/10/09 21:55	0.96
9149250	1,2-Dichlorobenzene	22	22	330	U	5/29/09	06/10/09 21:55	0.96
9149250	1,3-Dichlorobenzene	12	12	330	U	5/29/09	06/10/09 21:55	0.96
9149250	1,4-Dichlorobenzene	13	13	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2,4,5-Trichlorophenol	9.9	9.9	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2,4,6-Trichlorophenol	9.9	9.9	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2,4-Dichlorophenol	9.9	9.9	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2,4-Dimethylphenol	65	65	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2,4-Dinitrophenol	330	330	820	U	5/29/09	06/10/09 21:55	0.96
9149250	2,4-Dinitrotoluene	65	65	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2,6-Dinitrotoluene	28	28	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2-Chloronaphthalene	9.9	9.9	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2-Chlorophenol	21	21	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2-Methylnaphthalene	19	19	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2-Methylphenol	13	13	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2-Nitroaniline	49	49	330	U	5/29/09	06/10/09 21:55	0.96
9149250	2-Nitrophenol	9.9	9.9	330	U	5/29/09	06/10/09 21:55	0.96
9149250	3,3'-Dichlorobenzidine	89	89	650	U	5/29/09	06/10/09 21:55	0.96
9149250	3-Methylphenol & 4-Methylphenol	34	34	340	U	5/29/09	06/10/09 21:55	0.96
9149250	3-Nitroaniline	72	72	330	U	5/29/09	06/10/09 21:55	0.96
9149250	4,6-Dinitro-2-methylphenol	330	330	650	U	5/29/09	06/10/09 21:55	0.96
9149250	4-Bromophenyl phenyl ether	19	19	330	U	5/29/09	06/10/09 21:55	0.96
9149250	4-Chloro-3-methylphenol	65	65	330	U	5/29/09	06/10/09 21:55	0.96
9149250	4-Chloroaniline	81	81	330	U	5/29/09	06/10/09 21:55	0.96
9149250	4-Chlorophenyl phenyl ether	21	21	330	U	5/29/09	06/10/09 21:55	0.96
9149250	4-Nitroaniline	72	72	330	U	5/29/09	06/10/09 21:55	0.96
9149250	4-Nitrophenol	96	96	650	U	5/29/09	06/10/09 21:55	0.96
9149250	Acenaphthene	10	10	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Acenaphthylene	17	17	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Anthracene	17	17	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Benzo(a)anthracene	20	20	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Benzo(a)pyrene	20	20	330	U	5/29/09	06/10/09 21:55	0.96

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WN8
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-005
Matrix:	SOLID	Lab WorkOrder:	LDMD21AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 09:51

nalysis Method: 8270C % Moisture: 2.9 Basis: Dry Leach Date: Unit: ug/kg

C Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
149250	Benzo(b)fluoranthene	26	26	330	U	5/29/09	06/10/09 21:55	0.96
149250	Benzo(ghi)perylene	16	16	330	U	5/29/09	06/10/09 21:55	0.96
149250	Benzo(k)fluoranthene	40	40	330	U	5/29/09	06/10/09 21:55	0.96
149250	bis(2-Chloroethoxy)methane	23	23	330	U	5/29/09	06/10/09 21:55	0.96
149250	bis(2-Chloroethyl) ether	16	16	330	U	5/29/09	06/10/09 21:55	0.96
149250	bis(2-Chloroisopropyl) ether	23	23	330	U	5/29/09	06/10/09 21:55	0.96
149250	bis(2-Ethylhexyl) phthalate	45	45	330	U	5/29/09	06/10/09 21:55	0.96
149250	Butyl benzyl phthalate	42	42	330	U	5/29/09	06/10/09 21:55	0.96
149250	Carbazole	36	36	330	U	5/29/09	06/10/09 21:55	0.96
149250	Chrysene	27	27	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Dibenz(a,h)anthracene	19	19	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Dibenzofuran	20	20	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Diethyl phthalate	26	26	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Dimethyl phthalate	23	23	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Di-n-butyl phthalate	29	29	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Di-n-octyl phthalate	14	14	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Fluoranthene	36	36	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Fluorene	18	18	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Hexachlorobenzene	29	29	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Hexachlorobutadiene	9.9	9.9	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Hexachlorocyclopentadiene	49	49	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Hexachloroethane	21	21	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Indeno(1,2,3-cd)pyrene	22	22	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Isophorone	17	17	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Naphthalene	31	31	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Nitrobenzene	22	22	330	U	5/29/09	06/10/09 21:55	0.96
9149250	N-Nitrosodi-n-propylamine	31	31	330	U	5/29/09	06/10/09 21:55	0.96
9149250	N-Nitrosodiphenylamine	21	21	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Pentachlorophenol	330	330	650	U	5/29/09	06/10/09 21:55	0.96
9149250	Phenanthrene	17	17	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Phenol	18	18	330	U	5/29/09	06/10/09 21:55	0.96
9149250	Pyrene	12	12	330	U	5/29/09	06/10/09 21:55	0.96

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THE LEADER IN ENVIRONMENTAL TESTING

7/23/09

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN8
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-005
Matrix:	SOLID	**Lab WorkOrder:**	LDMD21AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:51

Analysis Method: 8270C **% Moisture:** 2.9 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	No Tics Detected				U	5/29/09	06/10/09 21:55	0.96

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	80	44	120	
2-Fluorophenol	85	49	120	
2,4,6-Tribromophenol	78	44	120	
Nitrobenzene-d5	81	47	120	
Phenol-d5	84	49	120	
Terphenyl-d14	96	50	120	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/22/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WN9
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-006
Matrix:	SOLID	Lab WorkOrder:	LDMD31AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 10:25

Analysis Method: 8270C % Moisture: 1.7 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	28	28	330	U	5/29/09	06/10/09 22:15	0.98
9149250	1,2-Dichlorobenzene	22	22	330	U	5/29/09	06/10/09 22:15	0.98
9149250	1,3-Dichlorobenzene	12	12	330	U	5/29/09	06/10/09 22:15	0.98
9149250	1,4-Dichlorobenzene	14	14	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2,4,5-Trichlorophenol	10	10	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2,4,6-Trichlorophenol	10	10	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2,4-Dichlorophenol	10	10	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2,4-Dimethylphenol	66	66	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2,4-Dinitrophenol	330	330	820	U	5/29/09	06/10/09 22:15	0.98
9149250	2,4-Dinitrotoluene	66	66	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2,6-Dinitrotoluene	28	28	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2-Chloronaphthalene	10	10	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2-Chlorophenol	21	21	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2-Methylnaphthalene	19	19	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2-Methylphenol	13	13	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2-Nitroaniline	50	50	330	U	5/29/09	06/10/09 22:15	0.98
9149250	2-Nitrophenol	10	10	330	U	5/29/09	06/10/09 22:15	0.98
9149250	3,3'-Dichlorobenzidine	90	90	660	U	5/29/09	06/10/09 22:15	0.98
9149250	3-Methylphenol & 4-Methylphenol	34	34	340	U	5/29/09	06/10/09 22:15	0.98
9149250	3-Nitroaniline	73	73	330	U	5/29/09	06/10/09 22:15	0.98
9149250	4,6-Dinitro-2-methylphenol	330	330	660	U	5/29/09	06/10/09 22:15	0.98
9149250	4-Bromophenyl phenyl ether	19	19	330	U	5/29/09	06/10/09 22:15	0.98
9149250	4-Chloro-3-methylphenol	66	66	330	U	5/29/09	06/10/09 22:15	0.98
9149250	4-Chloroaniline	82	82	330	U	5/29/09	06/10/09 22:15	0.98
9149250	4-Chlorophenyl phenyl ether	21	21	330	U	5/29/09	06/10/09 22:15	0.98
9149250	4-Nitroaniline	72	72	330	U	5/29/09	06/10/09 22:15	0.98
9149250	4-Nitrophenol	97	97	660	U	5/29/09	06/10/09 22:15	0.98
9149250	Acenaphthene	10	10	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Acenaphthylene	17	17	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Anthracene	17	17	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Benzo(a)anthracene	20	20	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Benzo(a)pyrene	20	20	330	U	5/29/09	06/10/09 22:15	0.98

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WN9
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-006
Matrix:	SOLID	Lab WorkOrder:	LDMD31AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 10:25

nalysis Method: 8270C % Moisture: 1.7 Basis: Dry Leach Date: Unit: ug/kg

C Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
149250	Benzo(b)fluoranthene	26	26	330	U	5/29/09	06/10/09 22:15	0.98
149250	Benzo(ghi)perylene	16	16	330	U	5/29/09	06/10/09 22:15	0.98
149250	Benzo(k)fluoranthene	40	40	330	U	5/29/09	06/10/09 22:15	0.98
149250	bis(2-Chloroethoxy)methane	23	23	330	U	5/29/09	06/10/09 22:15	0.98
149250	bis(2-Chloroethyl) ether	17	17	330	U	5/29/09	06/10/09 22:15	0.98
149250	bis(2-Chloroisopropyl) ether	23	23	330	U	5/29/09	06/10/09 22:15	0.98
149250	bis(2-Ethylhexyl) phthalate	210	46	330	J	5/29/09	06/10/09 22:15	0.98
149250	Butyl benzyl phthalate	43	43	330	U	5/29/09	06/10/09 22:15	0.98
149250	Carbazole	36	36	330	U	5/29/09	06/10/09 22:15	0.98
149250	Chrysene	27	27	330	U	5/29/09	06/10/09 22:15	0.98
149250	Dibenz(a,h)anthracene	19	19	330	U	5/29/09	06/10/09 22:15	0.98
149250	Dibenzofuran	20	20	330	U	5/29/09	06/10/09 22:15	0.98
149250	Diethyl phthalate	26	26	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Dimethyl phthalate	23	23	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Di-n-butyl phthalate	29	29	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Di-n-octyl phthalate	14	14	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Fluoranthene	36	36	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Fluorene	18	18	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Hexachlorobenzene	29	29	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Hexachlorobutadiene	10	10	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Hexachlorocyclopentadiene	50	50	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Hexachloroethane	21	21	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Indeno(1,2,3-cd)pyrene	22	22	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Isophorone	17	17	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Naphthalene	31	31	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Nitrobenzene	22	22	330	U	5/29/09	06/10/09 22:15	0.98
9149250	N-Nitrosodi-n-propylamine	31	31	330	U	5/29/09	06/10/09 22:15	0.98
9149250	N-Nitrosodiphenylamine	21	21	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Pentachlorophenol	330	330	660	U	5/29/09	06/10/09 22:15	0.98
9149250	Phenanthrene	17	17	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Phenol	18	18	330	U	5/29/09	06/10/09 22:15	0.98
9149250	Pyrene	12	12	330	U	5/29/09	06/10/09 22:15	0.98

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THE LEADER IN ENVIRONMENTAL TESTING

V 7/23/09

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN9
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-006
Matrix:	SOLID	**Lab WorkOrder:**	LDMD31AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 10:25

Analysis Method: 8270C **% Moisture:** 1.7 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	9-Octadecenamide, (z)-	150			J N	5/29/09	06/10/09 22:15	0.98

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	74	44	120	
2-Fluorophenol	75	49	120	
2,4,6-Tribromophenol	73	44	120	
Nitrobenzene-d5	71	47	120	
Phenol-d5	76	49	120	
Terphenyl-d14	86	50	120	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP0
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-007
Matrix:	SOLID	Lab WorkOrder:	LDMD51AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 12:49

nalysis Method: 8270C % Moisture: 1.6 Basis: Dry Leach Date: Unit: ug/kg

C Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
149250	1,2,4-Trichlorobenzene	27	27	320	U	5/29/09	06/10/09 22:35	0.96
149250	1,2-Dichlorobenzene	21	21	320	U	5/29/09	06/10/09 22:35	0.96
149250	1,3-Dichlorobenzene	12	12	320	U	5/29/09	06/10/09 22:35	0.96
149250	1,4-Dichlorobenzene	13	13	320	U	5/29/09	06/10/09 22:35	0.96
149250	2,4,5-Trichlorophenol	9.8	9.8	320	U	5/29/09	06/10/09 22:35	0.96
149250	2,4,6-Trichlorophenol	9.8	9.8	320	U	5/29/09	06/10/09 22:35	0.96
149250	2,4-Dichlorophenol	9.8	9.8	320	U	5/29/09	06/10/09 22:35	0.96
149250	2,4-Dimethylphenol	64	64	320	U	5/29/09	06/10/09 22:35	0.96
149250	2,4-Dinitrophenol	320	320	810	U	5/29/09	06/10/09 22:35	0.96
149250	2,4-Dinitrotoluene	64	64	320	U	5/29/09	06/10/09 22:35	0.96
149250	2,6-Dinitrotoluene	27	27	320	U	5/29/09	06/10/09 22:35	0.96
149250	2-Chloronaphthalene	9.8	9.8	320	U	5/29/09	06/10/09 22:35	0.96
149250	2-Chlorophenol	20	20	320	U	5/29/09	06/10/09 22:35	0.96
9149250	2-Methylnaphthalene	19	19	320	U	5/29/09	06/10/09 22:35	0.96
9149250	2-Methylphenol	13	13	320	U	5/29/09	06/10/09 22:35	0.96
9149250	2-Nitroaniline	49	49	320	U	5/29/09	06/10/09 22:35	0.96
9149250	2-Nitrophenol	9.8	9.8	320	U	5/29/09	06/10/09 22:35	0.96
9149250	3,3'-Dichlorobenzidine	88	88	640	U	5/29/09	06/10/09 22:35	0.96
9149250	3-Methylphenol & 4-Methylphenol	34	34	340	U	5/29/09	06/10/09 22:35	0.96
9149250	3-Nitroaniline	71	71	320	U	5/29/09	06/10/09 22:35	0.96
9149250	4,6-Dinitro-2-methylphenol	320	320	640	U	5/29/09	06/10/09 22:35	0.96
9149250	4-Bromophenyl phenyl ether	19	19	320	U	5/29/09	06/10/09 22:35	0.96
9149250	4-Chloro-3-methylphenol	64	64	320	U	5/29/09	06/10/09 22:35	0.96
9149250	4-Chloroaniline	80	80	320	U	5/29/09	06/10/09 22:35	0.96
9149250	4-Chlorophenyl phenyl ether	20	20	320	U	5/29/09	06/10/09 22:35	0.96
9149250	4-Nitroaniline	71	71	320	U	5/29/09	06/10/09 22:35	0.96
9149250	4-Nitrophenol	95	95	640	U	5/29/09	06/10/09 22:35	0.96
9149250	Acenaphthene	10	10	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Acenaphthylene	17	17	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Anthracene	17	17	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Benzo(a)anthracene	20	20	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Benzo(a)pyrene	20	20	320	U	5/29/09	06/10/09 22:35	0.96

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP0
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-007
Matrix:	SOLID	**Lab WorkOrder:**	LDMD51AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 12:49

Analysis Method: 8270C **% Moisture:** 1.6 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Benzo(b)fluoranthene	26	26	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Benzo(ghi)perylene	16	16	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Benzo(k)fluoranthene	39	39	320	U	5/29/09	06/10/09 22:35	0.96
9149250	bis(2-Chloroethoxy)methane	22	22	320	U	5/29/09	06/10/09 22:35	0.96
9149250	bis(2-Chloroethyl) ether	16	16	320	U	5/29/09	06/10/09 22:35	0.96
9149250	bis(2-Chloroisopropyl) ether	22	22	320	U	5/29/09	06/10/09 22:35	0.96
9149250	bis(2-Ethylhexyl) phthalate	45	45	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Butyl benzyl phthalate	42	42	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Carbazole	35	35	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Chrysene	26	26	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Dibenz(a,h)anthracene	19	19	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Dibenzofuran	20	20	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Diethyl phthalate	25	25	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Dimethyl phthalate	22	22	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Di-n-butyl phthalate	28	28	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Di-n-octyl phthalate	14	14	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Fluoranthene	35	35	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Fluorene	18	18	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Hexachlorobenzene	28	28	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Hexachlorobutadiene	9.8	9.8	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Hexachlorocyclopentadiene	49	49	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Hexachloroethane	21	21	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Indeno(1,2,3-cd)pyrene	21	21	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Isophorone	17	17	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Naphthalene	30	30	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Nitrobenzene	21	21	320	U	5/29/09	06/10/09 22:35	0.96
9149250	N-Nitrosodi-n-propylamine	30	30	320	U	5/29/09	06/10/09 22:35	0.96
9149250	N-Nitrosodiphenylamine	20	20	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Pentachlorophenol	320	320	640	U	5/29/09	06/10/09 22:35	0.96
9149250	Phenanthrene	17	17	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Phenol	18	18	320	U	5/29/09	06/10/09 22:35	0.96
9149250	Pyrene	12	12	320	U	5/29/09	06/10/09 22:35	0.96

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP0
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-007
Matrix:	SOLID	Lab WorkOrder:	LDMD51AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 12:49

Analysis Method: 8270C % Moisture: 1.6 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	No Tics Detected				U	5/29/09	06/10/09 22:35	0.96

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	63	44	120	
2-Fluorophenol	66	49	120	
2,4,6-Tribromophenol	61	44	120	
Nitrobenzene-d5	62	47	120	
Phenol-d5	68	49	120	
Terphenyl-d14	81	50	120	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP1
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-008
Matrix:	SOLID	**Lab WorkOrder:**	LDMD61AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 13:31

Analysis Method: 8270C **% Moisture:** 3.2 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	28	28	330	U	5/29/09	06/10/09 22:55	0.97
9149250	1,2-Dichlorobenzene	22	22	330	U	5/29/09	06/10/09 22:55	0.97
9149250	1,3-Dichlorobenzene	12	12	330	U	5/29/09	06/10/09 22:55	0.97
9149250	1,4-Dichlorobenzene	14	14	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2,4,5-Trichlorophenol	10	10	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2,4,6-Trichlorophenol	10	10	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2,4-Dichlorophenol	10	10	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2,4-Dimethylphenol	66	66	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2,4-Dinitrophenol	330	330	830	U	5/29/09	06/10/09 22:55	0.97
9149250	2,4-Dinitrotoluene	66	66	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2,6-Dinitrotoluene	28	28	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2-Chloronaphthalene	10	10	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2-Chlorophenol	21	21	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2-Methylnaphthalene	19	19	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2-Methylphenol	13	13	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2-Nitroaniline	50	50	330	U	5/29/09	06/10/09 22:55	0.97
9149250	2-Nitrophenol	10	10	330	U	5/29/09	06/10/09 22:55	0.97
9149250	3,3'-Dichlorobenzidine	90	90	660	U	5/29/09	06/10/09 22:55	0.97
9149250	3-Methylphenol & 4-Methylphenol	34	34	340	U	5/29/09	06/10/09 22:55	0.97
9149250	3-Nitroaniline	73	73	330	U	5/29/09	06/10/09 22:55	0.97
9149250	4,6-Dinitro-2-methylphenol	330	330	660	U	5/29/09	06/10/09 22:55	0.97
9149250	4-Bromophenyl phenyl ether	19	19	330	U	5/29/09	06/10/09 22:55	0.97
9149250	4-Chloro-3-methylphenol	66	66	330	U	5/29/09	06/10/09 22:55	0.97
9149250	4-Chloroaniline	82	82	330	U	5/29/09	06/10/09 22:55	0.97
9149250	4-Chlorophenyl phenyl ether	21	21	330	U	5/29/09	06/10/09 22:55	0.97
9149250	4-Nitroaniline	73	73	330	U	5/29/09	06/10/09 22:55	0.97
9149250	4-Nitrophenol	97	97	660	U	5/29/09	06/10/09 22:55	0.97
9149250	Acenaphthene	10	10	330	U	5/29/09	06/10/09 22:55	0.97
9149250	Acenaphthylene	17	17	330	U	5/29/09	06/10/09 22:55	0.97
9149250	Anthracene	17	17	330	U	5/29/09	06/10/09 22:55	0.97
9149250	Benzo(a)anthracene	20	20	330	U	5/29/09	06/10/09 22:55	0.97
9149250	Benzo(a)pyrene	20	20	330	U	5/29/09	06/10/09 22:55	0.97

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP1
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-008
Matrix:	SOLID	**Lab WorkOrder:**	LDMD61AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 13:31

Analysis Method: 8270C **% Moisture:** 3.2 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
149250	Benzo(b)fluoranthene	26	26	330	U	5/29/09	06/10/09 22:55	0.97
149250	Benzo(ghi)perylene	16	16	330	U	5/29/09	06/10/09 22:55	0.97
149250	Benzo(k)fluoranthene	40	40	330	U	5/29/09	06/10/09 22:55	0.97
149250	bis(2-Chloroethoxy)methane	23	23	330	U	5/29/09	06/10/09 22:55	0.97
149250	bis(2-Chloroethyl) ether	17	17	330	U	5/29/09	06/10/09 22:55	0.97
149250	bis(2-Chloroisopropyl) ether	23	23	330	U	5/29/09	06/10/09 22:55	0.97
149250	bis(2-Ethylhexyl) phthalate	46	46	330	U	5/29/09	06/10/09 22:55	0.97
149250	Butyl benzyl phthalate	43	43	330	U	5/29/09	06/10/09 22:55	0.97
149250	Carbazole	36	36	330	U	5/29/09	06/10/09 22:55	0.97
149250	Chrysene	27	27	330	U	5/29/09	06/10/09 22:55	0.97
149250	Dibenz(a,h)anthracene	19	19	330	U	5/29/09	06/10/09 22:55	0.97
149250	Dibenzofuran	20	20	330	U	5/29/09	06/10/09 22:55	0.97
149250	Diethyl phthalate	26	26	330	U	5/29/09	06/10/09 22:55	0.97
149250	Dimethyl phthalate	23	23	330	U	5/29/09	06/10/09 22:55	0.97
149250	Di-n-butyl phthalate	29	29	330	U	5/29/09	06/10/09 22:55	0.97
149250	Di-n-octyl phthalate	14	14	330	U	5/29/09	06/10/09 22:55	0.97
149250	Fluoranthene	36	36	330	U	5/29/09	06/10/09 22:55	0.97
149250	Fluorene	18	18	330	U	5/29/09	06/10/09 22:55	0.97
149250	Hexachlorobenzene	29	29	330	U	5/29/09	06/10/09 22:55	0.97
149250	Hexachlorobutadiene	10	10	330	U	5/29/09	06/10/09 22:55	0.97
149250	Hexachlorocyclopentadiene	50	50	330	U	5/29/09	06/10/09 22:55	0.97
149250	Hexachloroethane	21	21	330	U	5/29/09	06/10/09 22:55	0.97
149250	Indeno(1,2,3-cd)pyrene	22	22	330	U	5/29/09	06/10/09 22:55	0.97
149250	Isophorone	17	17	330	U	5/29/09	06/10/09 22:55	0.97
149250	Naphthalene	31	31	330	U	5/29/09	06/10/09 22:55	0.97
149250	Nitrobenzene	22	22	330	U	5/29/09	06/10/09 22:55	0.97
149250	N-Nitrosodi-n-propylamine	31	31	330	U	5/29/09	06/10/09 22:55	0.97
149250	N-Nitrosodiphenylamine	21	21	330	U	5/29/09	06/10/09 22:55	0.97
149250	Pentachlorophenol	330	330	660	U	5/29/09	06/10/09 22:55	0.97
149250	Phenanthrene	17	17	330	U	5/29/09	06/10/09 22:55	0.97
149250	Phenol	18	18	330	U	5/29/09	06/10/09 22:55	0.97
149250	Pyrene	12	12	330	U	5/29/09	06/10/09 22:55	0.97

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP1
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-008
Matrix:	SOLID	Lab WorkOrder:	LDMD61AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 13:31

Analysis Method: 8270C % Moisture: 3.2 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	No Tics Detected				U	5/29/09	06/10/09 22:55	0.97

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	68	44	120	
2-Fluorophenol	70	49	120	
2,4,6-Tribromophenol	71	44	120	
Nitrobenzene-d5	66	47	120	
Phenol-d5	71	49	120	
Terphenyl-d14	86	50	120	

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Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

K 7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP2
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-009
Matrix:	SOLID	Lab WorkOrder:	LDMD71AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 13:45

Analysis Method: 8270C % Moisture: 2.0 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	27	27	320	U	5/29/09	06/10/09 23:16	0.96
9149250	1,2-Dichlorobenzene	22	22	320	U	5/29/09	06/10/09 23:16	0.96
9149250	1,3-Dichlorobenzene	12	12	320	U	5/29/09	06/10/09 23:16	0.96
9149250	1,4-Dichlorobenzene	13	13	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2,4,5-Trichlorophenol	9.8	9.8	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2,4,6-Trichlorophenol	9.8	9.8	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2,4-Dichlorophenol	9.8	9.8	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2,4-Dimethylphenol	65	65	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2,4-Dinitrophenol	330	330	810	U	5/29/09	06/10/09 23:16	0.96
9149250	2,4-Dinitrotoluene	65	65	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2,6-Dinitrotoluene	27	27	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2-Chloronaphthalene	9.8	9.8	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2-Chlorophenol	21	21	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2-Methylnaphthalene	19	19	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2-Methylphenol	13	13	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2-Nitroaniline	49	49	320	U	5/29/09	06/10/09 23:16	0.96
9149250	2-Nitrophenol	9.8	9.8	320	U	5/29/09	06/10/09 23:16	0.96
9149250	3,3'-Dichlorobenzidine	88	88	650	U	5/29/09	06/10/09 23:16	0.96
9149250	3-Methylphenol & 4-Methylphenol	34	34	340	U	5/29/09	06/10/09 23:16	0.96
9149250	3-Nitroaniline	71	71	320	U	5/29/09	06/10/09 23:16	0.96
9149250	4,6-Dinitro-2-methylphenol	320	320	650	U	5/29/09	06/10/09 23:16	0.96
9149250	4-Bromophenyl phenyl ether	19	19	320	U	5/29/09	06/10/09 23:16	0.96
9149250	4-Chloro-3-methylphenol	65	65	320	U	5/29/09	06/10/09 23:16	0.96
9149250	4-Chloroaniline	80	80	320	U	5/29/09	06/10/09 23:16	0.96
9149250	4-Chlorophenyl phenyl ether	21	21	320	U	5/29/09	06/10/09 23:16	0.96
9149250	4-Nitroaniline	71	71	320	U	5/29/09	06/10/09 23:16	0.96
9149250	4-Nitrophenol	95	95	650	U	5/29/09	06/10/09 23:16	0.96
9149250	Acenaphthene	10	10	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Acenaphthylene	17	17	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Anthracene	17	17	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Benzo(a)anthracene	20	20	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Benzo(a)pyrene	20	20	320	U	5/29/09	06/10/09 23:16	0.96

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Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP2
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-009
Matrix:	SOLID	**Lab WorkOrder:**	LDMD71AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 13:45

Analysis Method: 8270C **% Moisture:** 2.0 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Benzo(b)fluoranthene	26	26	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Benzo(ghi)perylene	16	16	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Benzo(k)fluoranthene	39	39	320	U	5/29/09	06/10/09 23:16	0.96
9149250	bis(2-Chloroethoxy)methane	23	23	320	U	5/29/09	06/10/09 23:16	0.96
9149250	bis(2-Chloroethyl) ether	16	16	320	U	5/29/09	06/10/09 23:16	0.96
9149250	bis(2-Chloroisopropyl) ether	23	23	320	U	5/29/09	06/10/09 23:16	0.96
9149250	bis(2-Ethylhexyl) phthalate	45	45	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Butyl benzyl phthalate	42	42	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Carbazole	35	35	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Chrysene	28	26	320	J	5/29/09	06/10/09 23:16	0.96
9149250	Dibenz(a,h)anthracene	19	19	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Dibenzofuran	20	20	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Diethyl phthalate	25	25	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Dimethyl phthalate	23	23	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Di-n-butyl phthalate	28	28	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Di-n-octyl phthalate	14	14	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Fluoranthene	35	35	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Fluorene	18	18	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Hexachlorobenzene	28	28	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Hexachlorobutadiene	9.8	9.8	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Hexachlorocyclopentadiene	49	49	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Hexachloroethane	21	21	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Indeno(1,2,3-cd)pyrene	22	22	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Isophorone	17	17	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Naphthalene	30	30	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Nitrobenzene	22	22	320	U	5/29/09	06/10/09 23:16	0.96
9149250	N-Nitrosodi-n-propylamine	30	30	320	U	5/29/09	06/10/09 23:16	0.96
9149250	N-Nitrosodiphenylamine	21	21	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Pentachlorophenol	320	320	650	U	5/29/09	06/10/09 23:16	0.96
9149250	Phenanthrene	17	17	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Phenol	18	18	320	U	5/29/09	06/10/09 23:16	0.96
9149250	Pyrene	12	12	320	U	5/29/09	06/10/09 23:16	0.96

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP2
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-009
Matrix:	SOLID	Lab WorkOrder:	LDMD71AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 13:45

Analysis Method: 8270C % Moisture: 2.0 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	No Tics Detected				U	5/29/09	06/10/09 23:16	0.96

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	68	44	120	
2-Fluorophenol	71	49	120	
2,4,6-Tribromophenol	71	44	120	
Nitrobenzene-d5	66	47	120	
Phenol-d5	73	49	120	
Terphenyl-d14	95	50	120	

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Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP3
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-010
Matrix:	SOLID	Lab WorkOrder:	LDMD91AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 13:15

Analysis Method: 8270C % Moisture: 5.8 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	29	29	340	U	5/29/09	06/10/09 23:36	0.96
9149250	1,2-Dichlorobenzene	22	22	340	U	5/29/09	06/10/09 23:36	0.96
9149250	1,3-Dichlorobenzene	12	12	340	U	5/29/09	06/10/09 23:36	0.96
9149250	1,4-Dichlorobenzene	14	14	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2,4,5-Trichlorophenol	10	10	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2,4,6-Trichlorophenol	10	10	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2,4-Dichlorophenol	10	10	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2,4-Dimethylphenol	67	67	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2,4-Dinitrophenol	340	340	840	U	5/29/09	06/10/09 23:36	0.96
9149250	2,4-Dinitrotoluene	67	67	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2,6-Dinitrotoluene	29	29	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2-Chloronaphthalene	10	10	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2-Chlorophenol	21	21	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2-Methylnaphthalene	19	19	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2-Methylphenol	13	13	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2-Nitroaniline	51	51	340	U	5/29/09	06/10/09 23:36	0.96
9149250	2-Nitrophenol	10	10	340	U	5/29/09	06/10/09 23:36	0.96
9149250	3,3'-Dichlorobenzidine	92	92	670	U	5/29/09	06/10/09 23:36	0.96
9149250	3-Methylphenol & 4-Methylphenol	35	35	350	U	5/29/09	06/10/09 23:36	0.96
9149250	3-Nitroaniline	74	74	340	U	5/29/09	06/10/09 23:36	0.96
9149250	4,6-Dinitro-2-methylphenol	340	340	670	U	5/29/09	06/10/09 23:36	0.96
9149250	4-Bromophenyl phenyl ether	19	19	340	U	5/29/09	06/10/09 23:36	0.96
9149250	4-Chloro-3-methylphenol	67	67	340	U	5/29/09	06/10/09 23:36	0.96
9149250	4-Chloroaniline	83	83	340	U	5/29/09	06/10/09 23:36	0.96
9149250	4-Chlorophenyl phenyl ether	21	21	340	U	5/29/09	06/10/09 23:36	0.96
9149250	4-Nitroaniline	74	74	340	U	5/29/09	06/10/09 23:36	0.96
9149250	4-Nitrophenol	99	99	670	U	5/29/09	06/10/09 23:36	0.96
9149250	Acenaphthene	10	10	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Acenaphthylene	17	17	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Anthracene	17	17	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Benzo(a)anthracene	20	20	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Benzo(a)pyrene	20	20	340	U	5/29/09	06/10/09 23:36	0.96

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/20/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP3
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-010
Matrix:	SOLID	**Lab WorkOrder:**	LDMD91AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 13:15

Analysis Method: 8270C **% Moisture:** 5.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Benzo(b)fluoranthene	27	27	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Benzo(ghi)perylene	16	16	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Benzo(k)fluoranthene	41	41	340	U	5/29/09	06/10/09 23:36	0.96
9149250	bis(2-Chloroethoxy)methane	23	23	340	U	5/29/09	06/10/09 23:36	0.96
9149250	bis(2-Chloroethyl) ether	17	17	340	U	5/29/09	06/10/09 23:36	0.96
9149250	bis(2-Chloroisopropyl) ether	23	23	340	U	5/29/09	06/10/09 23:36	0.96
9149250	bis(2-Ethylhexyl) phthalate	47	47	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Butyl benzyl phthalate	44	44	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Carbazole	37	37	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Chrysene	28	28	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Dibenz(a,h)anthracene	19	19	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Dibenzofuran	20	20	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Diethyl phthalate	26	26	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Dimethyl phthalate	23	23	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Di-n-butyl phthalate	30	30	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Di-n-octyl phthalate	15	15	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Fluoranthene	37	37	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Fluorene	18	18	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Hexachlorobenzene	30	30	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Hexachlorobutadiene	10	10	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Hexachlorocyclopentadiene	51	51	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Hexachloroethane	22	22	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Indeno(1,2,3-cd)pyrene	22	22	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Isophorone	17	17	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Naphthalene	32	32	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Nitrobenzene	22	22	340	U	5/29/09	06/10/09 23:36	0.96
9149250	N-Nitrosodi-n-propylamine	32	32	340	U	5/29/09	06/10/09 23:36	0.96
9149250	N-Nitrosodiphenylamine	21	21	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Pentachlorophenol	340	340	670	U	5/29/09	06/10/09 23:36	0.96
9149250	Phenanthrene	17	17	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Phenol	18	18	340	U	5/29/09	06/10/09 23:36	0.96
9149250	Pyrene	12	12	340	U	5/29/09	06/10/09 23:36	0.96

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP3
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-010
Matrix:	SOLID	Lab WorkOrder:	LDMD91AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 13:15

Analysis Method: 8270C % Moisture: 5.8 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	9-Octadecenamide, (z)-	170			J N	5/29/09	06/10/09 23:36	0.96
9149250	Bromacil	750			J N	5/29/09	06/10/09 23:36	0.96

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	85	44	120	
2-Fluorophenol	88	49	120	
2,4,6-Tribromophenol	87	44	120	
Nitrobenzene-d5	82	47	120	
Phenol-d5	87	49	120	
Terphenyl-d14	101	50	120	

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7/23/09

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP4
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-011
Matrix:	SOLID	**Lab WorkOrder:**	LDMEA1AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 14:10

nalysis Method: 8270C **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

C Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
149250	1,2,4-Trichlorobenzene	28	28	330	U	5/29/09	06/10/09 23:56	0.99
149250	1,2-Dichlorobenzene	22	22	330	U	5/29/09	06/10/09 23:56	0.99
149250	1,3-Dichlorobenzene	12	12	330	U	5/29/09	06/10/09 23:56	0.99
149250	1,4-Dichlorobenzene	14	14	330	U	5/29/09	06/10/09 23:56	0.99
149250	2,4,5-Trichlorophenol	10	10	330	U	5/29/09	06/10/09 23:56	0.99
149250	2,4,6-Trichlorophenol	10	10	330	U	5/29/09	06/10/09 23:56	0.99
149250	2,4-Dichlorophenol	10	10	330	U	5/29/09	06/10/09 23:56	0.99
149250	2,4-Dimethylphenol	67	67	330	U	5/29/09	06/10/09 23:56	0.99
149250	2,4-Dinitrophenol	340	340	830	U	5/29/09	06/10/09 23:56	0.99
149250	2,4-Dinitrotoluene	67	67	330	U	5/29/09	06/10/09 23:56	0.99
149250	2,6-Dinitrotoluene	28	28	330	U	5/29/09	06/10/09 23:56	0.99
149250	2-Chloronaphthalene	10	10	330	U	5/29/09	06/10/09 23:56	0.99
149250	2-Chlorophenol	21	21	330	U	5/29/09	06/10/09 23:56	0.99
149250	2-Methylnaphthalene	19	19	330	U	5/29/09	06/10/09 23:56	0.99
149250	2-Methylphenol	13	13	330	U	5/29/09	06/10/09 23:56	0.99
149250	2-Nitroaniline	50	50	330	U	5/29/09	06/10/09 23:56	0.99
149250	2-Nitrophenol	10	10	330	U	5/29/09	06/10/09 23:56	0.99
9149250	3,3'-Dichlorobenzidine	91	91	670	U	5/29/09	06/10/09 23:56	0.99
9149250	3-Methylphenol & 4-Methylphenol	34	34	340	U	5/29/09	06/10/09 23:56	0.99
9149250	3-Nitroaniline	74	74	330	U	5/29/09	06/10/09 23:56	0.99
9149250	4,6-Dinitro-2-methylphenol	330	330	670	U	5/29/09	06/10/09 23:56	0.99
9149250	4-Bromophenyl phenyl ether	19	19	330	U	5/29/09	06/10/09 23:56	0.99
9149250	4-Chloro-3-methylphenol	67	67	330	U	5/29/09	06/10/09 23:56	0.99
9149250	4-Chloroaniline	83	83	330	U	5/29/09	06/10/09 23:56	0.99
9149250	4-Chlorophenyl phenyl ether	21	21	330	U	5/29/09	06/10/09 23:56	0.99
9149250	4-Nitroaniline	73	73	330	U	5/29/09	06/10/09 23:56	0.99
9149250	4-Nitrophenol	98	98	670	U	5/29/09	06/10/09 23:56	0.99
9149250	Acenaphthene	10	10	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Acenaphthylene	17	17	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Anthracene	17	17	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Benzo(a)anthracene	20	20	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Benzo(a)pyrene	20	20	330	U	5/29/09	06/10/09 23:56	0.99

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Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP4
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-011
Matrix:	SOLID	Lab WorkOrder:	LDMEA1AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 14:10

Analysis Method: 8270C % Moisture: 1.8 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Benzo(b)fluoranthene	26	26	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Benzo(ghi)perylene	16	16	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Benzo(k)fluoranthene	40	40	330	U	5/29/09	06/10/09 23:56	0.99
9149250	bis(2-Chloroethoxy)methane	23	23	330	U	5/29/09	06/10/09 23:56	0.99
9149250	bis(2-Chloroethyl) ether	17	17	330	U	5/29/09	06/10/09 23:56	0.99
9149250	bis(2-Chloroisopropyl) ether	23	23	330	U	5/29/09	06/10/09 23:56	0.99
9149250	bis(2-Ethylhexyl) phthalate	46	46	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Butyl benzyl phthalate	43	43	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Carbazole	36	36	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Chrysene	29	27	330	J	5/29/09	06/10/09 23:56	0.99
9149250	Dibenz(a,h)anthracene	19	19	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Dibenzofuran	20	20	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Diethyl phthalate	26	26	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Dimethyl phthalate	23	23	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Di-n-butyl phthalate	29	29	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Di-n-octyl phthalate	15	15	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Fluoranthene	36	36	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Fluorene	18	18	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Hexachlorobenzene	29	29	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Hexachlorobutadiene	10	10	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Hexachlorocyclopentadiene	50	50	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Hexachloroethane	21	21	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Indeno(1,2,3-cd)pyrene	22	22	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Isophorone	17	17	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Naphthalene	31	31	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Nitrobenzene	22	22	330	U	5/29/09	06/10/09 23:56	0.99
9149250	N-Nitrosodi-n-propylamine	31	31	330	U	5/29/09	06/10/09 23:56	0.99
9149250	N-Nitrosodiphenylamine	21	21	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Pentachlorophenol	330	330	670	U	5/29/09	06/10/09 23:56	0.99
9149250	Phenanthrene	17	17	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Phenol	18	18	330	U	5/29/09	06/10/09 23:56	0.99
9149250	Pyrene	12	12	330	U	5/29/09	06/10/09 23:56	0.99

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THE LEADER IN ENVIRONMENTAL TESTING

7/23/09

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP4
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-011
Matrix:	SOLID	**Lab WorkOrder:**	LDMEA1AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 14:10

Analysis Method: 8270C **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
149250	No Tics Detected				U	5/29/09	06/10/09 23:56	0.99

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	76	44	120	
2-Fluorophenol	78	49	120	
2,4,6-Tribromophenol	73	44	120	
Nitrobenzene-d5	75	47	120	
Phenol-d5	79	49	120	
Terphenyl-d14	96	50	120	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP5
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-012
Matrix:	SOLID	**Lab WorkOrder:**	LDMEC1AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 14:28

Analysis Method: 8270C **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	28	28	330	U	5/29/09	06/11/09 00:16	0.99
9149250	1,2-Dichlorobenzene	22	22	330	U	5/29/09	06/11/09 00:16	0.99
9149250	1,3-Dichlorobenzene	12	12	330	U	5/29/09	06/11/09 00:16	0.99
9149250	1,4-Dichlorobenzene	14	14	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2,4,5-Trichlorophenol	10	10	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2,4,6-Trichlorophenol	10	10	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2,4-Dichlorophenol	10	10	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2,4-Dimethylphenol	67	67	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2,4-Dinitrophenol	340	340	830	U	5/29/09	06/11/09 00:16	0.99
9149250	2,4-Dinitrotoluene	67	67	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2,6-Dinitrotoluene	28	28	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2-Chloronaphthalene	10	10	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2-Chlorophenol	21	21	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2-Methylnaphthalene	19	19	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2-Methylphenol	13	13	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2-Nitroaniline	50	50	330	U	5/29/09	06/11/09 00:16	0.99
9149250	2-Nitrophenol	10	10	330	U	5/29/09	06/11/09 00:16	0.99
9149250	3,3'-Dichlorobenzidine	91	91	670	U	5/29/09	06/11/09 00:16	0.99
9149250	3-Methylphenol & 4-Methylphenol	34	34	340	U	5/29/09	06/11/09 00:16	0.99
9149250	3-Nitroaniline	74	74	330	U	5/29/09	06/11/09 00:16	0.99
9149250	4,6-Dinitro-2-methylphenol	330	330	670	U	5/29/09	06/11/09 00:16	0.99
9149250	4-Bromophenyl phenyl ether	19	19	330	U	5/29/09	06/11/09 00:16	0.99
9149250	4-Chloro-3-methylphenol	67	67	330	U	5/29/09	06/11/09 00:16	0.99
9149250	4-Chloroaniline	83	83	330	U	5/29/09	06/11/09 00:16	0.99
9149250	4-Chlorophenyl phenyl ether	21	21	330	U	5/29/09	06/11/09 00:16	0.99
9149250	4-Nitroaniline	73	73	330	U	5/29/09	06/11/09 00:16	0.99
9149250	4-Nitrophenol	98	98	670	U	5/29/09	06/11/09 00:16	0.99
9149250	Acenaphthene	10	10	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Acenaphthylene	17	17	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Anthracene	17	17	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Benzo(a)anthracene	20	20	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Benzo(a)pyrene	20	20	330	U	5/29/09	06/11/09 00:16	0.99

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Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP5
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-012
Matrix:	SOLID	**Lab WorkOrder:**	LDMEC1AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 14:28

Analysis Method: 8270C **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Benzo(b)fluoranthene	29	26	330	J	5/29/09	06/11/09 00:16	0.99
9149250	Benzo(ghi)perylene	16	16	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Benzo(k)fluoranthene	40	40	330	U	5/29/09	06/11/09 00:16	0.99
9149250	bis(2-Chloroethoxy)methane	23	23	330	U	5/29/09	06/11/09 00:16	0.99
9149250	bis(2-Chloroethyl) ether	17	17	330	U	5/29/09	06/11/09 00:16	0.99
9149250	bis(2-Chloroisopropyl) ether	23	23	330	U	5/29/09	06/11/09 00:16	0.99
9149250	bis(2-Ethylhexyl) phthalate	46	46	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Butyl benzyl phthalate	43	43	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Carbazole	36	36	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Chrysene	33	27	330	J	5/29/09	06/11/09 00:16	0.99
9149250	Dibenz(a,h)anthracene	19	19	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Dibenzofuran	20	20	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Diethyl phthalate	26	26	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Dimethyl phthalate	23	23	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Di-n-butyl phthalate	29	29	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Di-n-octyl phthalate	15	15	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Fluoranthene	36	36	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Fluorene	18	18	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Hexachlorobenzene	29	29	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Hexachlorobutadiene	10	10	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Hexachlorocyclopentadiene	50	50	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Hexachloroethane	21	21	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Indeno(1,2,3-cd)pyrene	22	22	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Isophorone	17	17	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Naphthalene	31	31	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Nitrobenzene	22	22	330	U	5/29/09	06/11/09 00:16	0.99
9149250	N-Nitrosodi-n-propylamine	31	31	330	U	5/29/09	06/11/09 00:16	0.99
9149250	N-Nitrosodiphenylamine	21	21	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Pentachlorophenol	330	330	670	U	5/29/09	06/11/09 00:16	0.99
9149250	Phenanthrene	17	17	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Phenol	18	18	330	U	5/29/09	06/11/09 00:16	0.99
9149250	Pyrene	18	12	330	J	5/29/09	06/11/09 00:16	0.99

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Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

2/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP5
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-012
Matrix:	SOLID	**Lab WorkOrder:**	LDMEC1AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 14:28

Analysis Method: 8270C **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	No Tics Detected				U	5/29/09	06/11/09 00:16	0.99

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	81	44	120	
2-Fluorophenol	83	49	120	
2,4,6-Tribromophenol	80	44	120	
Nitrobenzene-d5	79	47	120	
Phenol-d5	83	49	120	
Terphenyl-d14	97	50	120	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP6
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-013
Matrix:	SOLID	**Lab WorkOrder:**	LDMED1AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 10:39

Analysis Method: 8270C **% Moisture:** 2.1 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	28	28	330	U	5/29/09	06/11/09 00:36	0.98
9149250	1,2-Dichlorobenzene	22	22	330	U	5/29/09	06/11/09 00:36	0.98
9149250	1,3-Dichlorobenzene	12	12	330	U	5/29/09	06/11/09 00:36	0.98
9149250	1,4-Dichlorobenzene	14	14	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2,4,5-Trichlorophenol	10	10	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2,4,6-Trichlorophenol	10	10	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2,4-Dichlorophenol	10	10	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2,4-Dimethylphenol	66	66	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2,4-Dinitrophenol	330	330	830	U	5/29/09	06/11/09 00:36	0.98
9149250	2,4-Dinitrotoluene	66	66	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2,6-Dinitrotoluene	28	28	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2-Chloronaphthalene	10	10	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2-Chlorophenol	21	21	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2-Methylnaphthalene	19	19	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2-Methylphenol	13	13	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2-Nitroaniline	50	50	330	U	5/29/09	06/11/09 00:36	0.98
9149250	2-Nitrophenol	10	10	330	U	5/29/09	06/11/09 00:36	0.98
9149250	3,3'-Dichlorobenzidine	90	90	660	U	5/29/09	06/11/09 00:36	0.98
9149250	3-Methylphenol & 4-Methylphenol	34	34	340	U	5/29/09	06/11/09 00:36	0.98
9149250	3-Nitroaniline	73	73	330	U	5/29/09	06/11/09 00:36	0.98
9149250	4,6-Dinitro-2-methylphenol	330	330	660	U	5/29/09	06/11/09 00:36	0.98
9149250	4-Bromophenyl phenyl ether	19	19	330	U	5/29/09	06/11/09 00:36	0.98
9149250	4-Chloro-3-methylphenol	66	66	330	U	5/29/09	06/11/09 00:36	0.98
9149250	4-Chloroaniline	82	82	330	U	5/29/09	06/11/09 00:36	0.98
9149250	4-Chlorophenyl phenyl ether	21	21	330	U	5/29/09	06/11/09 00:36	0.98
9149250	4-Nitroaniline	73	73	330	U	5/29/09	06/11/09 00:36	0.98
9149250	4-Nitrophenol	97	97	660	U	5/29/09	06/11/09 00:36	0.98
9149250	Acenaphthene	10	10	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Acenaphthylene	17	17	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Anthracene	17	17	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Benzo(a)anthracene	20	20	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Benzo(a)pyrene	20	20	330	U	5/29/09	06/11/09 00:36	0.98

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP6
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-013
Matrix:	SOLID	**Lab WorkOrder:**	LDMED1AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 10:39

Analysis Method: 8270C **% Moisture:** 2.1 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Benzo(b)fluoranthene	26	26	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Benzo(ghi)perylene	16	16	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Benzo(k)fluoranthene	40	40	330	U	5/29/09	06/11/09 00:36	0.98
9149250	bis(2-Chloroethoxy)methane	23	23	330	U	5/29/09	06/11/09 00:36	0.98
9149250	bis(2-Chloroethyl) ether	17	17	330	U	5/29/09	06/11/09 00:36	0.98
9149250	bis(2-Chloroisopropyl) ether	23	23	330	U	5/29/09	06/11/09 00:36	0.98
9149250	bis(2-Ethylhexyl) phthalate	46	46	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Butyl benzyl phthalate	43	43	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Carbazole	36	36	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Chrysene	27	27	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Dibenz(a,h)anthracene	19	19	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Dibenzofuran	20	20	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Diethyl phthalate	26	26	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Dimethyl phthalate	23	23	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Di-n-butyl phthalate	29	29	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Di-n-octyl phthalate	14	14	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Fluoranthene	36	36	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Fluorene	18	18	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Hexachlorobenzene	29	29	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Hexachlorobutadiene	10	10	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Hexachlorocyclopentadiene	50	50	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Hexachloroethane	21	21	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Indeno(1,2,3-cd)pyrene	22	22	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Isophorone	17	17	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Naphthalene	31	31	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Nitrobenzene	22	22	330	U	5/29/09	06/11/09 00:36	0.98
9149250	N-Nitrosodi-n-propylamine	31	31	330	U	5/29/09	06/11/09 00:36	0.98
9149250	N-Nitrosodiphenylamine	21	21	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Pentachlorophenol	330	330	660	U	5/29/09	06/11/09 00:36	0.98
9149250	Phenanthrene	17	17	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Phenol	18	18	330	U	5/29/09	06/11/09 00:36	0.98
9149250	Pyrene	12	12	330	U	5/29/09	06/11/09 00:36	0.98

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

V 7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP6
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-013
Matrix:	SOLID	**Lab WorkOrder:**	LDMED1AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 10:39

Analysis Method: 8270C **% Moisture:** 2.1 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Unknown	230			J N	5/29/09	06/11/09 00:36	0.98

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	69	44	120	
2-Fluorophenol	73	49	120	
2,4,6-Tribromophenol	71	44	120	
Nitrobenzene-d5	68	47	120	
Phenol-d5	74	49	120	
Terphenyl-d14	88	50	120	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

7/27/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP7
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-014
Matrix:	SOLID	Lab WorkOrder:	LDMEE1AF
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 12:49

Analysis Method: 8270C % Moisture: 1.8 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	1,2,4-Trichlorobenzene	28	28	330	U	5/29/09	06/11/09 00:56	0.98
9149250	1,2-Dichlorobenzene	22	22	330	U	5/29/09	06/11/09 00:56	0.98
9149250	1,3-Dichlorobenzene	12	12	330	U	5/29/09	06/11/09 00:56	0.98
9149250	1,4-Dichlorobenzene	14	14	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2,4,5-Trichlorophenol	10	10	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2,4,6-Trichlorophenol	10	10	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2,4-Dichlorophenol	10	10	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2,4-Dimethylphenol	66	66	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2,4-Dinitrophenol	330	330	820	U	5/29/09	06/11/09 00:56	0.98
9149250	2,4-Dinitrotoluene	66	66	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2,6-Dinitrotoluene	28	28	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2-Chloronaphthalene	10	10	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2-Chlorophenol	21	21	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2-Methylnaphthalene	19	19	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2-Methylphenol	13	13	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2-Nitroaniline	50	50	330	U	5/29/09	06/11/09 00:56	0.98
9149250	2-Nitrophenol	10	10	330	U	5/29/09	06/11/09 00:56	0.98
9149250	3,3'-Dichlorobenzidine	90	90	660	U	5/29/09	06/11/09 00:56	0.98
9149250	3-Methylphenol & 4-Methylphenol	34	34	340	U	5/29/09	06/11/09 00:56	0.98
9149250	3-Nitroaniline	73	73	330	U	5/29/09	06/11/09 00:56	0.98
9149250	4,6-Dinitro-2-methylphenol	330	330	660	U	5/29/09	06/11/09 00:56	0.98
9149250	4-Bromophenyl phenyl ether	19	19	330	U	5/29/09	06/11/09 00:56	0.98
9149250	4-Chloro-3-methylphenol	66	66	330	U	5/29/09	06/11/09 00:56	0.98
9149250	4-Chloroaniline	82	82	330	U	5/29/09	06/11/09 00:56	0.98
9149250	4-Chlorophenyl phenyl ether	21	21	330	U	5/29/09	06/11/09 00:56	0.98
9149250	4-Nitroaniline	72	72	330	U	5/29/09	06/11/09 00:56	0.98
9149250	4-Nitrophenol	97	97	660	U	5/29/09	06/11/09 00:56	0.98
9149250	Acenaphthene	10	10	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Acenaphthylene	17	17	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Anthracene	17	17	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Benzo(a)anthracene	20	20	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Benzo(a)pyrene	20	20	330	U	5/29/09	06/11/09 00:56	0.98

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

2/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP7
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-014
Matrix:	SOLID	**Lab WorkOrder:**	LDMEE1AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 12:49

Analysis Method: 8270C **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Benzo(b)fluoranthene	26	26	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Benzo(ghi)perylene	16	16	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Benzo(k)fluoranthene	40	40	330	U	5/29/09	06/11/09 00:56	0.98
9149250	bis(2-Chloroethoxy)methane	23	23	330	U	5/29/09	06/11/09 00:56	0.98
9149250	bis(2-Chloroethyl) ether	17	17	330	U	5/29/09	06/11/09 00:56	0.98
9149250	bis(2-Chloroisopropyl) ether	23	23	330	U	5/29/09	06/11/09 00:56	0.98
9149250	bis(2-Ethylhexyl) phthalate	46	46	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Butyl benzyl phthalate	43	43	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Carbazole	36	36	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Chrysene	27	27	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Dibenz(a,h)anthracene	19	19	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Dibenzofuran	20	20	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Diethyl phthalate	26	26	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Dimethyl phthalate	23	23	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Di-n-butyl phthalate	29	29	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Di-n-octyl phthalate	14	14	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Fluoranthene	36	36	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Fluorene	18	18	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Hexachlorobenzene	29	29	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Hexachlorobutadiene	10	10	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Hexachlorocyclopentadiene	50	50	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Hexachloroethane	21	21	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Indeno(1,2,3-cd)pyrene	22	22	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Isophorone	17	17	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Naphthalene	31	31	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Nitrobenzene	22	22	330	U	5/29/09	06/11/09 00:56	0.98
9149250	N-Nitrosodi-n-propylamine	31	31	330	U	5/29/09	06/11/09 00:56	0.98
9149250	N-Nitrosodiphenylamine	21	21	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Pentachlorophenol	330	330	660	U	5/29/09	06/11/09 00:56	0.98
9149250	Phenanthrene	17	17	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Phenol	18	18	330	U	5/29/09	06/11/09 00:56	0.98
9149250	Pyrene	12	12	330	U	5/29/09	06/11/09 00:56	0.98

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Sample Analysis Data Sheet

V 7/23/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP7
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-014
Matrix:	SOLID	**Lab WorkOrder:**	LDMEE1AF
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 12:49

Analysis Method: 8270C **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
0149250	No Tics Detected				U	5/29/09	06/11/09 00:56	0.98

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	64	44	120	
2-Fluorophenol	67	49	120	
2,4,6-Tribromophenol	70	44	120	
Nitrobenzene-d5	63	47	120	
Phenol-d5	69	49	120	
Terphenyl-d14	86	50	120	

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

CASE NARRATIVE
J00499 / RC-075 / D9E220401

The following report contains the analytical results for fifteen soil samples submitted to TestAmerica by Washington Closure Hanford. The samples were received May 22, 2009, according to documented sample acceptance procedures.

Client ID	Lab ID	Analyses Requested	Analyses Performed
J18WN4	D9E220401-001	6010/7471/8270A	6010B/7471A/8270C
J18WN5	D9E220401-002	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN6	D9E220401-003	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN7	D9E220401-004	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN8	D9E220401-005	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN9	D9E220401-006	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP0	D9E220401-007	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP1	D9E220401-008	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP2	D9E220401-009	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP3	D9E220401-010	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP4	D9E220401-011	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP5	D9E220401-012	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP6	D9E220401-013	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP7	D9E220401-014	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18X44	D9E220401-015	8260A	8260B

Dilution factors and qualifiers are provided to assist in the interpretation of the results. In some cases, due to interferences or analytes present above the linear calibration curve, samples must be analyzed at a dilution. For samples analyzed at a dilution, the reporting limits are adjusted relative to the dilution required. Dilutions made for reasons other than the presence of target compounds are addressed in the Supplemental QC Information section.

This report includes reporting limits (RLs) less than TestAmerica Denver's practical quantitation limits. These reporting limits are being used specifically at the client's request to meet the needs of this project. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards. Please note that Non-Detect (U) results have been evaluated down to the Method Detection Limit (MDL) and should be considered Non-Detect (U) at the MDL. The results, RLs and MDLs included in this report have been adjusted for dry weight.

TestAmerica utilizes USEPA approved methods in all analytical work. The results apply only to the samples included in this report and meet all requirements of NELAC. All data have been reviewed for compliance with the laboratory QA/QC plan and have been found to be compliant with laboratory protocols, with the exception of any items noted below.

SUPPLEMENTAL QC INFORMATION

Sample Receipt

Samples were received in good condition at a temperature of 3.6°C. No anomalies were encountered during sample receipt.

GCMS Volatiles – SW846 8260B

Low levels of Methylene chloride, a common laboratory contaminant, are present in the method blank associated with QC batch 9154075. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

GCMS Volatiles – SW846 8260B (cont.)
The MSD aliquot of the MS/MSD performed on sample J18WN5 exhibited a percent recovery outside the QC control limits for 1,1-Dichloroethene. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GCMS Semivolatiles – SW846 8270C
Compounds Benzo(b)fluoranthene and Benzo(k)fluoranthene were unresolved in sample J18WN4 due to matrix interferences. It can be noted that these compounds were adequately resolved in associated standards, indicating the instrument is achieving separation. The combined peak was reported as Benzo(b)fluoranthene, while Benzo(k)fluoranthene was reported as undetected even though it may be present. Associated results in the analytical report have been flagged with a "K".

Sample J18WN5 exhibited surrogate recoveries outside the QC control limits, biased high. As no detectable concentrations are present at levels greater than the reporting limits in the sample, corrective action is deemed unnecessary.

No other anomalies were encountered.

GC Semivolatiles – SW846 8082 – PCBs
Surrogate Decachlorobiphenyl was recovered outside the QC control limits, biased high, in sample J18WP2. This is an indicator that data may be biased high. As no detectable concentrations are present in the sample, corrective action is deemed unnecessary. The laboratory noted that the sample chromatogram shows obvious evidence of matrix interference.

A Continuing Calibration Verification (CCV) standard exhibited %Difference (%D) values >15%, biased high, for Aroclor 1260 and surrogate Tetrachloro-m-xylene. The overall mean %D is ≤15%; therefore, method criteria have been met and corrective action is deemed unnecessary.

No other anomalies were encountered.

Total Metals – SW846 6010B/7471A
Low levels of Zinc are present in the method blank associated with QC batch 9146376. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

The duplicate analysis of sample J18WN4 exhibited RPD data outside the QC control limits for Barium, Beryllium, Lead, Manganese, Zinc and Mercury. In some cases, the RPD was calculated based on a value below the method detection limit, and as such, could not be reliably calculated. There is no indication that the analytical systems were operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

I certify that this data package 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:

Kae E. Yoder
Project Manager

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 1 of 2

Collector J Sellers	Company Contact D.W.Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 116-DR-8, Verification I, excavation		SAF No. RC-075
Ice Chest No.	Field Logbook No. EL-1607-6	COA R116R8N6W0	Method of Shipment
Shipped To EBERLINE SERVICES, LLC HONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No. See OSPC

Price Code: 8L

Data Turnaround: 21 days

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

950000

SAMPLE ANALYSIS												
Preservation				None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
Type of Container				G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P
No. of Container(s)				1	1	1	1	1	1	1	1	1	1
Volume				250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL
Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium	
J18WN4	SOIL	5/20/09	0737	✓			✓							EB
J18WN5	SOIL	↓	0758	✓	✓	✓	✓	✓						A1
J18WN6	SOIL		0901	✓	✓	✓	✓	✓						A2
J18WN7	SOIL		0932	✓	✓	✓	✓	✓						A3
J18WN8	SOIL		0951	✓	✓	✓	✓	✓						A4

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: J. Sellers	5-20-09 1006	Received By/Stored In: DWShea DWShea	5/20/09 1006
Relinquished By/Removed From: DWShea DWShea	5/20/09 1641	Received By/Stored In: Fridge 1B	5/20/09 1641
Relinquished By/Removed From: Fridge 1B / J. E. Benhal	0830 5-21-09	Received By/Stored In: J. E. Benhal	0830 5-21-09
Relinquished By/Removed From: J. E. Benhal	1000 5-21-09	Received By/Stored In: DAVID HARBICO	1000 5-21-09
Relinquished By/Removed From: DAVID HARBICO	1000 5-21-09	Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]: Mercury - 7471 - (CV) [Mercury] DWShea 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108 metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wi=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By: Nancy Rindell	Title	Date/Time: 5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 2 of 2

Collector: J Sellers	Company Contact: D.W.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH
Price Code: 8L	Data Turnaround: 21 days		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 116-DR-8, Verification I, excavation		SAF No.: RC-075
Ice Chest No.	Field Logbook No.: EL-1607-6	COA: R116R8N6W0	Method of Shipment
Shipped To: EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No.: See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS
potentially radioactive

Special Handling and/or Storage

250057

SAMPLE ANALYSIS												
Preservation				None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
Type of Container				G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P
No. of Container(s)				1	1	1	1	1	1	1	1	1	1
Volume				250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL*	60mL	60mL
Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium
J18WN9	SOIL	5/20/09	1025	✓	✓	✓	✓	✓					A5
J18WP0	SOIL		1249	✓	✓	✓	✓	✓					A6
J18WP1	SOIL		1331	✓	✓	✓	✓	✓					A7
J18WP2	SOIL		1345	✓	✓	✓	✓	✓					A8
J18WP3	SOIL		13125	✓	✓	✓	✓	✓					A9

CHAIN OF POSSESSION — Sign/Print Names DWShea 5/20/09

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
J.Sellers	5-20-09 1440	DWSHEA DWSHEA	5/20/09 1440
DWShea DWShea	5/20/09 1641	Fridge 18	5/20/09 1641
Fridge 18/J.E. Bernal	5-21-09 0830	J.E. Bernal	5-21-09 0830
J.E. Bernal	5-21-09 1000	DAVID HARBINSON	5-21-09 100
DAVID HARBINSON	5-21-09 100		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] 5/12/09
(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108 metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

JU0499

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
	[signature]		5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica

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3.6 CHK
IRZAB 5-22-09

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 2 of 2

Collector: J Sellers	Company Contact: D.W.Shea — Telephone No.: 521-6014	Project Coordinator: KESSNER, JH	Price Code: 8L — Data Turnaround: 21 days
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 116-DR-8, Verification I, excavation	SAF No.: RC-075	
Ice Chest No.	Field Logbook No.: EL-1607-6 — COA: R116R8N6W0	Method of Shipment	
Shipped To: EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS
potentially radioactive

Special Handling and/or Storage

850000

SAMPLE ANALYSIS

			Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None	
			Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P	
			No. of Container(s)	1	1	1	1	1	1	1	1	1	1	
			Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL	
				See Item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See Item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63; Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium	
Sample No.	Matrix *	Sample Date	Sample Time											
J18WP4	SOIL	5/20/09	1345	✓	✓	✓	✓	✓					A	A10
J18WP5	SOIL		1428	✓	✓	✓	✓	✓						A11
J18WP6	SOIL		1039	✓	✓	✓	✓	✓						A12
J18WP7	SOIL		1249	✓	✓	✓	✓	✓						D

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: J. Sellers	Date/Time: 5-20-09 1440	Received By/Stored In: DWSHEA DWSHEA	Date/Time: 5/20/09 1440
Relinquished By/Removed From: DWSHEA DWSHEA	Date/Time: 5/20/09 1641	Received By/Stored In: Fridge 18	Date/Time: 5/20/09 1641
Relinquished By/Removed From: Fridge 18 / J.E. Bernhal	Date/Time: 0830 5-21-09	Received By/Stored In: J.E. Bernhal	Date/Time: 0830 5-21-09
Relinquished By/Removed From: J.E. Bernhal	Date/Time: 1015 5-21-09	Received By/Stored In: DAVID HARRIS	Date/Time: 1015 5-21-09
Relinquished By/Removed From: DAVID HARRIS	Date/Time: 5-21-09 1015	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) ~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~ Chromium, Cobalt, Copper, ~~Iron~~ Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~ Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) (Mercury) DWShea 5/12/09
(2) Gamma Spec - Add-on (Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108m, metastable, Sodium-22, Zirconium-95~~) DWShea 5/12/09

JV0499

Matrix *
S=Soil
SD=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wi=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By: Larry Bundell	Title	Date/Time: 5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica

Appendix 5

Data Validation Supporting Documentation

GC/MS ORGANIC DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 116-DR-8			DATA PACKAGE: J00499		
VALIDATOR: ELR		LAB: TAL		DATE: 7/22/09	
			SDG: J00499		
ANALYSES PERFORMED					
SW-846 8260		SW-846 8260 (TCLP)	SW-846 8270		SW-846 8270 (TCLP)
SAMPLES/MATRIX					
J18WN4	J18WN5	J18WN6	J18WN7	J18WN8	J18WN9
J18WP0	J18WP2	J18WP3	J18WP4	J18WP5	J18WP6
J18WP7					
					Soil

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? ..... Yes (No) N/A

Comments:

2. INSTRUMENT TUNING AND CALIBRATION (Levels D and E)

GC/MS tuning/performance check acceptable? ..... Yes No (N/A)

Initial calibrations acceptable? ..... Yes No (N/A)

Continuing calibrations acceptable? ..... Yes No (N/A)

Standards traceable? ..... Yes No (N/A)

Standards expired? ..... Yes No (N/A)

Calculation check acceptable? ..... Yes No (N/A)

Comments:

GC/MS ORGANIC DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

Calibration blanks analyzed? (Levels D, E) ..... Yes No N/A

Calibration blank results acceptable? (Levels D, E) ..... Yes No N/A

Laboratory blanks analyzed? ..... Yes No N/A

Laboratory blank results acceptable? ..... Yes No N/A

Field/trip blanks analyzed? (Levels C, D, E) ..... Yes No N/A

Field/trip blank results acceptable? (Levels C, D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

FB- benzo(a)anthracene benzo(b)fluoranthene, benzo(g,h,i)perylene benzo(k)fluoranthene, chrysene, pyrene

4. ACCURACY (Levels C, D, and E)

Surrogates/system monitoring compounds analyzed? ..... Yes No N/A

Surrogate/system monitoring compound recoveries acceptable? ..... Yes No N/A

Surrogates traceable? (Levels D, E) ..... Yes No N/A

Surrogates expired? (Levels D, E) ..... Yes No N/A

MS/MSD samples analyzed? ..... Yes No N/A

MS/MSD results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards? (Levels D, E) ..... Yes No N/A

LCS/BSS samples analyzed? ..... Yes No N/A

LCS/BSS results acceptable? ..... Yes No N/A

Standards traceable? (Levels D, E) ..... Yes No N/A

Standards expired? (Levels D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments: no PAS

Surr 1,2-dichlorobenzene acenaphthene benzo(a)anthracene benzo(a)pyrene benzo(b)fluoranthene benzo(g,h,i)perylene chrysene indeno(123-cd)pyrene pyrene - I all in WNS

GC/MS ORGANIC DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

MS/MSD samples analyzed? ..... Yes No N/A
MS/MSD RPD values acceptable? ..... Yes No N/A
MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A
MS/MSD standards expired? (Levels D, E) ..... Yes No N/A
Field duplicate RPD values acceptable? ..... Yes No N/A
Field split RPD values acceptable? ..... Yes No N/A
Transcription/calculation errors? (Levels D, E) ..... Yes No N/A
Comments: _____

6. SYSTEM PERFORMANCE (Levels D and E)

Internal standards analyzed? ..... Yes No N/A
Iinternal standard areas acceptable? ..... Yes No N/A
Internal standard retention times acceptable? ..... Yes No N/A
Standards traceable? ..... Yes No N/A
Standards expired? ..... Yes No N/A
Transcription/calculation errors? ..... Yes No N/A
Comments: _____

7. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A
Sample holding times acceptable? ..... Yes No N/A
Comments: _____

GC/MS ORGANIC DATA VALIDATION CHECKLIST

8. COMPOUND IDENTIFICATION, QUANTITATION, AND DETECTION LIMITS (all levels)

Compound identification acceptable? (Levels D, E) ..... Yes No N/A

Compound quantitation acceptable? (Levels D, E) ..... Yes No N/A

Results reported for all requested analyses? ..... Yes No N/A

Results supported in the raw data? (Levels D, E) ..... Yes No N/A

Samples properly prepared? (Levels D, E) ..... Yes No N/A

Laboratory properly identified and coded all TIC? (Levels D, E) ..... Yes No N/A

Detection limits meet RDL? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: 70 out

9. SAMPLE CLEANUP (Levels D and E)

GPC cleanup performed? ..... Yes No N/A

GPC check performed? ..... Yes No N/A

GPC check recoveries acceptable? ..... Yes No N/A

GPC calibration performed? ..... Yes No N/A

GPC calibration check performed? ..... Yes No N/A

GPC calibration check retention times acceptable? ..... Yes No N/A

Check/calibration materials traceable? ..... Yes No N/A

Check/calibration materials Expired? ..... Yes No N/A

Analytical batch QC given similar cleanup? ..... Yes No N/A

Transcription/Calculation Errors? ..... Yes No N/A

Comments:

Appendix 6

Additional Documentation Requested by Client

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Method Blank Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Lab Sample ID: D9E290000-250B **Work Order:** LD0N31AA **Analysis Method:** 8270C **Matrix:** SOLID **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Acenaphthene	10	10	330	U	05/29/09	06/10/09 18:52	1
9149250	Diethyl phthalate	26	26	330	U	05/29/09	06/10/09 18:52	1
9149250	2,4-Dimethylphenol	66	66	330	U	05/29/09	06/10/09 18:52	1
9149250	Dimethyl phthalate	23	23	330	U	05/29/09	06/10/09 18:52	1
9149250	Di-n-octyl phthalate	14	14	330	U	05/29/09	06/10/09 18:52	1
9149250	4,6-Dinitro-2-methylphenol	330	330	660	U	05/29/09	06/10/09 18:52	1
9149250	2,4-Dinitrophenol	330	330	820	U	05/29/09	06/10/09 18:52	1
9149250	2,4-Dinitrotoluene	66	66	330	U	05/29/09	06/10/09 18:52	1
9149250	2,6-Dinitrotoluene	28	28	330	U	05/29/09	06/10/09 18:52	1
9149250	Anthracene	17	17	330	U	05/29/09	06/10/09 18:52	1
9149250	Fluoranthene	36	36	330	U	05/29/09	06/10/09 18:52	1
9149250	Fluorene	18	18	330	U	05/29/09	06/10/09 18:52	1
9149250	Hexachlorobenzene	29	29	330	U	05/29/09	06/10/09 18:52	1
9149250	Hexachlorobutadiene	10	10	330	U	05/29/09	06/10/09 18:52	1
9149250	Hexachlorocyclopentadiene	50	50	330	U	05/29/09	06/10/09 18:52	1
9149250	Hexachloroethane	21	21	330	U	05/29/09	06/10/09 18:52	1
9149250	Indeno(1,2,3-cd)pyrene	22	22	330	U	05/29/09	06/10/09 18:52	1
9149250	Isophorone	17	17	330	U	05/29/09	06/10/09 18:52	1
9149250	2-Methylnaphthalene	19	19	330	U	05/29/09	06/10/09 18:52	1
9149250	2-Methylphenol	13	13	330	U	05/29/09	06/10/09 18:52	1
9149250	Naphthalene	31	31	330	U	05/29/09	06/10/09 18:52	1
9149250	2-Nitroaniline	50	50	330	U	05/29/09	06/10/09 18:52	1
9149250	3-Nitroaniline	73	73	330	U	05/29/09	06/10/09 18:52	1
9149250	4-Nitroaniline	72	72	330	U	05/29/09	06/10/09 18:52	1
9149250	Nitrobenzene	22	22	330	U	05/29/09	06/10/09 18:52	1
9149250	2-Nitrophenol	10	10	330	U	05/29/09	06/10/09 18:52	1
9149250	4-Nitrophenol	97	97	660	U	05/29/09	06/10/09 18:52	1
9149250	Benzo(a)anthracene	20	20	330	U	05/29/09	06/10/09 18:52	1
9149250	N-Nitrosodi-n-propylamine	31	31	330	U	05/29/09	06/10/09 18:52	1
9149250	N-Nitrosodiphenylamine	21	21	330	U	05/29/09	06/10/09 18:52	1
9149250	Benzo(b)fluoranthene	26	26	330	U	05/29/09	06/10/09 18:52	1
9149250	Benzo(k)fluoranthene	40	40	330	U	05/29/09	06/10/09 18:52	1
9149250	Benzo(ghi)perylene	16	16	330	U	05/29/09	06/10/09 18:52	1
9149250	Benzo(a)pyrene	20	20	330	U	05/29/09	06/10/09 18:52	1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Method Blank Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Lab Sample ID: D9E290000-250B **Work Order:** LD0N31AA **Analysis Method:** 8270C **Matrix:** SOLID **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149250	Pentachlorophenol	330	330	660	U	05/29/09	06/10/09 18:52	1
9149250	Phenanthrene	17	17	330	U	05/29/09	06/10/09 18:52	1
9149250	Phenol	18	18	330	U	05/29/09	06/10/09 18:52	1
9149250	Pyrene	12	12	330	U	05/29/09	06/10/09 18:52	1
9149250	1,2,4-Trichlorobenzene	28	28	330	U	05/29/09	06/10/09 18:52	1
9149250	2,4,5-Trichlorophenol	10	10	330	U	05/29/09	06/10/09 18:52	1
9149250	2,4,6-Trichlorophenol	10	10	330	U	05/29/09	06/10/09 18:52	1
9149250	Carbazole	36	36	330	U	05/29/09	06/10/09 18:52	1
9149250	3-Methylphenol & 4-Methylphenol	33	33	330	U	05/29/09	06/10/09 18:52	1
9149250	bis(2-Chloroethoxy)methane	23	23	330	U	05/29/09	06/10/09 18:52	1
9149250	bis(2-Chloroethyl) ether	17	17	330	U	05/29/09	06/10/09 18:52	1
9149250	bis(2-Chloroisopropyl) ether	23	23	330	U	05/29/09	06/10/09 18:52	1
9149250	bis(2-Ethylhexyl) phthalate	46	46	330	U	05/29/09	06/10/09 18:52	1
9149250	4-Bromophenyl phenyl ether	19	19	330	U	05/29/09	06/10/09 18:52	1
9149250	Butyl benzyl phthalate	43	43	330	U	05/29/09	06/10/09 18:52	1
9149250	Acenaphthylene	17	17	330	U	05/29/09	06/10/09 18:52	1
9149250	4-Chloroaniline	82	82	330	U	05/29/09	06/10/09 18:52	1
9149250	4-Chloro-3-methylphenol	66	66	330	U	05/29/09	06/10/09 18:52	1
9149250	2-Chloronaphthalene	10	10	330	U	05/29/09	06/10/09 18:52	1
9149250	2-Chlorophenol	21	21	330	U	05/29/09	06/10/09 18:52	1
9149250	4-Chlorophenyl phenyl ether	21	21	330	U	05/29/09	06/10/09 18:52	1
9149250	Chrysene	27	27	330	U	05/29/09	06/10/09 18:52	1
9149250	Dibenz(a,h)anthracene	19	19	330	U	05/29/09	06/10/09 18:52	1
9149250	Dibenzofuran	20	20	330	U	05/29/09	06/10/09 18:52	1
9149250	Di-n-butyl phthalate	29	29	330	U	05/29/09	06/10/09 18:52	1
9149250	1,2-Dichlorobenzene	22	22	330	U	05/29/09	06/10/09 18:52	1
9149250	1,3-Dichlorobenzene	12	12	330	U	05/29/09	06/10/09 18:52	1
9149250	1,4-Dichlorobenzene	14	14	330	U	05/29/09	06/10/09 18:52	1
9149250	3,3'-Dichlorobenzidine	90	90	660	U	05/29/09	06/10/09 18:52	1
9149250	2,4-Dichlorophenol	10	10	330	U	05/29/09	06/10/09 18:52	1
9149250	No Tics Detected				U	05/29/09	06/10/09 18:52	1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Method Blank Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	64	44	120	
2-Fluorophenol	65	49	120	
2,4,6-Tribromophenol	59	44	120	
Nitrobenzene-d5	61	47	120	
Phenol-d5	67	49	120	
Terphenyl-d14	85	50	120	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Laboratory Control Sample Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Lab Sample ID: D9E290000-250C **WorkOrder:** LD0N31AC **Analysis Method:** 8270C **Matrix:** SOLID **Unit:** ug/kg

QC Batch	Analyte	True	Found	%Rec	Q	Limits	Prep Date	Analysis Date	Dilution
9149250	Acenaphthene	3210	2600	81		46 - 120	05/29/09	06/10/09 19:33	1
9149250	2,4-Dinitrotoluene	3210	2910	91		48 - 120	05/29/09	06/10/09 19:33	1
9149250	Anthracene	3210	2830	88		57 - 120	05/29/09	06/10/09 19:33	1
9149250	2-Methylnaphthalene	3210	2550	79		55 - 120	05/29/09	06/10/09 19:33	1
9149250	2-Methylphenol	3210	2490	78		51 - 120	05/29/09	06/10/09 19:33	1
9149250	4-Nitrophenol	3210	3000	94		41 - 120	05/29/09	06/10/09 19:33	1
9149250	N-Nitrosodi-n-propylamine	3210	2510	78		45 - 120	05/29/09	06/10/09 19:33	1
9149250	Pentachlorophenol	3210	2470	77		33 - 120	05/29/09	06/10/09 19:33	1
9149250	Phenol	3210	2530	79		48 - 120	05/29/09	06/10/09 19:33	1
9149250	Pyrene	3210	2940	92		45 - 120	05/29/09	06/10/09 19:33	1
9149250	1,2,4-Trichlorobenzene	3210	2170	68		46 - 120	05/29/09	06/10/09 19:33	1
9149250	2,4,6-Trichlorophenol	3210	2670	83		50 - 120	05/29/09	06/10/09 19:33	1
9149250	Carbazole	3210	2860	89		54 - 120	05/29/09	06/10/09 19:33	1
9149250	4-Chloro-3-methylphenol	3210	2740	86		50 - 120	05/29/09	06/10/09 19:33	1
9149250	2-Chlorophenol	3210	2410	75		49 - 120	05/29/09	06/10/09 19:33	1
9149250	1,4-Dichlorobenzene	3210	2010	63		43 - 120	05/29/09	06/10/09 19:33	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2-Fluorobiphenyl	79	44	120	
2-Fluorophenol	75	49	120	
2,4,6-Tribromophenol	90	44	120	
Nitrobenzene-d5	70	47	120	
Phenol-d5	78	49	120	
Terphenyl-d14	95	50	120	

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Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Matrix Spike Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

ent Sample ID: J18WN4 **Lab WorkOrder:** LDMDV1D **% Moisture:** 0.0 **Basis:** Dry

b Sample ID: D9E220401-001S **Analysis Method** 8270C **Matrix:** SOLID **Unit:** ug/kg

: Batch ID: 9149250

Analyte	Spike Amount	Sample Result	Q	MS Result	% Rec	Q	QC Limit	Prep Date	Analysis Date	Dilution
,2,4-Trichlorobenzene	3130	26	U	2210	71		46 - 120	05/29/09	06/10/09 20:13	0.94
,4-Dichlorobenzene	3130	13	U	2080	66		43 - 120	05/29/09	06/10/09 20:13	0.94
:,4,6-Trichlorophenol	3130	9.4	U	2410	77		50 - 120	05/29/09	06/10/09 20:13	0.94
',4-Dinitrotoluene	3130	62	U	2620	84		48 - 120	05/29/09	06/10/09 20:13	0.94
?-Chlorophenol	3130	20	U	2250	72		49 - 120	05/29/09	06/10/09 20:13	0.94
?-Methylnaphthalene	3130	18	U	2400	77		55 - 120	05/29/09	06/10/09 20:13	0.94
?-Methylphenol	3130	12	U	2310	74		51 - 120	05/29/09	06/10/09 20:13	0.94
4-Chloro-3-methylphenol	3130	62	U	2470	79		50 - 120	05/29/09	06/10/09 20:13	0.94
4-Nitrophenol	3130	91	U	2660	85		41 - 120	05/29/09	06/10/09 20:13	0.94
Acenaphthene	3130	9.7	U	2340	75		46 - 120	05/29/09	06/10/09 20:13	0.94
Anthracene	3130	16	U	2580	82		57 - 120	05/29/09	06/10/09 20:13	0.94
Carbazole	3130	34	U	2640	84		54 - 120	05/29/09	06/10/09 20:13	0.94
N-Nitrosodi-n-propylamine	3130	29	U	2370	76		45 - 120	05/29/09	06/10/09 20:13	0.94
Pentachlorophenol	3130	310	U	2430	78		33 - 120	05/29/09	06/10/09 20:13	0.94
Phenol	3130	17	U	2290	73		48 - 120	05/29/09	06/10/09 20:13	0.94
Pyrene	3130	13	J	2620	83		45 - 120	05/29/09	06/10/09 20:13	0.94

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2,4,6-Tribromophenol	82	44	120	
2-Fluorobiphenyl	76	44	120	
2-Fluorophenol	73	49	120	
Nitrobenzene-d5	73	47	120	
Phenol-d5	74	49	120	
Terphenyl-d14	87	50	120	

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Washington Closure Hanford LLC

Mass Spectrometry Semi-Volatiles Matrix Spike Duplicate Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Client Sample ID: J18WN4 **Lab WorkOrder:** LDMDV1DJ **% Moisture:** 0.0 **Basis:** Dry

Lab Sample ID: D9E220401-001D **Analysis Method:** 8270C **Matrix:** SOLID **Unit:** ug/kg

QC Batch ID: 9149250

Analyte	Spike Amount	Sample Result	MSD Result	% Rec	RPD	Q	QC Limits % Rec	QC Limits RPD	Prep Date	Analysis Date	Dilution
1,2,4-Trichlorobenzene	3150	26	2620	83	17		46 - 120	35	05/29/09	06/10/09 20:33	0.94
1,4-Dichlorobenzene	3150	13	2510	80	19		43 - 120	34	05/29/09	06/10/09 20:33	0.94
2,4,6-Trichlorophenol	3150	9.4	2960	94	20		50 - 120	30	05/29/09	06/10/09 20:33	0.94
2,4-Dinitrotoluene	3150	62	3170	101	19		48 - 120	30	05/29/09	06/10/09 20:33	0.94
2-Chlorophenol	3150	20	2770	88	21		49 - 120	32	05/29/09	06/10/09 20:33	0.94
2-Methylnaphthalene	3150	18	2920	93	20		55 - 120	30	05/29/09	06/10/09 20:33	0.94
2-Methylphenol	3150	12	2840	90	21		51 - 120	30	05/29/09	06/10/09 20:33	0.94
4-Chloro-3-methylphenol	3150	62	3070	98	22		50 - 120	33	05/29/09	06/10/09 20:33	0.94
4-Nitrophenol	3150	91	3280	104	21		41 - 120	30	05/29/09	06/10/09 20:33	0.94
Acenaphthene	3150	9.7	2890	92	21		46 - 120	32	05/29/09	06/10/09 20:33	0.94
Anthracene	3150	16	3060	97	17		57 - 120	30	05/29/09	06/10/09 20:33	0.94
Carbazole	3150	34	3120	99	17		54 - 120	30	05/29/09	06/10/09 20:33	0.94
N-Nitrosodi-n-propylamine	3150	29	2940	93	21		45 - 120	34	05/29/09	06/10/09 20:33	0.94
Pentachlorophenol	3150	310	2920	93	18		33 - 120	40	05/29/09	06/10/09 20:33	0.94
Phenol	3150	17	2850	91	22		48 - 120	34	05/29/09	06/10/09 20:33	0.94
Pyrene	3150	13	3210	102	20		45 - 120	30	05/29/09	06/10/09 20:33	0.94

Surrogate	% Rec	Lower Limit	Upper Limit	Q
2,4,6-Tribromophenol	101	44	120	
2-Fluorobiphenyl	93	44	120	
2-Fluorophenol	90	49	120	
Nitrobenzene-d5	90	47	120	
Phenol-d5	91	49	120	
Terphenyl-d14	107	50	120	

Date: 27 July 2009
To: Washington Closure Hanford Inc. (technical representative)
From: ELR Consulting
Project: 100-D/DR Burial Grounds & Remaining Sites – Soil Full Protocol - Waste Site 116-DR-8
Subject: Volatile Organic - Data Package No. J00499-TAL

INTRODUCTION

This memo presents the results of data validation on Data Package No. J00499 prepared by TestAmerica Laboratory Inc. (TAL). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample Date	Media	Validation	Analyte
J18X44	5/20/09	Soil	C	See note 1
J18WN5	5/20/09	Soil	C	See note 1
J18WN6	5/20/09	Soil	C	See note 1
J18WN7	5/20/09	Soil	C	See note 1
J18WN8	5/20/09	Soil	C	See note 1
J18WN9	5/20/09	Soil	C	See note 1
J18WP0	5/20/09	Soil	C	See note 1
J18WP1	5/20/09	Soil	C	See note 1
J18WP2	5/20/09	Soil	C	See note 1
J18WP3	5/20/09	Soil	C	See note 1
J18WP4	5/20/09	Soil	C	See note 1
J18WP5	5/20/09	Soil	C	See note 1
J18WP6	5/20/09	Soil	C	See note 1
J18WP7	5/20/09	Soil	C	See note 1

1 – Volatile organics by 8260B.

Data validation was conducted in accordance with the Washington Closure Hanford (WCH) validation statement of work and the 100 Area Remedial Action Sampling and Analysis Plan (DOE/RL-96-22, Rev. 4, February 2005). Appendices 1 through 6 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports
Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Data Requested by Client

DATA QUALITY OBJECTIVES

Holding Times

Analytical holding times were assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Samples must be analyzed within 14 days of the date of sample collection.

If holding times are exceeded, but not by greater than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detectable sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

All holding times were met.

Method Blanks

Method blank analyses are conducted to determine the extent of laboratory contamination introduced through sampling, sample preparation and analysis. At least one acceptable method blank analysis must be conducted for every 20 samples. No contaminants should be present in the method blank. Analytical results for analytes present in any sample at less than five times the concentration of that analyte found in the associated blank are qualified as non-detects and flagged "U". Common laboratory contaminants present in samples at less than ten times the concentration of that analyte found in the associated blank are qualified as non-detects. If a sample result is less than the CRQL and is less than five times (or less than ten times for lab contaminants) the highest associated blank result, the sample result value is raised to the CRQL level and qualified as undetected "U".

Due to method blank contamination, the methylene chloride results in all samples were raised to the RQL, qualified as undetected and flagged "U".

All other method blank results were acceptable.

Field Blanks

One field (trip) blank (J18X44) was submitted for analysis. 2-Butanone and acetone were detected in the field blank. Under the WCH statement of work, no qualification is required.

- **Accuracy**

Matrix Spike/Matrix Spike Duplicate & Blank Spike Recoveries

Matrix spike/matrix spike duplicate analyses are used to assess the analytical accuracy of the reported data and the effect of the matrix on the ability to accurately quantify sample concentrations. Matrix spike/matrix spike duplicate analyses are performed in duplicate using five compounds for which percent recoveries must be within a range of 50-150% or within laboratory control limits. If spike recoveries are outside control limits, detected sample results less than five times the spike concentration are qualified as estimates and flagged "J". Undetected sample results with spike recoveries below control limits are qualified as estimates and flagged "UJ". Undetected sample results are not qualified if the spike recovery is above control limits. Sample results greater than five times the spike concentration require no qualification.

All accuracy results were acceptable.

Surrogate Recovery

The analyses of surrogate compounds provide a measure of performance for individual samples. Matrix-specific surrogate compound recovery control windows have been established by the EPA CLP program. If two surrogates of the same class of compounds (base/neutral or acid) are out of control limits, all associated sample results greater than the contract required quantitation limit (CRQL) are qualified as estimates and flagged "J". Sample results less than the CRQL and below the lower control limit are qualified as estimates and flagged "UJ". Sample results less than the CRQL with recoveries above the upper control limit require no qualification. If a surrogate recovery is less than 10%, detects are qualified as estimates and flagged "J" and nondetects are rejected and flagged "UR".

All surrogate results were acceptable.

- **Precision**

Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike (MS)/matrix spike duplicate (MSD) results provide matrix-specific information on the precision of the method for specific target compound classes. Precision is expressed by the relative percent difference (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample. Samples results must be within RPD limits of +/-30%. If RPD values are out of specification and the sample concentration is less than five times the spike concentration, all associated detected sample results are qualified as estimates and flagged "J". If RPD values are out of specification and the sample concentration is greater than five times the spike concentration, no qualification is required.

All precision results were acceptable.

Field Duplicate Samples

One set of field duplicates (J18WP0/J18WP7) was submitted for analysis. Field duplicates are compared using the same criteria as for laboratory duplicates. The RPD for acetone (98%) was outside QC limits. Under the WCH statement of work, no qualification is required. All other field duplicate results were acceptable.

Analytical Detection Levels

Reported analytical detection levels are compared against the required quantitation limits (RQL's) to ensure that laboratory detection levels meet the required criteria. All analytes met the RQL.

Completeness

Data package No. J00499 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

The following minor deficiencies were noted:

- Due to method blank contamination, the methylene chloride results in all samples were raised to the RQL, qualified as undetected and flagged "U".

Data flagged "J" indicates that the associated concentration is an estimate, but under the WCH statement of work, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

REFERENCES

Washington Closure Hanford Contract #S00W307A00 (March 2008), *Data Validation Services*, March 2008.

DOE/RL-96-22, Rev. 4, *100 Area Remedial Action Sampling and Analysis Plan*, U.S. Department of Energy, February 2005.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validators in compliance with the WCH validation SOW are as follows:

U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the same quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications usable for decision-making purposes).

Appendix 2

Summary of Data Qualification

VOLATILE ORGANIC DATA QUALIFICATION SUMMARY*

SDG: J00499	REVIEWER: ELR	Project: 116-DR-8	PAGE 1 OF 1
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Methylene chloride	U at RQL	All	Blank contamination

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Annotated Laboratory Reports

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7/24/09

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN5
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-002
Matrix:	SOLID	**Lab WorkOrder:**	LDMDW1A2
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 07:58

Analysis Method: 8260B **% Moisture:** 0.91 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.52	0.52	5.0	U	6/2/09	06/02/09 13:04	1
9154075	1,1,2,2-Tetrachloroethane	0.62	0.62	5.0	U	6/2/09	06/02/09 13:04	1
9154075	1,1,2-Trichloroethane	0.89	0.89	5.0	U	6/2/09	06/02/09 13:04	1
9154075	1,1-Dichloroethane	0.21	0.21	5.0	U	6/2/09	06/02/09 13:04	1
9154075	1,1-Dichloroethene	0.60	0.60	5.0	U T	6/2/09	06/02/09 13:04	1
9154075	1,2-Dichloroethane	0.71	0.71	5.0	U	6/2/09	06/02/09 13:04	1
9154075	1,2-Dichloroethene (total)	0.39	0.39	5.0	U	6/2/09	06/02/09 13:04	1
9154075	1,2-Dichloropropane	0.56	0.56	5.0	U	6/2/09	06/02/09 13:04	1
9154075	2-Butanone (MEK)	1.8	1.8	10	U	6/2/09	06/02/09 13:04	1
9154075	2-Hexanone	4.9	4.9	20	U	6/2/09	06/02/09 13:04	1
9154075	4-Methyl-2-pentanone	4.4	4.4	10	U	6/2/09	06/02/09 13:04	1
9154075	Acetone	13	5.4	20	J	6/2/09	06/02/09 13:04	1
9154075	Benzene	0.47	0.47	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Bromodichloromethane	0.22	0.22	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Bromoform	0.23	0.23	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Bromomethane	0.50	0.50	10	U	6/2/09	06/02/09 13:04	1
9154075	Carbon disulfide	0.42	0.42	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Carbon tetrachloride	0.64	0.64	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Chlorobenzene	0.54	0.54	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Chloroethane	0.90	0.90	10	U	6/2/09	06/02/09 13:04	1
9154075	Chloroform	0.29	0.29	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Chloromethane	0.78	0.78	10	U	6/2/09	06/02/09 13:04	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Dibromochloromethane	0.58	0.58	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Ethylbenzene	0.68	0.68	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Methylene chloride	10 ~~22~~	0.76	5.0	~~B~~ U	6/2/09	06/02/09 13:04	1
9154075	Styrene	0.64	0.64	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Tetrachloroethene	0.60	0.60	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Toluene	1.1	0.70	5.0	J	6/2/09	06/02/09 13:04	1
9154075	trans-1,3-Dichloropropene	0.68	0.68	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Trichloroethene	0.23	0.23	5.0	U	6/2/09	06/02/09 13:04	1
9154075	Vinyl chloride	1.4	1.4	5.0	U	6/2/09	06/02/09 13:04	1

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Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN5
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-002
Matrix:	SOLID	**Lab WorkOrder:**	LDMDW1A2
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 07:58

Analysis Method: 8260B **% Moisture:** 0.91 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	Xylenes (total)	0.62	0.62	3.5	U	6/2/09	06/02/09 13:04	1
9154075	No Tics Detected				U	6/2/09	06/02/09 13:04	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	71	60	143	
Toluene-d8	100	68	134	
Dibromofluoromethane	90	10	179	
4-Bromofluorobenzene	85	59	129	

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THE LEADER IN ENVIRONMENTAL TESTING

7/24/09

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN6
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-003
Matrix:	SOLID	**Lab WorkOrder:**	LDMD01AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:01

Analysis Method: 8260B **% Moisture:** 1.9 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.53	0.53	5.1	U	6/2/09	06/02/09 14:06	1
9154075	1,1,2,2-Tetrachloroethane	0.62	0.62	5.1	U	6/2/09	06/02/09 14:06	1
9154075	1,1,2-Trichloroethane	0.90	0.90	5.1	U	6/2/09	06/02/09 14:06	1
9154075	1,1-Dichloroethane	0.21	0.21	5.1	U	6/2/09	06/02/09 14:06	1
9154075	1,1-Dichloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 14:06	1
9154075	1,2-Dichloroethane	0.71	0.71	5.1	U	6/2/09	06/02/09 14:06	1
9154075	1,2-Dichloroethene (total)	0.40	0.40	5.1	U	6/2/09	06/02/09 14:06	1
9154075	1,2-Dichloropropane	0.56	0.56	5.1	U	6/2/09	06/02/09 14:06	1
9154075	2-Butanone (MEK)	1.9	1.9	10	U	6/2/09	06/02/09 14:06	1
9154075	2-Hexanone	5.0	5.0	20	U	6/2/09	06/02/09 14:06	1
9154075	4-Methyl-2-pentanone	4.4	4.4	10	U	6/2/09	06/02/09 14:06	1
9154075	Acetone	15	5.5	20	J	6/2/09	06/02/09 14:06	1
9154075	Benzene	0.48	0.48	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Bromodichloromethane	0.22	0.22	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Bromoform	0.23	0.23	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Bromomethane	0.51	0.51	10	U	6/2/09	06/02/09 14:06	1
9154075	Carbon disulfide	0.43	0.43	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Carbon tetrachloride	0.64	0.64	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Chlorobenzene	0.55	0.55	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Chloroethane	0.91	0.91	10	U	6/2/09	06/02/09 14:06	1
9154075	Chloroform	0.30	0.30	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Chloromethane	0.78	0.78	10	U	6/2/09	06/02/09 14:06	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Dibromochloromethane	0.58	0.58	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Ethylbenzene	0.68	0.68	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Methylene chloride	10 ~~1.8~~ 7/24	0.76	5.1	~~B~~ U 7/24	6/2/09	06/02/09 14:06	1
9154075	Styrene	0.64	0.64	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Tetrachloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Toluene	0.70	0.70	5.1	U	6/2/09	06/02/09 14:06	1
9154075	trans-1,3-Dichloropropene	0.68	0.68	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Trichloroethene	0.23	0.23	5.1	U	6/2/09	06/02/09 14:06	1
9154075	Vinyl chloride	1.4	1.4	5.1	U	6/2/09	06/02/09 14:06	1

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN6
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-003
Matrix:	SOLID	**Lab WorkOrder:**	LDMD01AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:01

Analysis Method: 8260B **% Moisture:** 1.9 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
154075	Xylenes (total)	0.62	0.62	3.6	U	6/2/09	06/02/09 14:06	1
154075	No Tics Detected				U	6/2/09	06/02/09 14:06	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	66	60	143	
Toluene-d8	97	68	134	
Dibromofluoromethane	85	10	179	
4-Bromofluorobenzene	81	59	129	

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THE LEADER IN ENVIRONMENTAL TESTING

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN7
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-004
Matrix:	SOLID	**Lab WorkOrder:**	LDMD11AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:32

Analysis Method: 8260B **% Moisture:** 1.1 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.53	0.53	5.1	U	6/2/09	06/02/09 14:27	1
9154075	1,1,2,2-Tetrachloroethane	0.62	0.62	5.1	U	6/2/09	06/02/09 14:27	1
9154075	1,1,2-Trichloroethane	0.89	0.89	5.1	U	6/2/09	06/02/09 14:27	1
9154075	1,1-Dichloroethane	0.21	0.21	5.1	U	6/2/09	06/02/09 14:27	1
9154075	1,1-Dichloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 14:27	1
9154075	1,2-Dichloroethane	0.71	0.71	5.1	U	6/2/09	06/02/09 14:27	1
9154075	1,2-Dichloroethene (total)	0.39	0.39	5.1	U	6/2/09	06/02/09 14:27	1
9154075	1,2-Dichloropropane	0.56	0.56	5.1	U	6/2/09	06/02/09 14:27	1
9154075	2-Butanone (MEK)	1.9	1.9	10	U	6/2/09	06/02/09 14:27	1
9154075	2-Hexanone	4.9	4.9	20	U	6/2/09	06/02/09 14:27	1
9154075	4-Methyl-2-pentanone	4.4	4.4	10	U	6/2/09	06/02/09 14:27	1
9154075	Acetone	7.2	5.4	20	J	6/2/09	06/02/09 14:27	1
9154075	Benzene	0.48	0.48	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Bromodichloromethane	0.22	0.22	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Bromoform	0.23	0.23	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Bromomethane	0.51	0.51	10	U	6/2/09	06/02/09 14:27	1
9154075	Carbon disulfide	0.42	0.42	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Carbon tetrachloride	0.64	0.64	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Chlorobenzene	0.55	0.55	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Chloroethane	0.90	0.90	10	U	6/2/09	06/02/09 14:27	1
9154075	Chloroform	0.29	0.29	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Chloromethane	0.78	0.78	10	U	6/2/09	06/02/09 14:27	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Dibromochloromethane	0.58	0.58	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Ethylbenzene	0.68	0.68	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Methylene chloride	10 7/24	0.76	5.1	7/24 U	6/2/09	06/02/09 14:27	1
9154075	Styrene	0.64	0.64	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Tetrachloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Toluene	0.70	0.70	5.1	U	6/2/09	06/02/09 14:27	1
9154075	trans-1,3-Dichloropropene	0.68	0.68	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Trichloroethene	0.23	0.23	5.1	U	6/2/09	06/02/09 14:27	1
9154075	Vinyl chloride	1.4	1.4	5.1	U	6/2/09	06/02/09 14:27	1

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN7
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-004
Matrix:	SOLID	**Lab WorkOrder:**	LDMD11AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:32

Analysis Method: 8260B **% Moisture:** 1.1 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
154075	Xylenes (total)	0.62	0.62	3.5	U	6/2/09	06/02/09 14:27	1
154075	No Tics Detected				U	6/2/09	06/02/09 14:27	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	69	60	143	
Toluene-d8	100	68	134	
Dibromofluoromethane	87	10	179	
4-Bromofluorobenzene	88	59	129	

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

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Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN8
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-005
Matrix:	SOLID	**Lab WorkOrder:**	LDMD21AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:51

Analysis Method: 8260B **% Moisture:** 2.9 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.54	0.54	5.1	U	6/2/09	06/02/09 14:48	1
9154075	1,1,2,2-Tetrachloroethane	0.63	0.63	5.1	U	6/2/09	06/02/09 14:48	1
9154075	1,1,2-Trichloroethane	0.91	0.91	5.1	U	6/2/09	06/02/09 14:48	1
9154075	1,1-Dichloroethane	0.22	0.22	5.1	U	6/2/09	06/02/09 14:48	1
9154075	1,1-Dichloroethene	0.61	0.61	5.1	U	6/2/09	06/02/09 14:48	1
9154075	1,2-Dichloroethane	0.72	0.72	5.1	U	6/2/09	06/02/09 14:48	1
9154075	1,2-Dichloroethene (total)	0.40	0.40	5.1	U	6/2/09	06/02/09 14:48	1
9154075	1,2-Dichloropropane	0.57	0.57	5.1	U	6/2/09	06/02/09 14:48	1
9154075	2-Butanone (MEK)	1.9	1.9	10	U	6/2/09	06/02/09 14:48	1
9154075	2-Hexanone	5.0	5.0	21	U	6/2/09	06/02/09 14:48	1
9154075	4-Methyl-2-pentanone	4.5	4.5	10	U	6/2/09	06/02/09 14:48	1
9154075	Acetone	16	5.5	21	J	6/2/09	06/02/09 14:48	1
9154075	Benzene	0.48	0.48	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Bromodichloromethane	0.23	0.23	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Bromoform	0.24	0.24	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Bromomethane	0.51	0.51	10	U	6/2/09	06/02/09 14:48	1
9154075	Carbon disulfide	0.43	0.43	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Carbon tetrachloride	0.65	0.65	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Chlorobenzene	0.56	0.56	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Chloroethane	0.92	0.92	10	U	6/2/09	06/02/09 14:48	1
9154075	Chloroform	0.30	0.30	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Chloromethane	0.79	0.79	10	U	6/2/09	06/02/09 14:48	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Dibromochloromethane	0.59	0.59	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Ethylbenzene	0.69	0.69	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Methylene chloride	10 ~~18~~ 7/24/09	0.77	5.1	~~B~~ U 7/24/09	6/2/09	06/02/09 14:48	1
9154075	Styrene	0.65	0.65	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Tetrachloroethene	0.61	0.61	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Toluene	0.71	0.71	5.1	U	6/2/09	06/02/09 14:48	1
9154075	trans-1,3-Dichloropropene	0.69	0.69	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Trichloroethene	0.24	0.24	5.1	U	6/2/09	06/02/09 14:48	1
9154075	Vinyl chloride	1.4	1.4	5.1	U	6/2/09	06/02/09 14:48	1

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN8
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-005
Matrix:	SOLID	**Lab WorkOrder:**	LDMD21AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:51

nalysis Method: 8260B **% Moisture:** 2.9 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

C Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
154075	Xylenes (total)	0.63	0.63	3.6	U	6/2/09	06/02/09 14:48	1
154075	No Tics Detected				U	6/2/09	06/02/09 14:48	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	67	60	143	
Toluene-d8	100	68	134	
Dibromofluoromethane	86	10	179	
4-Bromofluorobenzene	85	59	129	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN9
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-006
Matrix:	SOLID	**Lab WorkOrder:**	LDMD31AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 10:25

Analysis Method: 8260B **% Moisture:** 1.7 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.53	0.53	5.1	U	6/2/09	06/02/09 15:08	1
9154075	1,1,2,2-Tetrachloroethane	0.62	0.62	5.1	U	6/2/09	06/02/09 15:08	1
9154075	1,1,2-Trichloroethane	0.90	0.90	5.1	U	6/2/09	06/02/09 15:08	1
9154075	1,1-Dichloroethane	0.21	0.21	5.1	U	6/2/09	06/02/09 15:08	1
9154075	1,1-Dichloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 15:08	1
9154075	1,2-Dichloroethane	0.71	0.71	5.1	U	6/2/09	06/02/09 15:08	1
9154075	1,2-Dichloroethene (total)	0.40	0.40	5.1	U	6/2/09	06/02/09 15:08	1
9154075	1,2-Dichloropropane	0.56	0.56	5.1	U	6/2/09	06/02/09 15:08	1
9154075	2-Butanone (MEK)	1.9	1.9	10	U	6/2/09	06/02/09 15:08	1
9154075	2-Hexanone	5.0	5.0	20	U	6/2/09	06/02/09 15:08	1
9154075	4-Methyl-2-pentanone	4.4	4.4	10	U	6/2/09	06/02/09 15:08	1
9154075	Acetone	6.0	5.5	20	J	6/2/09	06/02/09 15:08	1
9154075	Benzene	0.48	0.48	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Bromodichloromethane	0.22	0.22	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Bromoform	0.23	0.23	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Bromomethane	0.51	0.51	10	U	6/2/09	06/02/09 15:08	1
9154075	Carbon disulfide	0.43	0.43	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Carbon tetrachloride	0.64	0.64	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Chlorobenzene	0.55	0.55	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Chloroethane	0.91	0.91	10	U	6/2/09	06/02/09 15:08	1
9154075	Chloroform	0.29	0.29	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Chloromethane	0.78	0.78	10	U	6/2/09	06/02/09 15:08	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Dibromochloromethane	0.58	0.58	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Ethylbenzene	0.68	0.68	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Methylene chloride	10 ~~1.8~~ 7/24	0.76	5.1	~~J~~ U 7/24	6/2/09	06/02/09 15:08	1
9154075	Styrene	0.64	0.64	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Tetrachloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Toluene	0.70	0.70	5.1	U	6/2/09	06/02/09 15:08	1
9154075	trans-1,3-Dichloropropene	0.68	0.68	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Trichloroethene	0.23	0.23	5.1	U	6/2/09	06/02/09 15:08	1
9154075	Vinyl chloride	1.4	1.4	5.1	U	6/2/09	06/02/09 15:08	1

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THE LEADER IN ENVIRONMENTAL TESTING

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WN9
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-006
Matrix:	SOLID	Lab WorkOrder:	LDMD31AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 10:25

Analysis Method: 8260B **% Moisture:** 1.7 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	Xylenes (total)	0.62	0.62	3.6	U	6/2/09	06/02/09 15:08	1
9154075	No Tics Detected				U	6/2/09	06/02/09 15:08	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	70	60	143	
Toluene-d8	102	68	134	
Dibromofluoromethane	89	10	179	
4-Bromofluorobenzene	81	59	129	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

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Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP0
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-007
Matrix:	SOLID	Lab WorkOrder:	LDMD51AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 12:49

Analysis Method: 8260B **% Moisture:** 1.6 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.53	0.53	5.1	U	6/2/09	06/02/09 15:29	1
9154075	1,1,2,2-Tetrachloroethane	0.62	0.62	5.1	U	6/2/09	06/02/09 15:29	1
9154075	1,1,2-Trichloroethane	0.89	0.89	5.1	U	6/2/09	06/02/09 15:29	1
9154075	1,1-Dichloroethane	0.21	0.21	5.1	U	6/2/09	06/02/09 15:29	1
9154075	1,1-Dichloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 15:29	1
9154075	1,2-Dichloroethane	0.71	0.71	5.1	U	6/2/09	06/02/09 15:29	1
9154075	1,2-Dichloroethene (total)	0.40	0.40	5.1	U	6/2/09	06/02/09 15:29	1
9154075	1,2-Dichloropropane	0.56	0.56	5.1	U	6/2/09	06/02/09 15:29	1
9154075	2-Butanone (MEK)	1.9	1.9	10	U	6/2/09	06/02/09 15:29	1
9154075	2-Hexanone	5.0	5.0	20	U	6/2/09	06/02/09 15:29	1
9154075	4-Methyl-2-pentanone	4.4	4.4	10	U	6/2/09	06/02/09 15:29	1
9154075	Acetone	13	5.5	20	J	6/2/09	06/02/09 15:29	1
9154075	Benzene	0.48	0.48	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Bromodichloromethane	0.22	0.22	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Bromoform	0.23	0.23	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Bromomethane	0.51	0.51	10	U	6/2/09	06/02/09 15:29	1
9154075	Carbon disulfide	0.43	0.43	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Carbon tetrachloride	0.64	0.64	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Chlorobenzene	0.55	0.55	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Chloroethane	0.90	0.90	10	U	6/2/09	06/02/09 15:29	1
9154075	Chloroform	0.29	0.29	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Chloromethane	0.78	0.78	10	U	6/2/09	06/02/09 15:29	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Dibromochloromethane	0.58	0.58	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Ethylbenzene	0.68	0.68	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Methylene chloride	10 ~~1.7~~ 7/24/09	0.76	5.1	~~1B~~ U 7/24/09	6/2/09	06/02/09 15:29	1
9154075	Styrene	0.64	0.64	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Tetrachloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Toluene	0.70	0.70	5.1	U	6/2/09	06/02/09 15:29	1
9154075	trans-1,3-Dichloropropene	0.68	0.68	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Trichloroethene	0.23	0.23	5.1	U	6/2/09	06/02/09 15:29	1
9154075	Vinyl chloride	1.4	1.4	5.1	U	6/2/09	06/02/09 15:29	1

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP0
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-007
Matrix:	SOLID	**Lab WorkOrder:**	LDMD51AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 12:49

Analysis Method: 8260B **% Moisture:** 1.6 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
154075	Xylenes (total)	0.62	0.62	3.6	U	6/2/09	06/02/09 15:29	1
154075	No Tics Detected				U	6/2/09	06/02/09 15:29	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	70	60	143	
Toluene-d8	96	68	134	
Dibromofluoromethane	88	10	179	
4-Bromofluorobenzene	84	59	129	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP1
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-008
Matrix:	SOLID	Lab WorkOrder:	LDMD61AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 13:31

Analysis Method: 8260B % Moisture: 3.2 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.54	0.54	5.2	U	6/2/09	06/02/09 15:50	1
9154075	1,1,2,2-Tetrachloroethane	0.63	0.63	5.2	U	6/2/09	06/02/09 15:50	1
9154075	1,1,2-Trichloroethane	0.91	0.91	5.2	U	6/2/09	06/02/09 15:50	1
9154075	1,1-Dichloroethane	0.22	0.22	5.2	U	6/2/09	06/02/09 15:50	1
9154075	1,1-Dichloroethene	0.61	0.61	5.2	U	6/2/09	06/02/09 15:50	1
9154075	1,2-Dichloroethane	0.72	0.72	5.2	U	6/2/09	06/02/09 15:50	1
9154075	1,2-Dichloroethene (total)	0.40	0.40	5.2	U	6/2/09	06/02/09 15:50	1
9154075	1,2-Dichloropropane	0.57	0.57	5.2	U	6/2/09	06/02/09 15:50	1
9154075	2-Butanone (MEK)	1.9	1.9	10	U	6/2/09	06/02/09 15:50	1
9154075	2-Hexanone	5.1	5.1	21	U	6/2/09	06/02/09 15:50	1
9154075	4-Methyl-2-pentanone	4.5	4.5	10	U	6/2/09	06/02/09 15:50	1
9154075	Acetone	30	5.6	21		6/2/09	06/02/09 15:50	1
9154075	Benzene	0.49	0.49	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Bromodichloromethane	0.23	0.23	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Bromoform	0.24	0.24	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Bromomethane	0.52	0.52	10	U	6/2/09	06/02/09 15:50	1
9154075	Carbon disulfide	0.43	0.43	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Carbon tetrachloride	0.65	0.65	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Chlorobenzene	0.56	0.56	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Chloroethane	0.92	0.92	10	U	6/2/09	06/02/09 15:50	1
9154075	Chloroform	0.30	0.30	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Chloromethane	0.80	0.80	10	U	6/2/09	06/02/09 15:50	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Dibromochloromethane	0.59	0.59	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Ethylbenzene	0.69	0.69	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Methylene chloride	10 ~~1.9~~ 7/24/09	0.77	5.2	~~JB~~ U 7/24/09	6/2/09	06/02/09 15:50	1
9154075	Styrene	0.65	0.65	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Tetrachloroethene	0.61	0.61	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Toluene	0.71	0.71	5.2	U	6/2/09	06/02/09 15:50	1
9154075	trans-1,3-Dichloropropene	0.69	0.69	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Trichloroethene	0.24	0.24	5.2	U	6/2/09	06/02/09 15:50	1
9154075	Vinyl chloride	1.4	1.4	5.2	U	6/2/09	06/02/09 15:50	1

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP1
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-008
Matrix:	SOLID	Lab WorkOrder:	LDMD61AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 13:31

Analysis Method: 8260B **% Moisture:** 3.2 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	Xylenes (total)	0.63	0.63	3.6	U	6/2/09	06/02/09 15:50	1
9154075	No Tics Detected				U	6/2/09	06/02/09 15:50	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	71	60	143	
Toluene-d8	99	68	134	
Dibromofluoromethane	90	10	179	
4-Bromofluorobenzene	87	59	129	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP2
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-009
Matrix:	SOLID	Lab WorkOrder:	LDMD71AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 13:45

Analysis Method: 8260B % Moisture: 2.0 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.53	0.53	5.1	U	6/2/09	06/02/09 16:11	1
9154075	1,1,2,2-Tetrachloroethane	0.62	0.62	5.1	U	6/2/09	06/02/09 16:11	1
9154075	1,1,2-Trichloroethane	0.90	0.90	5.1	U	6/2/09	06/02/09 16:11	1
9154075	1,1-Dichloroethane	0.21	0.21	5.1	U	6/2/09	06/02/09 16:11	1
9154075	1,1-Dichloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 16:11	1
9154075	1,2-Dichloroethane	0.71	0.71	5.1	U	6/2/09	06/02/09 16:11	1
9154075	1,2-Dichloroethene (total)	0.40	0.40	5.1	U	6/2/09	06/02/09 16:11	1
9154075	1,2-Dichloropropane	0.56	0.56	5.1	U	6/2/09	06/02/09 16:11	1
9154075	2-Butanone (MEK)	1.9	1.9	10	U	6/2/09	06/02/09 16:11	1
9154075	2-Hexanone	5.0	5.0	20	U	6/2/09	06/02/09 16:11	1
9154075	4-Methyl-2-pentanone	4.4	4.4	10	U	6/2/09	06/02/09 16:11	1
9154075	Acetone	8.9	5.5	20	J	6/2/09	06/02/09 16:11	1
9154075	Benzene	0.48	0.48	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Bromodichloromethane	0.22	0.22	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Bromoform	0.23	0.23	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Bromomethane	0.51	0.51	10	U	6/2/09	06/02/09 16:11	1
9154075	Carbon disulfide	0.43	0.43	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Carbon tetrachloride	0.64	0.64	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Chlorobenzene	0.55	0.55	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Chloroethane	0.91	0.91	10	U	6/2/09	06/02/09 16:11	1
9154075	Chloroform	0.30	0.30	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Chloromethane	0.79	0.79	10	U	6/2/09	06/02/09 16:11	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Dibromochloromethane	0.58	0.58	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Ethylbenzene	0.68	0.68	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Methylene chloride	10 ~~U~~ 7/24	0.76	5.1	~~JB~~ U 7/24	6/2/09	06/02/09 16:11	1
9154075	Styrene	0.64	0.64	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Tetrachloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Toluene	0.70	0.70	5.1	U	6/2/09	06/02/09 16:11	1
9154075	trans-1,3-Dichloropropene	0.68	0.68	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Trichloroethene	0.23	0.23	5.1	U	6/2/09	06/02/09 16:11	1
9154075	Vinyl chloride	1.4	1.4	5.1	U	6/2/09	06/02/09 16:11	1

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP2
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-009
Matrix:	SOLID	Lab WorkOrder:	LDMD71AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 13:45

Analysis Method: 8260B % Moisture: 2.0 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	Xylenes (total)	0.62	0.62	3.6	U	6/2/09	06/02/09 16:11	1
9154075	No Tics Detected				U	6/2/09	06/02/09 16:11	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	67	60	143	
Toluene-d8	99	68	134	
Dibromofluoromethane	86	10	179	
4-Bromofluorobenzene	81	59	129	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

K 7/24/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP3
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-010
Matrix:	SOLID	Lab WorkOrder:	LDMD91AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 13:15

Analysis Method: 8260B % Moisture: 5.8 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
154075	1,1,1-Trichloroethane	0.55	0.55	5.3	U	6/2/09	06/02/09 16:32	1
154075	1,1,2,2-Tetrachloroethane	0.65	0.65	5.3	U	6/2/09	06/02/09 16:32	1
154075	1,1,2-Trichloroethane	0.93	0.93	5.3	U	6/2/09	06/02/09 16:32	1
154075	1,1-Dichloroethane	0.22	0.22	5.3	U	6/2/09	06/02/09 16:32	1
154075	1,1-Dichloroethene	0.63	0.63	5.3	U	6/2/09	06/02/09 16:32	1
154075	1,2-Dichloroethane	0.74	0.74	5.3	U	6/2/09	06/02/09 16:32	1
154075	1,2-Dichloroethene (total)	0.41	0.41	5.3	U	6/2/09	06/02/09 16:32	1
154075	1,2-Dichloropropane	0.58	0.58	5.3	U	6/2/09	06/02/09 16:32	1
154075	2-Butanone (MEK)	1.9	1.9	11	U	6/2/09	06/02/09 16:32	1
154075	2-Hexanone	5.2	5.2	21	U	6/2/09	06/02/09 16:32	1
154075	4-Methyl-2-pentanone	4.6	4.6	11	U	6/2/09	06/02/09 16:32	1
154075	Acetone	7.9	5.7	21	J	6/2/09	06/02/09 16:32	1
154075	Benzene	0.50	0.50	5.3	U	6/2/09	06/02/09 16:32	1
154075	Bromodichloromethane	0.23	0.23	5.3	U	6/2/09	06/02/09 16:32	1
154075	Bromoform	0.24	0.24	5.3	U	6/2/09	06/02/09 16:32	1
154075	Bromomethane	0.53	0.53	11	U	6/2/09	06/02/09 16:32	1
154075	Carbon disulfide	0.45	0.45	5.3	U	6/2/09	06/02/09 16:32	1
154075	Carbon tetrachloride	0.67	0.67	5.3	U	6/2/09	06/02/09 16:32	1
154075	Chlorobenzene	0.57	0.57	5.3	U	6/2/09	06/02/09 16:32	1
154075	Chloroethane	0.94	0.94	11	U	6/2/09	06/02/09 16:32	1
154075	Chloroform	0.31	0.31	5.3	U	6/2/09	06/02/09 16:32	1
154075	Chloromethane	0.82	0.82	11	U	6/2/09	06/02/09 16:32	1
154075	cis-1,3-Dichloropropene	1.4	1.4	5.3	U	6/2/09	06/02/09 16:32	1
154075	Dibromochloromethane	0.60	0.60	5.3	U	6/2/09	06/02/09 16:32	1
154075	Ethylbenzene	0.71	0.71	5.3	U	6/2/09	06/02/09 16:32	1
154075	Methylene chloride	10 ~~1.8~~ 7/24/09	0.80	5.3	~~J~~ U 7/24/09	6/2/09	06/02/09 16:32	1
154075	Styrene	0.67	0.67	5.3	U	6/2/09	06/02/09 16:32	1
154075	Tetrachloroethene	0.63	0.63	5.3	U	6/2/09	06/02/09 16:32	1
154075	Toluene	0.73	0.73	5.3	U	6/2/09	06/02/09 16:32	1
154075	trans-1,3-Dichloropropene	0.71	0.71	5.3	U	6/2/09	06/02/09 16:32	1
154075	Trichloroethene	0.24	0.24	5.3	U	6/2/09	06/02/09 16:32	1
154075	Vinyl chloride	1.4	1.4	5.3	U	6/2/09	06/02/09 16:32	1

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP3
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-010
Matrix:	SOLID	**Lab WorkOrder:**	LDMD91AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 13:15

Analysis Method: 8260B % Moisture: 5.8 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	Xylenes (total)	0.65	0.65	3.7	U	6/2/09	06/02/09 16:32	1
9154075	No Tics Detected				U	6/2/09	06/02/09 16:32	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	68	60	143	
Toluene-d8	100	68	134	
Dibromofluoromethane	85	10	179	
4-Bromofluorobenzene	80	59	129	

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP4
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-011
Matrix:	SOLID	Lab WorkOrder:	LDMEA1AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 14:10

nalysis Method: 8260B % Moisture: 1.8 Basis: Dry Leach Date: Unit: ug/kg

C Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
154075	1,1,1-Trichloroethane	0.53	0.53	5.1	U	6/2/09	06/02/09 16:52	1
154075	1,1,2,2-Tetrachloroethane	0.62	0.62	5.1	U	6/2/09	06/02/09 16:52	1
154075	1,1,2-Trichloroethane	0.90	0.90	5.1	U	6/2/09	06/02/09 16:52	1
154075	1,1-Dichloroethane	0.21	0.21	5.1	U	6/2/09	06/02/09 16:52	1
154075	1,1-Dichloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 16:52	1
154075	1,2-Dichloroethane	0.71	0.71	5.1	U	6/2/09	06/02/09 16:52	1
154075	1,2-Dichloroethene (total)	0.40	0.40	5.1	U	6/2/09	06/02/09 16:52	1
154075	1,2-Dichloropropane	0.56	0.56	5.1	U	6/2/09	06/02/09 16:52	1
154075	2-Butanone (MEK)	1.9	1.9	10	U	6/2/09	06/02/09 16:52	1
154075	2-Hexanone	5.0	5.0	20	U	6/2/09	06/02/09 16:52	1
154075	4-Methyl-2-pentanone	4.4	4.4	10	U	6/2/09	06/02/09 16:52	1
154075	Acetone	7.3	5.5	20	J	6/2/09	06/02/09 16:52	1
154075	Benzene	0.48	0.48	5.1	U	6/2/09	06/02/09 16:52	1
154075	Bromodichloromethane	0.22	0.22	5.1	U	6/2/09	06/02/09 16:52	1
154075	Bromoform	0.23	0.23	5.1	U	6/2/09	06/02/09 16:52	1
154075	Bromomethane	0.51	0.51	10	U	6/2/09	06/02/09 16:52	1
154075	Carbon disulfide	0.43	0.43	5.1	U	6/2/09	06/02/09 16:52	1
154075	Carbon tetrachloride	0.64	0.64	5.1	U	6/2/09	06/02/09 16:52	1
154075	Chlorobenzene	0.55	0.55	5.1	U	6/2/09	06/02/09 16:52	1
154075	Chloroethane	0.91	0.91	10	U	6/2/09	06/02/09 16:52	1
154075	Chloroform	0.30	0.30	5.1	U	6/2/09	06/02/09 16:52	1
154075	Chloromethane	0.78	0.78	10	U	6/2/09	06/02/09 16:52	1
154075	cis-1,3-Dichloropropene	1.3	1.3	5.1	U	6/2/09	06/02/09 16:52	1
154075	Dibromochloromethane	0.58	0.58	5.1	U	6/2/09	06/02/09 16:52	1
154075	Ethylbenzene	0.68	0.68	5.1	U	6/2/09	06/02/09 16:52	1
154075	Methylene chloride	10 ~~1.6~~ 7/24/09	0.76	5.1	~~J~~ U 7/24/09	6/2/09	06/02/09 16:52	1
154075	Styrene	0.64	0.64	5.1	U	6/2/09	06/02/09 16:52	1
154075	Tetrachloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 16:52	1
154075	Toluene	0.70	0.70	5.1	U	6/2/09	06/02/09 16:52	1
154075	trans-1,3-Dichloropropene	0.68	0.68	5.1	U	6/2/09	06/02/09 16:52	1
154075	Trichloroethene	0.23	0.23	5.1	U	6/2/09	06/02/09 16:52	1
154075	Vinyl chloride	1.4	1.4	5.1	U	6/2/09	06/02/09 16:52	1

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

RT 7/24/09

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP4
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-011
Matrix:	SOLID	**Lab WorkOrder:**	LDMEA1AD
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 14:10

Analysis Method: 8260B % Moisture: 1.8 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	Xylenes (total)	0.62	0.62	3.6	U	6/2/09	06/02/09 16:52	1
9154075	No Tics Detected				U	6/2/09	06/02/09 16:52	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	70	60	143	
Toluene-d8	101	68	134	
Dibromofluoromethane	89	10	179	
4-Bromofluorobenzene	83	59	129	

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP5
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-012
Matrix:	SOLID	Lab WorkOrder:	LDMEC1AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 14:28

Analysis Method: 8260B % Moisture: 1.8 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.53	0.53	5.1	U	6/2/09	06/02/09 17:13	1
9154075	1,1,2,2-Tetrachloroethane	0.62	0.62	5.1	U	6/2/09	06/02/09 17:13	1
9154075	1,1,2-Trichloroethane	0.90	0.90	5.1	U	6/2/09	06/02/09 17:13	1
9154075	1,1-Dichloroethane	0.21	0.21	5.1	U	6/2/09	06/02/09 17:13	1
9154075	1,1-Dichloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 17:13	1
9154075	1,2-Dichloroethane	0.71	0.71	5.1	U	6/2/09	06/02/09 17:13	1
9154075	1,2-Dichloroethene (total)	0.40	0.40	5.1	U	6/2/09	06/02/09 17:13	1
9154075	1,2-Dichloropropane	0.56	0.56	5.1	U	6/2/09	06/02/09 17:13	1
9154075	2-Butanone (MEK)	1.9	1.9	10	U	6/2/09	06/02/09 17:13	1
9154075	2-Hexanone	5.0	5.0	20	U	6/2/09	06/02/09 17:13	1
9154075	4-Methyl-2-pentanone	4.4	4.4	10	U	6/2/09	06/02/09 17:13	1
9154075	Acetone	5.5	5.5	20	U	6/2/09	06/02/09 17:13	1
9154075	Benzene	0.48	0.48	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Bromodichloromethane	0.22	0.22	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Bromoform	0.23	0.23	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Bromomethane	0.51	0.51	10	U	6/2/09	06/02/09 17:13	1
9154075	Carbon disulfide	0.43	0.43	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Carbon tetrachloride	0.64	0.64	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Chlorobenzene	0.55	0.55	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Chloroethane	0.91	0.91	10	U	6/2/09	06/02/09 17:13	1
9154075	Chloroform	0.30	0.30	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Chloromethane	0.78	0.78	10	U	6/2/09	06/02/09 17:13	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Dibromochloromethane	0.58	0.58	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Ethylbenzene	0.68	0.68	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Methylene chloride	10	0.76	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Styrene	0.64	0.64	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Tetrachloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Toluene	0.70	0.70	5.1	U	6/2/09	06/02/09 17:13	1
9154075	trans-1,3-Dichloropropene	0.68	0.68	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Trichloroethene	0.23	0.23	5.1	U	6/2/09	06/02/09 17:13	1
9154075	Vinyl chloride	1.4	1.4	5.1	U	6/2/09	06/02/09 17:13	1

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

7/24/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP5
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-012
Matrix:	SOLID	Lab WorkOrder:	LDMEC1AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 14:28

Analysis Method: 8260B % Moisture: 1.8 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	Xylenes (total)	0.62	0.62	3.6	U	6/2/09	06/02/09 17:13	1
9154075	No Tics Detected				U	6/2/09	06/02/09 17:13	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	69	60	143	
Toluene-d8	100	68	134	
Dibromofluoromethane	88	10	179	
4-Bromofluorobenzene	82	59	129	

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18WP6
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-013
Matrix:	SOLID	Lab WorkOrder:	LDMED1AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 10:39

Analysis Method: 8260B % Moisture: 2.1 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.53	0.53	5.1	U	6/2/09	06/02/09 17:34	1
9154075	1,1,2,2-Tetrachloroethane	0.62	0.62	5.1	U	6/2/09	06/02/09 17:34	1
9154075	1,1,2-Trichloroethane	0.90	0.90	5.1	U	6/2/09	06/02/09 17:34	1
9154075	1,1-Dichloroethane	0.21	0.21	5.1	U	6/2/09	06/02/09 17:34	1
9154075	1,1-Dichloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 17:34	1
9154075	1,2-Dichloroethane	0.72	0.72	5.1	U	6/2/09	06/02/09 17:34	1
9154075	1,2-Dichloroethene (total)	0.40	0.40	5.1	U	6/2/09	06/02/09 17:34	1
9154075	1,2-Dichloropropane	0.56	0.56	5.1	U	6/2/09	06/02/09 17:34	1
9154075	2-Butanone (MEK)	1.9	1.9	10	U	6/2/09	06/02/09 17:34	1
9154075	2-Hexanone	5.0	5.0	20	U	6/2/09	06/02/09 17:34	1
9154075	4-Methyl-2-pentanone	4.5	4.5	10	U	6/2/09	06/02/09 17:34	1
9154075	Acetone	5.5	5.5	20	U	6/2/09	06/02/09 17:34	1
9154075	Benzene	0.48	0.48	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Bromodichloromethane	0.22	0.22	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Bromoform	0.23	0.23	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Bromomethane	0.51	0.51	10	U	6/2/09	06/02/09 17:34	1
9154075	Carbon disulfide	0.43	0.43	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Carbon tetrachloride	0.64	0.64	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Chlorobenzene	0.55	0.55	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Chloroethane	0.91	0.91	10	U	6/2/09	06/02/09 17:34	1
9154075	Chloroform	0.30	0.30	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Chloromethane	0.79	0.79	10	U	6/2/09	06/02/09 17:34	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Dibromochloromethane	0.58	0.58	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Ethylbenzene	0.68	0.68	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Methylene chloride	10 ~~1.8~~ 7/24/09	0.77	5.1	in ~~1.8~~ 7/24/09 U	6/2/09	06/02/09 17:34	1
9154075	Styrene	0.64	0.64	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Tetrachloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Toluene	0.70	0.70	5.1	U	6/2/09	06/02/09 17:34	1
9154075	trans-1,3-Dichloropropene	0.68	0.68	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Trichloroethene	0.23	0.23	5.1	U	6/2/09	06/02/09 17:34	1
9154075	Vinyl chloride	1.4	1.4	5.1	U	6/2/09	06/02/09 17:34	1

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP6
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-013
Matrix:	SOLID	Lab WorkOrder:	LDMED1AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 10:29

Analysis Method: 8260B % Moisture: 2.1 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
0154075	Xylenes (total)	0.62	0.62	3.6	U	6/2/09	06/02/09 17:34	1
0154075	No Tics Detected				U	6/2/09	06/02/09 17:34	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	74	60	143	
Toluene-d8	102	68	134	
Dibromofluoromethane	94	10	179	
4-Bromofluorobenzene	85	59	129	

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP7
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-014
Matrix:	SOLID	Lab WorkOrder:	LDMEE1AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 12:49

Analysis Method: 8260B % Moisture: 1.8 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.53	0.53	5.1	U	6/2/09	06/02/09 17:55	1
9154075	1,1,2,2-Tetrachloroethane	0.62	0.62	5.1	U	6/2/09	06/02/09 17:55	1
9154075	1,1,2-Trichloroethane	0.90	0.90	5.1	U	6/2/09	06/02/09 17:55	1
9154075	1,1-Dichloroethane	0.21	0.21	5.1	U	6/2/09	06/02/09 17:55	1
9154075	1,1-Dichloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 17:55	1
9154075	1,2-Dichloroethane	0.71	0.71	5.1	U	6/2/09	06/02/09 17:55	1
9154075	1,2-Dichloroethene (total)	0.40	0.40	5.1	U	6/2/09	06/02/09 17:55	1
9154075	1,2-Dichloropropane	0.56	0.56	5.1	U	6/2/09	06/02/09 17:55	1
9154075	2-Butanone (MEK)	1.9	1.9	10	U	6/2/09	06/02/09 17:55	1
9154075	2-Hexanone	5.0	5.0	20	U	6/2/09	06/02/09 17:55	1
9154075	4-Methyl-2-pentanone	4.4	4.4	10	U	6/2/09	06/02/09 17:55	1
9154075	Acetone	38	5.5	20		6/2/09	06/02/09 17:55	1
9154075	Benzene	0.48	0.48	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Bromodichloromethane	0.22	0.22	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Bromoform	0.23	0.23	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Bromomethane	0.51	0.51	10	U	6/2/09	06/02/09 17:55	1
9154075	Carbon disulfide	0.43	0.43	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Carbon tetrachloride	0.64	0.64	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Chlorobenzene	0.55	0.55	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Chloroethane	0.91	0.91	10	U	6/2/09	06/02/09 17:55	1
9154075	Chloroform	0.30	0.30	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Chloromethane	0.78	0.78	10	U	6/2/09	06/02/09 17:55	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Dibromochloromethane	0.58	0.58	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Ethylbenzene	0.68	0.68	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Methylene chloride	10 ~~46~~ 7/24/09	0.76	5.1	~~JB~~ U 7/24/09	6/2/09	06/02/09 17:55	1
9154075	Styrene	0.64	0.64	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Tetrachloroethene	0.60	0.60	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Toluene	0.70	0.70	5.1	U	6/2/09	06/02/09 17:55	1
9154075	trans-1,3-Dichloropropene	0.68	0.68	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Trichloroethene	0.23	0.23	5.1	U	6/2/09	06/02/09 17:55	1
9154075	Vinyl chloride	1.4	1.4	5.1	U	6/2/09	06/02/09 17:55	1

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP7
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-014
Matrix:	SOLID	Lab WorkOrder:	LDMEE1AD
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 12:49

Analysis Method: 8260B % Moisture: 1.8 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	Xylenes (total)	0.62	0.62	3.6	U	6/2/09	06/02/09 17:55	1
9154075	No Tics Detected				U	6/2/09	06/02/09 17:55	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	72	60	143	
Toluene-d8	101	68	134	
Dibromofluoromethane	90	10	179	
4-Bromofluorobenzene	85	59	129	

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Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18X44
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-015
Matrix:	SOLID	Lab WorkOrder:	LDMEF1AA
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 05:04

Analysis Method: 8260B % Moisture: 0.18 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	1,1,1-Trichloroethane	0.52	0.52	5.0	U	6/2/09	06/02/09 18:15	1
9154075	1,1,2,2-Tetrachloroethane	0.61	0.61	5.0	U	6/2/09	06/02/09 18:15	1
9154075	1,1,2-Trichloroethane	0.88	0.88	5.0	U	6/2/09	06/02/09 18:15	1
9154075	1,1-Dichloroethane	0.21	0.21	5.0	U	6/2/09	06/02/09 18:15	1
9154075	1,1-Dichloroethene	0.59	0.59	5.0	U	6/2/09	06/02/09 18:15	1
9154075	1,2-Dichloroethane	0.70	0.70	5.0	U	6/2/09	06/02/09 18:15	1
9154075	1,2-Dichloroethene (total)	0.39	0.39	5.0	U	6/2/09	06/02/09 18:15	1
9154075	1,2-Dichloropropane	0.55	0.55	5.0	U	6/2/09	06/02/09 18:15	1
9154075	2-Butanone (MEK)	23	1.8	10		6/2/09	06/02/09 18:15	1
9154075	2-Hexanone	4.9	4.9	20	U	6/2/09	06/02/09 18:15	1
9154075	4-Methyl-2-pentanone	4.4	4.4	10	U	6/2/09	06/02/09 18:15	1
9154075	Acetone	21	5.4	20		6/2/09	06/02/09 18:15	1
9154075	Benzene	0.47	0.47	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Bromodichloromethane	0.22	0.22	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Bromoform	0.23	0.23	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Bromomethane	0.50	0.50	10	U	6/2/09	06/02/09 18:15	1
9154075	Carbon disulfide	0.42	0.42	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Carbon tetrachloride	0.63	0.63	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Chlorobenzene	0.54	0.54	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Chloroethane	0.89	0.89	10	U	6/2/09	06/02/09 18:15	1
9154075	Chloroform	0.29	0.29	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Chloromethane	0.77	0.77	10	U	6/2/09	06/02/09 18:15	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Dibromochloromethane	0.57	0.57	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Ethylbenzene	0.67	0.67	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Methylene chloride	10 ~~27~~ 7/24/09	0.75	5.0	~~JB~~ U 7/24/09	6/2/09	06/02/09 18:15	1
9154075	Styrene	0.63	0.63	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Tetrachloroethene	0.59	0.59	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Toluene	0.69	0.69	5.0	U	6/2/09	06/02/09 18:15	1
9154075	trans-1,3-Dichloropropene	0.67	0.67	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Trichloroethene	0.23	0.23	5.0	U	6/2/09	06/02/09 18:15	1
9154075	Vinyl chloride	1.3	1.3	5.0	U	6/2/09	06/02/09 18:15	1

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THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Sample Analysis Data Sheet

VC 7/24/09

Lab Name:	TESTAMERICA DENVER	Client Sample ID:	J18X44
Lot/SDG Number:	D9E220401	Lab Sample ID:	D9E220401-015
Matrix:	SOLID	Lab WorkOrder:	LDMEF1AA
Date/Time Received:	05/22/09 09:00	Date/Time Collected:	05/20/09 05:04

Analysis Method: 8260B % Moisture: 0.18 Basis: Dry Leach Date: Unit: ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	Xylenes (total)	0.61	0.61	3.5	U	6/2/09	06/02/09 18:15	1
9154075	Nonanal	6.3			NJ	6/2/09	06/02/09 18:15	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	71	60	143	
Toluene-d8	99	68	134	
Dibromofluoromethane	88	10	179	
4-Bromofluorobenzene	84	59	129	

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

CASE NARRATIVE
J00499 / RC-075 / D9E220401

The following report contains the analytical results for fifteen soil samples submitted to TestAmerica by Washington Closure Hanford. The samples were received May 2 2, 2009, according to documented sample acceptance procedures.

Client ID	Lab ID	Analyses Requested	Analyses Performed
J18WN4	D9E220401-001	6010/7471/8270A	6010B/7471A/8270C
J18WN5	D9E220401-002	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN6	D9E220401-003	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN7	D9E220401-004	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN8	D9E220401-005	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN9	D9E220401-006	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP0	D9E220401-007	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP1	D9E220401-008	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP2	D9E220401-009	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP3	D9E220401-010	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP4	D9E220401-011	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP5	D9E220401-012	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP6	D9E220401-013	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP7	D9E220401-014	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18X44	D9E220401-015	8260A	8260B

Dilution factors and qualifiers are provided to assist in the interpretation of the results. In some cases, due to interferences or analytes present above the linear calibration curve, samples must be analyzed at a dilution. For samples analyzed at a dilution, the reporting limits are adjusted relative to the dilution required. Dilutions made for reasons other than the presence of target compounds are addressed in the Supplemental QC Information section.

This report includes reporting limits (RLs) less than TestAmerica Denver's practical quantitation limits. These reporting limits are being used specifically at the client's request to meet the needs of this project. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards. Please note that Non-Detect (U) results have been evaluated down to the Method Detection Limit (MDL) and should be considered Non-Detect (U) at the MDL. The results, RLs and MDLs included in this report have been adjusted for dry weight.

TestAmerica utilizes USEPA approved methods in all analytical work. The results apply only to the samples included in this report and meet all requirements of NELAC. All data have been reviewed for compliance with the laboratory QA/QC plan and have been found to be compliant with laboratory protocols, with the exception of any items noted below.

SUPPLEMENTAL QC INFORMATION

Sample Receipt

Samples were received in good condition at a temperature of 3.6°C. No anomalies were encountered during sample receipt.

GCMS Volatiles – SW846 8260B

Low levels of Methylene chloride, a common laboratory contaminant, are present in the method blank associated with QC batch 9154075. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

GCMS Volatiles – SW846 8260B (cont.)
The MSD aliquot of the MS/MSD performed on sample J18WN5 exhibited a percent recovery outside the QC control limits for 1,1-Dichloroethene. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GCMS Semivolatiles – SW846 8270C
Compounds Benzo(b)fluoranthene and Benzo(k)fluoranthene were unresolved in sample J18WN4 due to matrix interferences. It can be noted that these compounds were adequately resolved in associated standards, indicating the instrument is achieving separation. The combined peak was reported as Benzo(b)fluoranthene, while Benzo(k)fluoranthene was reported as undetected even though it may be present. Associated results in the analytical report have been flagged with a "K".

Sample J18WN5 exhibited surrogate recoveries outside the QC control limits, biased high. As no detectable concentrations are present at levels greater than the reporting limits in the sample, corrective action is deemed unnecessary.

No other anomalies were encountered.

GC Semivolatiles – SW846 8082 – PCBs
Surrogate Decachlorobiphenyl was recovered outside the QC control limits, biased high, in sample J18WP2. This is an indicator that data may be biased high. As no detectable concentrations are present in the sample, corrective action is deemed unnecessary. The laboratory noted that the sample chromatogram shows obvious evidence of matrix interference.

A Continuing Calibration Verification (CCV) standard exhibited %Difference (%D) values >15%, biased high, for Aroclor 1260 and surrogate Tetrachloro-m-xylene. The overall mean %D is ≤15%; therefore, method criteria have been met and corrective action is deemed unnecessary.

No other anomalies were encountered.

Total Metals – SW846 6010B/7471A
Low levels of Zinc are present in the method blank associated with QC batch 9146376. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

The duplicate analysis of sample J18WN4 exhibited RPD data outside the QC control limits for Barium, Beryllium, Lead, Manganese, Zinc and Mercury. In some cases, the RPD was calculated based on a value below the method detection limit, and as such, could not be reliably calculated. There is no indication that the analytical systems were operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

I certify that this data package 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:

Kae E. Yoder
Project Manager

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 1 of 2
Collector: J Sellers	Company Contact: D.W.Shea; Telephone No.: 521-6014	Project Coordinator: KESSNER, JH	Price Code: 8L; Data Turnaround: 21 days
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 116-DR-8, Verification I, excavation	SAF No.: RC-075	
Ice Chest No.	Field Logbook No.: EL-1607-6; COA: R116R8N6W0	Method of Shipment	
Shipped To: EBERLINE SERVICES LIONVILLE (TA)	Offsite Property No.	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

000042

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None	
Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	1	
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium	
Sample No. / Matrix * / Sample Date / Sample Time											
J18WN4 / SOIL / 5/20/09 / 0737	✓			✓							EB
J18WN5 / SOIL / ↓ / 0758	✓	✓	✓	✓	✓						A1
J18WN6 / SOIL / ↓ / 0901	✓	✓	✓	✓	✓						A2
J18WN7 / SOIL / ↓ / 0932	✓	✓	✓	✓	✓						A3
J18WN8 / SOIL / ↓ / 0951	✓	✓	✓	✓	✓						A4

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: J Sellers	Date/Time: 5-20-09 1006	Received By/Stored In: DWShea	Date/Time: 5/20/09 1006
Relinquished By/Removed From: DWShea	Date/Time: 5/20/09 1641	Received By/Stored In: Fridge 1B	Date/Time: 5/20/09 1641
Relinquished By/Removed From: Fridge 1B / J. E. Benfield	Date/Time: 0830 5-21-09	Received By/Stored In: J. E. Benfield	Date/Time: 0830 5-21-09
Relinquished By/Removed From: J. E. Benfield	Date/Time: 1000 5-21-09	Received By/Stored In: DAVID HARBISON	Date/Time: 1000 5-21-09
Relinquished By/Removed From: DAVID HARBISON	Date/Time: 1000 5-21-09	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] DWShea 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108-metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
	Lenny Rindell		5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 2 of 3

Collector J Sellers	Company Contact D.W.Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH
Price Code 8L	Data Turnaround 21 days		
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 116-DR-8, Verification I, excavation		SAF No. RC-075
Ice Chest No.	Field Logbook No. EL-1607-6	COA R116R8N6W0	Method of Shipment
Shipped To EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No. See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS
potentially radioactive

Special Handling and/or Storage

000043

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL*	60mL	60mL
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium

Sample No.	Matrix *	Sample Date	Sample Time										
J18WN9	SOIL	5/20/09	1025	✓	✓	✓	✓	✓					A5
J18WP0	SOIL		1249	✓	✓	✓	✓	✓					A6
J18WP1	SOIL		1331	✓	✓	✓	✓	✓					A7
J18WP2	SOIL		1345	✓	✓	✓	✓	✓					A8
J18WP3	SOIL		1325	✓	✓	✓	✓	✓					A9

CHAIN OF POSSESSION — Sign/Print Names DWShea 5/20/09

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
J. Sellers J. Sellers	5-20-09 1440	DWSHEA DWSHEA	5/20/09 1440
DWShea DWShea	5/20/09 1641	Fridge 1B	5/20/09 1641
Fridge 1B/J.E. Benhal	5-21-09 0830	J.E. Benhal	5-21-09 0830
J.E. Benhal	5-21-09 1000	DAVID HARBINSON	5-21-09 1000
DAVID HARBINSON	5-21-09 1000		

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108 metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W=Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
	Lamar Birdell		5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica

3.6 CHF
IRZAB 5-22-09

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Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 2 of 2

Collector J Sellers	Company Contact D.W.Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 116-DR-8, Verification I, excavation		SAF No. RC-075
Ice Chest No.	Field Logbook No. EL-1607-6	COA R116R8N6W0	Method of Shipment
Shipped To EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No. See OSPC

Price Code: 8L

Data Turnaround: 21 days

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions.	Carbon-14: Tritium - H3	Nickel-63: Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium	
J18WP4	SOIL	5/20/09	1345	✓	✓	✓	✓	✓					1	A10
J18WP5	SOIL		1428	✓	✓	✓	✓	✓						A11
J18WP6	SOIL		1039	✓	✓	✓	✓	✓						A12
J18WP7	SOIL		1249	✓	✓	✓	✓	✓						D

000044

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
J. Sellers	5-20-09 1440	DWSHEA DWSHEA	5/20/09 1440
DWSHEA DWSHEA	5/20/09 1641	Fridge 18	5/20/09 1641
Fridge 18 / J.E. Bernal	5-21-09 0830	J.E. Bernal	5-21-09 0830
J.E. Bernal	5-21-09 1015	DAVID HARDIN	5-21-09 1015
DAVID HARDIN	5-21-09 1015		

SFS 5/21/09

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~ Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~ Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] DWShea 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108 metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499

Matrix *
S=Soil
SD=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By: Lanny Bindell	Title	Date/Time: 5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-077	Page 1 of 1

Collector J Sellers	Company Contact D.W.Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH
Price Code 8L	Data Turnaround 21 days		
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 116-DR-8, Verification 1, VOA trip blanks		SAF No. RC-075
Ice Chest No.	Field Logbook No. EL-1607-6	COA R116R8N6W0	Method of Shipment
Shipped To EBERLINE SERVICES/LIONVILLE 5-21-09 JEB TA	Offsite Property No.		Bill of Lading/Air Bill No. See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

100045

Preservation	Cool 4C											
Type of Container	G											
No. of Container(s)	1											
Volume	120mL											
SAMPLE ANALYSIS	VOA - 8260A (TCL)											

Sample No.	Matrix *	Sample Date	Sample Time										
J18X43	SOIL	~~5/20/09~~	~~0504~~										
J18X44	SOIL	5/20/09	0504	✓									
J18X45	SOIL												

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
J. Sellers Josh Sellers	5-20-09 1440	DWSHEA DWSHEA	5/20/09 1440
DWSHEA DWSHEA	5/20/09 1641	Fridge 1B	5/20/09 1641
Fridge 1B / J.E. Bernal	5-21-09 0830	J.E. Bernal	5-21-09 0830
J.E. Bernal	5-21-09 1000	DAVID HARBIRCO	5-21-09 1000
DAVID HARBIRCO	5-21-09 1000		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SDL # J00499 MFH 5-22-09

SPECIAL INSTRUCTIONS

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wi=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
	Aaron Bindl		5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

5/21/09

TestAmerica

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Appendix 5

Data Validation Supporting Documentation

GC/MS ORGANIC DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 116-DR-8			DATA PACKAGE: J00499		
VALIDATOR: ELR		LAB: TAL		DATE: 7/21/09	
			SDG: J00499		
ANALYSES PERFORMED					
SW-846 8260		SW-846 8260 (TCLP)	SW-846 8270		SW-846 8270 (TCLP)
SAMPLES/MATRIX					
J18WN5	J18WN6	J18WN7	J17WN8	J18WN9	
J18WP0	J18WP1	J18WP2	J18WP3	J18WP5	
J18WP6	J18WP7	J18X44			
					Soil

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? ..... Yes (No) N/A

Comments:

2. INSTRUMENT TUNING AND CALIBRATION (Levels D and E)

GC/MS tuning/performance check acceptable? ..... Yes No (N/A)

Initial calibrations acceptable? ..... Yes No (N/A)

Continuing calibrations acceptable? ..... Yes No (N/A)

Standards traceable? ..... Yes No (N/A)

Standards expired? ..... Yes No (N/A)

Calculation check acceptable? ..... Yes No (N/A)

Comments:

GC/MS ORGANIC DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

Calibration blanks analyzed? (Levels D, E) ..... Yes No N/A

Calibration blank results acceptable? (Levels D, E) ..... Yes No N/A

Laboratory blanks analyzed? ..... Yes No N/A

Laboratory blank results acceptable? ..... Yes No N/A

Field/trip blanks analyzed? (Levels C, D, E) ..... Yes No N/A

Field/trip blank results acceptable? (Levels C, D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: Methylene Chloride - ~~[illegible]~~ - 0 at Row

FB - 2-butanone, acetone

4. ACCURACY (Levels C, D, and E)

Surrogates/system monitoring compounds analyzed? ..... Yes No N/A

Surrogate/system monitoring compound recoveries acceptable? ..... Yes No N/A

Surrogates traceable? (Levels D, E) ..... Yes No N/A

Surrogates expired? (Levels D, E) ..... Yes No N/A

MS/MSD samples analyzed? ..... Yes No N/A

MS/MSD results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards? (Levels D, E) ..... Yes No N/A

LCS/BSS samples analyzed? ..... Yes No N/A

LCS/BSS results acceptable? ..... Yes No N/A

Standards traceable? (Levels D, E) ..... Yes No N/A

Standards expired? (Levels D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments: no pts

MSD - 1,1-dichloro ethane - J all ~~detect~~ (1672)

~~detect~~

GC/MS ORGANIC DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

MS/MSD samples analyzed? ..... Yes No N/A

MS/MSD RPD values acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

Field duplicate RPD values acceptable? ..... Yes No N/A

Field split RPD values acceptable? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

FD-98% - acetone

6. SYSTEM PERFORMANCE (Levels D and E)

Internal standards analyzed? ..... Yes No N/A

Iinternal standard areas acceptable? ..... Yes No N/A

Internal standard retention times acceptable? ..... Yes No N/A

Standards traceable? ..... Yes No N/A

Standards expired? ..... Yes No N/A

Transcription/calculation errors? ..... Yes No N/A

Comments:

7. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A

Sample holding times acceptable? ..... Yes No N/A

Comments:

GC/MS ORGANIC DATA VALIDATION CHECKLIST

8. COMPOUND IDENTIFICATION, QUANTITATION, AND DETECTION LIMITS (all levels)

Compound identification acceptable? (Levels D, E) ..... Yes No N/A

Compound quantitation acceptable? (Levels D, E) ..... Yes No N/A

Results reported for all requested analyses? ..... Yes No N/A

Results supported in the raw data? (Levels D, E) ..... Yes No N/A

Samples properly prepared? (Levels D, E) ..... Yes No N/A

Laboratory properly identified and coded all TIC? (Levels D, E) ..... Yes No N/A

Detection limits meet RDL? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: _____

9. SAMPLE CLEANUP (Levels D and E)

GPC cleanup performed? ..... Yes No N/A

GPC check performed? ..... Yes No N/A

GPC check recoveries acceptable? ..... Yes No N/A

GPC calibration performed? ..... Yes No N/A

GPC calibration check performed? ..... Yes No N/A

GPC calibration check retention times acceptable? ..... Yes No N/A

Check/calibration materials traceable? ..... Yes No N/A

Check/calibration materials Expired? ..... Yes No N/A

Analytical batch QC given similar cleanup? ..... Yes No N/A

Transcription/Calculation Errors? ..... Yes No N/A

Comments: _____

Appendix 6

Additional Documentation Requested by Client

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC
Mass Spectrometry Volatiles Method Blank Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Lab Sample ID: D9F030000-075B **Work Order:** LD7FP1AA **Analysis Method:** 8260B **Matrix:** SOLID **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9154075	trans-1,3-Dichloropropene	0.67	0.67	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Acetone	5.4	5.4	20	U	06/02/09	06/02/09 12:43	1
9154075	Ethylbenzene	0.67	0.67	5.0	U	06/02/09	06/02/09 12:43	1
9154075	2-Hexanone	4.9	4.9	20	U	06/02/09	06/02/09 12:43	1
9154075	Methylene chloride	3.1	0.75	5.0	J	06/02/09	06/02/09 12:43	1
9154075	4-Methyl-2-pentanone	4.4	4.4	10	U	06/02/09	06/02/09 12:43	1
9154075	Benzene	0.47	0.47	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Styrene	0.63	0.63	5.0	U	06/02/09	06/02/09 12:43	1
9154075	1,1,2,2-Tetrachloroethane	0.61	0.61	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Tetrachloroethene	0.59	0.59	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Toluene	0.69	0.69	5.0	U	06/02/09	06/02/09 12:43	1
9154075	1,1,1-Trichloroethane	0.52	0.52	5.0	U	06/02/09	06/02/09 12:43	1
9154075	1,1,2-Trichloroethane	0.88	0.88	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Trichloroethene	0.23	0.23	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Vinyl chloride	1.3	1.3	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Xylenes (total)	0.61	0.61	3.5	U	06/02/09	06/02/09 12:43	1
9154075	Bromodichloromethane	0.22	0.22	5.0	U	06/02/09	06/02/09 12:43	1
9154075	2-Butanone (MEK)	1.8	1.8	10	U	06/02/09	06/02/09 12:43	1
9154075	Bromoform	0.23	0.23	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Bromomethane	0.50	0.50	10	U	06/02/09	06/02/09 12:43	1
9154075	Carbon disulfide	0.42	0.42	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Carbon tetrachloride	0.63	0.63	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Chlorobenzene	0.54	0.54	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Dibromochloromethane	0.57	0.57	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Chloroethane	0.89	0.89	10	U	06/02/09	06/02/09 12:43	1
9154075	Chloroform	0.29	0.29	5.0	U	06/02/09	06/02/09 12:43	1
9154075	Chloromethane	0.77	0.77	10	U	06/02/09	06/02/09 12:43	1
9154075	1,1-Dichloroethane	0.21	0.21	5.0	U	06/02/09	06/02/09 12:43	1
9154075	1,2-Dichloroethane	0.70	0.70	5.0	U	06/02/09	06/02/09 12:43	1
9154075	1,1-Dichloroethene	0.59	0.59	5.0	U	06/02/09	06/02/09 12:43	1
9154075	1,2-Dichloroethene (total)	0.39	0.39	5.0	U	06/02/09	06/02/09 12:43	1
9154075	1,2-Dichloropropane	0.55	0.55	5.0	U	06/02/09	06/02/09 12:43	1
9154075	cis-1,3-Dichloropropene	1.3	1.3	5.0	U	06/02/09	06/02/09 12:43	1
9154075	No Tics Detected				U	06/02/09	06/02/09 12:43	1

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Method Blank Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	73	60	143	
Toluene-d8	96	68	134	
Dibromofluoromethane	94	10	179	
4-Bromofluorobenzene	93	59	129	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Laboratory Control Sample Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Lab Sample ID: D9F030000-075C **WorkOrder:** LD7FP1AC **Analysis Method:** 8260B **Matrix:** SOLID **Unit:** ug/kg

QC Batch	Analyte	True	Found	%Rec	Q	Limits	Prep Date	Analysis Date	Dilution
154075	Ethylbenzene	50.0	43.7	87		78 - 120	06/02/09	06/02/09 12:01	1
154075	Methylene chloride	50.0	45.2	90		76 - 120	06/02/09	06/02/09 12:01	1
154075	Benzene	50.0	46.1	92		76 - 120	06/02/09	06/02/09 12:01	1
154075	Tetrachloroethene	50.0	46.0	92		71 - 120	06/02/09	06/02/09 12:01	1
154075	Toluene	50.0	44.3	89		72 - 120	06/02/09	06/02/09 12:01	1
154075	1,1,1-Trichloroethane	50.0	46.7	93		67 - 143	06/02/09	06/02/09 12:01	1
154075	Trichloroethene	50.0	46.2	92		78 - 120	06/02/09	06/02/09 12:01	1
154075	Bromodichloromethane	50.0	42.0	84		67 - 122	06/02/09	06/02/09 12:01	1
154075	Carbon tetrachloride	50.0	47.4	95		69 - 147	06/02/09	06/02/09 12:01	1
154075	Chlorobenzene	50.0	42.2	84		74 - 120	06/02/09	06/02/09 12:01	1
154075	Chloroform	50.0	45.4	91		77 - 125	06/02/09	06/02/09 12:01	1
154075	1,3-Dichlorobenzene	50.0	42.5	85		74 - 120	06/02/09	06/02/09 12:01	1
154075	1,1-Dichloroethane	50.0	48.7	97		74 - 120	06/02/09	06/02/09 12:01	1
154075	1,1-Dichloroethene	50.0	58.9	118		77 - 143	06/02/09	06/02/09 12:01	1
154075	trans-1,2-Dichloroethene	50.0	50.6	101		80 - 127	06/02/09	06/02/09 12:01	1
154075	1,2-Dichloropropane	50.0	46.6	93		77 - 143	06/02/09	06/02/09 12:01	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	67	58	140	
Toluene-d8	95	80	126	
Dibromofluoromethane	88	75	121	
4-Bromofluorobenzene	80	76	127	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Matrix Spike Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

ient Sample ID: J18WN5 **Lab WorkOrder:** LDMDW1A **% Moisture:** 0.91 **Basis:** Dry

.b Sample ID: D9E220401-002S **Analysis Method** 8260B **Matrix:** SOLID **Unit:** ug/kg

: Batch ID: 9154075

Analyte	Spike Amount	Sample Result	Q	MS Result	% Rec	Q	QC Limit	Prep Date	Analysis Date	Dilution
1,1,1-Trichloroethane	50.5	0.52	U	50.3	100		50 - 150	06/02/09	06/02/09 13:24	1
1,1-Dichloroethane	50.5	0.21	U	53.6	106		50 - 150	06/02/09	06/02/09 13:24	1
1,1-Dichloroethene	50.5	0.60	U	67.1	133		32 - 146	06/02/09	06/02/09 13:24	1
1,2-Dichloropropane	50.5	0.56	U	53.4	106		50 - 150	06/02/09	06/02/09 13:24	1
1,3-Dichlorobenzene	50.5	0.48	U	48.3	96		50 - 150	06/02/09	06/02/09 13:24	1
Benzene	50.5	0.47	U	52.3	104		41 - 130	06/02/09	06/02/09 13:24	1
Bromodichloromethane	50.5	0.22	U	48.2	95		50 - 150	06/02/09	06/02/09 13:24	1
Carbon tetrachloride	50.5	0.64	U	51.1	101		50 - 150	06/02/09	06/02/09 13:24	1
Chlorobenzene	50.5	0.54	U	48.5	96		31 - 129	06/02/09	06/02/09 13:24	1
Chloroform	50.5	0.29	U	50.5	100		50 - 150	06/02/09	06/02/09 13:24	1
Ethylbenzene	50.5	0.68	U	48.4	96		50 - 150	06/02/09	06/02/09 13:24	1
Methylene chloride	50.5	2.2	J B	51.2	97		50 - 150	06/02/09	06/02/09 13:24	1
Tetrachloroethene	50.5	0.60	U	49.6	98		50 - 150	06/02/09	06/02/09 13:24	1
Toluene	50.5	1.1	J	51.7	100		30 - 130	06/02/09	06/02/09 13:24	1
trans-1,2-Dichloroethene	50.5	0.39	U	55.8	110		50 - 150	06/02/09	06/02/09 13:24	1
Trichloroethene	50.5	0.23	U	50.4	100		34 - 132	06/02/09	06/02/09 13:24	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	67	60	143	
4-Bromofluorobenzene	82	59	129	
Dibromofluoromethane	89	10	179	
Toluene-d8	99	68	134	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

Mass Spectrometry Volatiles Matrix Spike Duplicate Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Client Sample ID: J18WN5 **Lab WorkOrder:** LDMDW1A8 **% Moisture:** 0.91 **Basis:** Dry

Lab Sample ID: D9E220401-002D **Analysis Method:** 8260B **Matrix:** SOLID **Unit:** ug/kg

QC Batch ID: 9154075

Analyte	Spike Amount	Sample Result	MSD Result	% Rec	RPD	Q	QC Limits % Rec	QC Limits RPD	Prep Date	Analysis Date	Dilution
1,1,1-Trichloroethane	50.5	0.52	51.9	103	3.1		50 - 150	30	06/02/09	06/02/09 13:45	1
1,1-Dichloroethane	50.5	0.21	59.0	117	9.6		50 - 150	30	06/02/09	06/02/09 13:45	1
1,1-Dichloroethene	50.5	0.60	84.1	167	22	T	32 - 146	30	06/02/09	06/02/09 13:45	1
1,2-Dichloropropane	50.5	0.56	55.0	109	2.9		50 - 150	30	06/02/09	06/02/09 13:45	1
1,3-Dichlorobenzene	50.5	0.48	48.0	95	0.47		50 - 150	30	06/02/09	06/02/09 13:45	1
Benzene	50.5	0.47	53.1	105	1.5		41 - 130	25	06/02/09	06/02/09 13:45	1
Bromodichloromethane	50.5	0.22	49.3	98	2.3		50 - 150	30	06/02/09	06/02/09 13:45	1
Carbon tetrachloride	50.5	0.64	53.5	106	4.6		50 - 150	30	06/02/09	06/02/09 13:45	1
Chlorobenzene	50.5	0.54	48.4	96	0.29		31 - 129	29	06/02/09	06/02/09 13:45	1
Chloroform	50.5	0.29	54.1	107	6.8		50 - 150	30	06/02/09	06/02/09 13:45	1
Ethylbenzene	50.5	0.68	49.2	98	1.8		50 - 150	30	06/02/09	06/02/09 13:45	1
Methylene chloride	50.5	2.2	61.1	117	18		50 - 150	30	06/02/09	06/02/09 13:45	1
Tetrachloroethene	50.5	0.60	48.3	96	2.7		50 - 150	30	06/02/09	06/02/09 13:45	1
Toluene	50.5	1.1	49.1	95	5.2		30 - 130	31	06/02/09	06/02/09 13:45	1
trans-1,2-Dichloroethene	50.5	0.39	68.7	136	21		50 - 150	30	06/02/09	06/02/09 13:45	1
Trichloroethene	50.5	0.23	50.8	101	0.78		34 - 132	49	06/02/09	06/02/09 13:45	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	67	60	143	
4-Bromofluorobenzene	86	59	129	
Dibromofluoromethane	88	10	179	
Toluene-d8	94	68	134	

Date: 27 July 2009
To: Washington Closure Hanford Inc. (technical representative)
From: ELR Consulting
Project: 100-D/DR Burial Grounds & Remaining Sites – Soil Full Protocol - Waste Site 116-DR-8
Subject: Radiochemistry - Data Package No. J00499-TAL

INTRODUCTION

This memo presents the results of data validation on Data Package No. J00499 prepared by TestAmerica Laboratory Inc. (TAL). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample Date	Media	Validation	Analyte
J18WN5	5/20/09	Soil	C	See note 1
J18WN6	5/20/09	Soil	C	See note 1
J18WN7	5/20/09	Soil	C	See note 1
J18WN8	5/20/09	Soil	C	See note 1
J18WN9	5/20/09	Soil	C	See note 1
J18WP0	5/20/09	Soil	C	See note 1
J18WP1	5/20/09	Soil	C	See note 1
J18WP2	5/20/09	Soil	C	See note 1
J18WP3	5/20/09	Soil	C	See note 1
J18WP4	5/20/09	Soil	C	See note 1
J18WP5	5/20/09	Soil	C	See note 1
J18WP6	5/20/09	Soil	C	See note 1
J18WP7	5/20/09	Soil	C	See note 1

1 – Gamma spectroscopy, alpha spectroscopy, total strontium, tritium, carbon-14 & nickel-63.

Data validation was conducted in accordance with the Washington Closure Hanford (WCH) validation statement of work and the 100 Area Remedial Action Sampling and Analysis Plan (DOE/RL-96-22, February 2005). Appendices 1 through 6 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports
Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Data Requested by Client

DATA QUALITY PARAMETERS

· Holding Times

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The maximum holding time for radiochemical analysis is 6 months.

All holding times were acceptable.

· Preparation (Method) Blanks

Laboratory Blanks

Blank samples are analyzed to determine if positive results are due to laboratory reagent, sample container, or detector contamination. If blank analysis results indicate the presence of an analyte above the minimum detectable activity (MDA), the following qualifiers are applied: All positive sample results less than five times the highest blank concentration are qualified as estimates and flagged "J"; sample results below the MDA are qualified as undetected and flagged "U"; sample results above the MDA and greater than five times the highest blank concentration are not qualified.

All laboratory blank results were acceptable.

Field (Equipment) Blank

No equipment blanks were submitted for analysis.

· Accuracy

Accuracy is evaluated from laboratory control sample (LCS) or blank spike sample (BSS) batch samples and spiked samples from the analytical batch. Measured activities are compared to the known added amounts. The acceptable LCS or BSS and matrix spike (MS) recovery range is 65-135%. In addition, samples may be spiked with a radiochemical tracer to assist in isolating the radioisotope of interest with the yield of the tracer being used in calculating sample activity. The acceptable range for tracer recovery is 20% to 105%. Spike sample results outside the above ranges result in associated sample results being qualified as estimates, or not qualified, depending on the activity of the individual sample. Results are rejected for LCS/BSS recoveries of less than 30% and tracer recoveries of less than 20%, and tracer recoveries of greater than 115% for detected results.

Due to an LCS recovery outside QC limits (131%), the cesium-137 result in samples J18WP5 and J18WN7 were qualified as estimates and flagged "J".

Due to the lack of a matrix spike analysis, all tritium and carbon-14 results were qualified as estimates and flagged "J".

Due to the lack of an LCS recovery, all plutonium-238 and uranium-235 results were qualified as estimates and flagged "J".

All other accuracy results were acceptable.

- **Laboratory Duplicates**

Analytical precision is expressed by the relative percent differences (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample in the analytical batch. Precision may alternatively be assessed using unspiked duplicate analyses performed on a sample in the analytical batch. If both sample and replicate activities (concentrations) are greater than five times the contract required detection limit (CRDL) and the RPD is less than 35%, no qualification is required. If either activity (concentration) is less than five times the CRDL, the RPD control limit is less than or equal to two times the CRDL. If the RPD is outside the applicable control limit, associated results are qualified as estimated detects or estimated non-detects.

All duplicate results were acceptable.

Field Duplicates

One set of field duplicates (J18WP0/J18WP7) was submitted for analysis. Field duplicates are compared using the same criteria as for laboratory duplicates. All field duplicate results were acceptable.

- **Detection Levels**

Reported analytical detection levels for undetected analytes are compared against the remaining waste sites RQLs to ensure that laboratory detection levels meet the required criteria. All analytes met the RQL.

- **Completeness**

Data package No. J00499 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

The following minor deficiency was noted:

- Due to an LCS recovery outside QC limits (131%), the cesium-137 result in samples J18WP5 and J18WN7 were qualified as estimates and flagged "J".

- Due to the lack of a matrix spike analysis, all tritium and carbon-14 results were qualified as estimates and flagged "J".

- Due to the lack of an LCS recovery, all plutonium-238 and uranium-235 results were qualified as estimates and flagged "J".

Data flagged "J" indicates that the associated concentration is an estimate, but under the WCH statement of work, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

REFERENCES

Washington Closure Hanford Contract #S00W307A00 (March 2008), *Data Validation Services*.

DOE/RL-96-22, Rev. 4, *100 Area Remedial Action Sampling and Analysis Plan*, U.S. Department of Energy, February 2005.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validators in compliance with the WCH statement of work are as follows:

U - Indicates the compound or analyte was analyzed for and not detected above the minimum detectable activity (MDA) in the sample. The value reported is the sample result corrected for sample dilution and moisture content by the laboratory. The data is usable for decision making purposes.

UJ - Indicates the compound or analyte was analyzed for and not detected at concentrations above the minimum detectable activity (MDA) in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate, but is usable for decision making purposes.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated concentration is an estimate, but the data are usable for decision-making purposes.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

Appendix 2

Summary of Data Qualification

RADIOCHEMISTRY DATA QUALIFICATION SUMMARY*

SDG: J00499	REVIEWER: ELR	Project: 116-DR-8	PAGE 1 OF 1
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Cesium-137	J	J18WP5, J18WN7	LCS recovery
Tritium Carbon-14	J	All	No MS analysis
Plutonium-238 Uranium-235	J	All	No LCS analysis

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Annotated Laboratory Reports

Sample Results Summary

Date: 16-Jun-09

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 41741

SDG No: J00499

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
9147301 PUISO_PLATE_AEA									
J18WN5									
	LDJEQ1AF	PU-238	0.00E+00 +- 1.60E-02	U J	pCi/g	88%	3.75E-02	1.00E+00	
		PU239/40	-6.26E-03 +- 1.69E-02	U	pCi/g	88%	5.37E-02	1.00E+00	
J18WN6									
	LDJET1AF	PU-238	0.00E+00 +- 2.26E-02	U J	pCi/g	54%	5.30E-02	1.00E+00	
		PU239/40	-6.64E-03 +- 2.34E-02	U	pCi/g	54%	6.98E-02	1.00E+00	
J18WN7									
	LDJEV1AF	PU-238	-1.59E-03 +- 1.62E-02	U J	pCi/g	86%	3.81E-02	1.00E+00	
		PU239/40	-1.59E-03 +- 1.62E-02	U	pCi/g	86%	3.81E-02	1.00E+00	
J18WN8									
	LDJEX1AF	PU-238	-3.28E-03 +- 1.71E-02	U J	pCi/g	80%	4.64E-02	1.00E+00	
		PU239/40	0.00E+00 +- 1.67E-02	U	pCi/g	80%	3.93E-02	1.00E+00	
J18WN9									
	LDJE11AF	PU-238	-1.19E-02 +- 1.93E-02	U J	pCi/g	76%	6.96E-02	1.00E+00	
		PU239/40	-5.08E-03 +- 1.79E-02	U	pCi/g	76%	5.34E-02	1.00E+00	
J18WP0									
	LDJE51AF	PU-238	0.00E+00 +- 6.47E-02	U J	pCi/g	22%	1.52E-01	1.00E+00	
		PU239/40	0.00E+00 +- 6.47E-02	U	pCi/g	22%	1.52E-01	1.00E+00	
J18WP1									
	LDJE61AF	PU-238	1.21E-02 +- 4.20E-02	U J	pCi/g	35%	1.14E-01	1.00E+00	
		PU239/40	-1.62E-02 +- 4.36E-02	U	pCi/g	35%	1.39E-01	1.00E+00	
J18WP2									
	LDJE91AF	PU-238	0.00E+00 +- 1.76E-02	U J	pCi/g	79%	4.14E-02	1.00E+00	
		PU239/40	-3.46E-03 +- 1.80E-02	U	pCi/g	79%	4.88E-02	1.00E+00	
J18WP3									
	LDJFA1AF	PU-238	1.24E-02 +- 2.54E-02	U J	pCi/g	61%	5.95E-02	1.00E+00	
		PU239/40	0.00E+00 +- 2.53E-02	U	pCi/g	61%	5.95E-02	1.00E+00	
J18WP4									
	LDJED1AF	PU-238	7.04E-03 +- 1.44E-02	U J	pCi/g	91%	3.37E-02	1.00E+00	
		PU239/40	0.00E+00 +- 1.44E-02	U	pCi/g	91%	3.37E-02	1.00E+00	
J18WP4 DUP									
	LDJED1AK	PU-238	-2.76E-03 +- 1.43E-02	U J	pCi/g	89%	3.90E-02	1.00E+00	457.3
		PU239/40	5.51E-03 +- 1.41E-02	U	pCi/g	89%	3.30E-02	1.00E+00	200.0
J18WP5									
	LDJEM1AF	PU-238	6.78E-03 +- 3.59E-02	U J	pCi/g	36%	1.07E-01	1.00E+00	
		PU239/40	1.36E-02 +- 3.46E-02	U	pCi/g	36%	8.11E-02	1.00E+00	
J18WP6									
	LDJEN1AF	PU-238	0.00E+00 +- 3.54E-02	U J	pCi/g	36%	8.30E-02	1.00E+00	

TestAmerica

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RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

7/23/09

000010

Sample Results Summary

Date: 16-Jun-09

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 41741 **SDG No:** J00499

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
9147301 PUISO_PLATE_AEA									
J18WP6									
	LDJEN1AF	PU239/40	3.12E-02 +- 4.98E-02	U	pCi/g	36%	8.30E-02	1.00E+00	
J18WP7									
	LDJEP1AF	PU-238	-2.69E-03 +- 1.40E-02	U J	pCi/g	87%	3.81E-02	1.00E+00	
		PU239/40	-6.73E-03 +- 1.48E-02	U	pCi/g	87%	4.96E-02	1.00E+00	
9147316 UISO_IE_PLATE_AEA									
J18WN5									
	LDJEQ1AC	U-234	1.73E-01 +- 7.25E-02		pCi/g	88%	3.54E-02	1.00E+00	
		U-235	6.27E-03 +- 1.28E-02	U J	pCi/g	88%	3.00E-02	1.00E+00	
		U-238	1.30E-01 +- 6.15E-02		pCi/g	88%	3.00E-02	1.00E+00	
J18WN6									
	LDJET1AC	U-234	1.45E-01 +- 7.01E-02		pCi/g	83%	4.50E-02	1.00E+00	
		U-235	2.14E-02 +- 2.51E-02	U J	pCi/g	83%	3.42E-02	1.00E+00	
		U-238	1.85E-01 +- 7.94E-02		pCi/g	83%	3.42E-02	1.00E+00	
J18WN7									
	LDJEV1AC	U-234	1.53E-01 +- 6.68E-02		pCi/g	90%	3.88E-02	1.00E+00	
		U-235	5.07E-03 +- 1.22E-02	U J	pCi/g	90%	2.76E-02	1.00E+00	
		U-238	2.39E-01 +- 8.63E-02		pCi/g	90%	3.58E-02	1.00E+00	
J18WN8									
	LDJEX1AC	U-234	1.47E-01 +- 6.57E-02		pCi/g	99%	4.30E-02	1.00E+00	
		U-235	4.14E-03 +- 1.23E-02	U J	pCi/g	99%	3.25E-02	1.00E+00	
		U-238	1.36E-01 +- 6.27E-02		pCi/g	99%	4.05E-02	1.00E+00	
J18WN9									
	LDJE11AC	U-234	1.50E-01 +- 7.05E-02		pCi/g	95%	4.15E-02	1.00E+00	
		U-235	1.93E-02 +- 2.45E-02	U J	pCi/g	95%	3.49E-02	1.00E+00	
		U-238	1.81E-01 +- 7.77E-02		pCi/g	95%	2.81E-02	1.00E+00	
J18WP0									
	LDJE51AC	U-234	1.67E-01 +- 8.33E-02		pCi/g	99%	4.78E-02	1.00E+00	
		U-235	8.23E-03 +- 1.80E-02	U J	pCi/g	99%	3.60E-02	1.00E+00	
		U-238	1.99E-01 +- 9.27E-02		pCi/g	99%	6.14E-02	1.00E+00	
J18WP1									
	LDJE61AC	U-234	1.80E-01 +- 7.24E-02		pCi/g	104%	4.27E-02	1.00E+00	
		U-235	1.04E-02 +- 1.67E-02	U J	pCi/g	104%	2.78E-02	1.00E+00	
		U-238	1.53E-01 +- 6.56E-02		pCi/g	104%	3.66E-02	1.00E+00	
J18WP2									
	LDJE91AC	U-234	1.36E-01 +- 7.13E-02		pCi/g	87%	7.83E-02	1.00E+00	
		U-235	2.36E-02 +- 3.22E-02	U J	pCi/g	87%	5.96E-02	1.00E+00	
		U-238	2.23E-01 +- 8.97E-02		pCi/g	87%	6.21E-02	1.00E+00	

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RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

7/23/09

000011

Sample Results Summary

Date: 16-Jun-09

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 41741

SDG No: J00499

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
9147316 UISO_IE_PLATE_AEA									
J18WP3									
	LDJFA1AC	U-234	2.47E-01 +- 8.97E-02		pCi/g	94%	4.83E-02	1.00E+00	
		U-235	3.71E-03 +- 1.87E-02	U J	pCi/g	94%	5.09E-02	1.00E+00	
		U-238	2.45E-01 +- 8.86E-02		pCi/g	94%	3.50E-02	1.00E+00	
J18WP4									
	LDJED1AC	U-234	7.24E-02 +- 4.85E-02		pCi/g	92%	5.23E-02	1.00E+00	
		U-235	1.88E-02 +- 2.36E-02	U J	pCi/g	92%	3.21E-02	1.00E+00	
		U-238	9.25E-02 +- 5.46E-02		pCi/g	92%	5.23E-02	1.00E+00	
J18WP5									
	LDJEM1AC	U-234	7.38E-02 +- 5.28E-02	U	pCi/g	91%	7.80E-02	1.00E+00	
		U-235	-3.63E-03 +- 1.39E-02	U J	pCi/g	91%	5.20E-02	1.00E+00	
		U-238	1.52E-01 +- 6.96E-02		pCi/g	91%	6.35E-02	1.00E+00	
J18WP5 DUP									
	LDJEM1AK	U-234	8.70E-02 +- 5.14E-02		pCi/g	90%	4.92E-02	1.00E+00	16.4
		U-235	2.52E-03 +- 1.92E-02	U J	pCi/g	90%	5.42E-02	1.00E+00	-1108.1
		U-238	1.11E-01 +- 5.68E-02		pCi/g	90%	3.56E-02	1.00E+00	31.5
J18WP6									
	LDJEN1AC	U-234	1.91E-01 +- 7.47E-02		pCi/g	97%	3.32E-02	1.00E+00	
		U-235	1.17E-02 +- 1.69E-02	U J	pCi/g	97%	2.81E-02	1.00E+00	
		U-238	1.21E-01 +- 5.76E-02		pCi/g	97%	3.32E-02	1.00E+00	
J18WP7									
	LDJEP1AC	U-234	1.02E-01 +- 5.30E-02		pCi/g	93%	2.91E-02	1.00E+00	
		U-235	-1.22E-03 +- 1.24E-02	U J	pCi/g	93%	2.91E-02	1.00E+00	
		U-238	1.82E-01 +- 7.33E-02		pCi/g	93%	2.91E-02	1.00E+00	
9147317 GAMMA_GS									
J18WN5									
	LDJEQ1AH	AM-241	-4.47E-02 +- 3.51E-02	U	pCi/g		5.66E-02		
		CO-60	7.66E-04 +- 1.92E-02	U	pCi/g		3.43E-02	5.00E-02	
		CS-137	-1.31E-02 +- 2.01E-02	U	pCi/g		3.37E-02	1.00E-01	
		EU-152	4.85E-02 +- 5.76E-02	U	pCi/g		9.09E-02	1.00E-01	
		EU-154	-3.34E-02 +- 5.92E-02	U	pCi/g		9.89E-02	1.00E-01	
		EU-155	3.14E-02 +- 5.24E-02	U	pCi/g		8.92E-02	1.00E-01	
J18WN6									
	LDJET1AH	AM-241	-7.09E-03 +- 5.45E-02	U	pCi/g		9.25E-02		
		CO-60	7.93E-03 +- 1.74E-02	U	pCi/g		3.32E-02	5.00E-02	
		CS-137	-3.05E-03 +- 1.72E-02	U	pCi/g		2.96E-02	1.00E-01	
		EU-152	4.64E-03 +- 4.39E-02	U	pCi/g		7.52E-02	1.00E-01	
		EU-154	-6.17E-03 +- 5.19E-02	U	pCi/g		9.11E-02	1.00E-01	

TestAmerica

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RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

7/23/09

000012

Sample Results Summary

Date: 16-Jun-09

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 41741

SDG No: J00499

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
9147317 GAMMA_GS									
J18WN6									
	LDJET1AH	EU-155	1.07E-02 +- 4.15E-02	U	pCi/g		7.29E-02	1.00E-01	
J18WN7									
	LDJEV1AH	AM-241	-4.77E-03 +- 6.90E-02	U	pCi/g		1.16E-01		
		CO-60	-7.56E-03 +- 1.49E-02	U	pCi/g		2.51E-02	5.00E-02	
		CS-137	6.23E-02 +- 2.15E-02	J	pCi/g		2.66E-02	1.00E-01	
		EU-152	-1.60E-02 +- 5.62E-02	U	pCi/g		7.02E-02	1.00E-01	
		EU-154	-4.63E-02 +- 4.40E-02	U	pCi/g		7.02E-02	1.00E-01	
		EU-155	1.34E-02 +- 5.32E-02	U	pCi/g		8.93E-02	1.00E-01	
J18WN8									
	LDJEX1AH	AM-241	7.20E-02 +- 1.55E-01	U	pCi/g		2.72E-01		
		CO-60	2.46E-03 +- 1.55E-02	U	pCi/g		2.75E-02	5.00E-02	
		CS-137	-6.71E-03 +- 1.63E-02	U	pCi/g		2.75E-02	1.00E-01	
		EU-152	5.58E-02 +- 4.52E-02	U	pCi/g		7.37E-02	1.00E-01	
		EU-154	-1.37E-02 +- 5.03E-02	U	pCi/g		8.56E-02	1.00E-01	
		EU-155	4.06E-03 +- 5.28E-02	U	pCi/g		8.86E-02	1.00E-01	
J18WN9									
	LDJE11AH	AM-241	-1.70E-02 +- 4.55E-02	U	pCi/g		7.54E-02		
		CO-60	-1.21E-02 +- 1.83E-02	U	pCi/g		3.03E-02	5.00E-02	
		CS-137	1.38E-02 +- 1.79E-02	U	pCi/g		3.21E-02	1.00E-01	
		EU-152	9.33E-04 +- 4.45E-02	U	pCi/g		6.87E-02	1.00E-01	
		EU-154	1.37E-02 +- 5.79E-02	U	pCi/g		1.04E-01	1.00E-01	
		EU-155	-1.53E-02 +- 3.89E-02	U	pCi/g		6.49E-02	1.00E-01	
J18WP0									
	LDJE51AH	AM-241	1.60E-02 +- 3.28E-02	U	pCi/g		4.85E-02		
		CO-60	-1.53E-03 +- 1.55E-02	U	pCi/g		2.78E-02	5.00E-02	
		CS-137	-5.81E-03 +- 1.48E-02	U	pCi/g		2.54E-02	1.00E-01	
		EU-152	9.05E-03 +- 4.56E-02	U	pCi/g		6.86E-02	1.00E-01	
		EU-154	-2.06E-02 +- 4.82E-02	U	pCi/g		8.24E-02	1.00E-01	
		EU-155	2.45E-02 +- 3.91E-02	U	pCi/g		6.68E-02	1.00E-01	
J18WP1									
	LDJE61AH	AM-241	-4.55E-02 +- 6.53E-02	U	pCi/g		1.07E-01		
		CO-60	4.09E-03 +- 1.36E-02	U	pCi/g		2.46E-02	5.00E-02	
		CS-137	2.68E-02 +- 1.67E-02	U	pCi/g		2.98E-02	1.00E-01	
		EU-152	-1.74E-02 +- 5.83E-02	U	pCi/g		6.59E-02	1.00E-01	
		EU-154	-5.41E-02 +- 4.29E-02	U	pCi/g		6.72E-02	1.00E-01	
		EU-155	9.16E-03 +- 5.13E-02	U	pCi/g		8.58E-02	1.00E-01	
J18WP2									

TestAmerica

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RPD - Relative Percent Difference.

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000013

7/23/09

Sample Results Summary

Date: 16-Jun-09

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 41741

SDG No: J00499

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
9147317 GAMMA_GS									
J18WP2									
	LDJE91AH	AM-241	9.70E-02 +- 1.80E-01	U	pCi/g		3.17E-01		
		CO-60	-4.47E-03 +- 1.83E-02	U	pCi/g		3.13E-02	5.00E-02	
		CS-137	1.16E-02 +- 1.93E-02	U	pCi/g		3.42E-02	1.00E-01	
		EU-152	-1.05E-02 +- 4.89E-02	U	pCi/g		8.21E-02	1.00E-01	
		EU-154	-1.97E-02 +- 6.18E-02	U	pCi/g		1.05E-01	1.00E-01	
		EU-155	3.09E-02 +- 6.11E-02	U	pCi/g		1.04E-01	1.00E-01	
J18WP3									
	LDJFA1AH	AM-241	-1.97E-03 +- 5.07E-02	U	pCi/g		8.53E-02		
		CO-60	8.25E-03 +- 2.07E-02	U	pCi/g		3.78E-02	5.00E-02	
		CS-137	8.45E-03 +- 1.85E-02	U	pCi/g		3.28E-02	1.00E-01	
		EU-152	-9.35E-04 +- 5.17E-02	U	pCi/g		7.51E-02	1.00E-01	
		EU-154	2.46E-02 +- 6.44E-02	U	pCi/g		1.16E-01	1.00E-01	
		EU-155	4.85E-02 +- 4.20E-02	U	pCi/g		7.35E-02	1.00E-01	
J18WP4									
	LDJED1AH	AM-241	4.50E-02 +- 3.83E-02	U	pCi/g		5.97E-02		
		CO-60	-6.15E-03 +- 1.69E-02	U	pCi/g		2.93E-02	5.00E-02	
		CS-137	7.76E-03 +- 1.95E-02	U	pCi/g		3.41E-02	1.00E-01	
		EU-152	7.84E-03 +- 4.56E-02	U	pCi/g		8.00E-02	1.00E-01	
		EU-154	3.30E-03 +- 5.13E-02	U	pCi/g		8.26E-02	1.00E-01	
		EU-155	2.53E-02 +- 4.79E-02	U	pCi/g		8.08E-02	1.00E-01	
J18WP5									
	LDJEM1AH	AM-241	3.16E-02 +- 3.92E-02	U	pCi/g		5.89E-02		
		CO-60	1.41E-03 +- 2.00E-02	U	pCi/g		3.60E-02	5.00E-02	
		CS-137	1.48E-01 +- 3.77E-02	J	pCi/g		3.36E-02	1.00E-01	
		EU-152	-4.68E-03 +- 4.74E-02	U	pCi/g		8.16E-02	1.00E-01	
		EU-154	-1.25E-02 +- 6.13E-02	U	pCi/g		1.07E-01	1.00E-01	
		EU-155	4.99E-02 +- 4.82E-02	U	pCi/g		8.24E-02	1.00E-01	
J18WP6									
	LDJEN1AH	AM-241	2.69E-02 +- 7.57E-02	U	pCi/g		1.29E-01		
		CO-60	-6.14E-03 +- 1.21E-02	U	pCi/g		2.03E-02	5.00E-02	
		CS-137	1.43E-02 +- 1.23E-02	U	pCi/g		2.24E-02	1.00E-01	
		EU-152	-2.06E-03 +- 2.87E-02	U	pCi/g		4.86E-02	1.00E-01	
		EU-154	-3.08E-02 +- 3.91E-02	U	pCi/g		6.38E-02	1.00E-01	
		EU-155	4.08E-02 +- 3.41E-02	U	pCi/g		6.04E-02	1.00E-01	
J18WP6 DUP									
	LDJEN1AK	AM-241	1.61E-02 +- 2.74E-02	U	pCi/g		4.78E-02		
		CO-60	2.16E-03 +- 1.60E-02	U	pCi/g		2.91E-02	5.00E-02	

TestAmerica

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RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

000014

K 7/23/09

Sample Results Summary

Date: 16-Jun-09

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 41741

SDG No: J00499

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
9147317 GAMMA_GS									
J18WP6 DUP									
	LDJEN1AK	CS-137	2.32E-02 +- 1.68E-02	U	pCi/g		3.12E-02	1.00E-01	
		EU-152	2.05E-02 +- 4.16E-02	U	pCi/g		7.38E-02	1.00E-01	
		EU-154	1.03E-02 +- 4.98E-02	U	pCi/g		9.01E-02	1.00E-01	
		EU-155	3.53E-02 +- 4.06E-02	U	pCi/g		7.01E-02	1.00E-01	
J18WP7									
	LDJEP1AH	AM-241	-6.43E-02 +- 7.48E-02	U	pCi/g		1.18E-01		
		CO-60	-1.42E-03 +- 1.14E-02	U	pCi/g		2.02E-02	5.00E-02	
		CS-137	-5.30E-03 +- 1.17E-02	U	pCi/g		1.94E-02	1.00E-01	
		EU-152	-7.90E-03 +- 2.97E-02	U	pCi/g		4.97E-02	1.00E-01	
		EU-154	-2.18E-02 +- 4.11E-02	U	pCi/g		6.88E-02	1.00E-01	
		EU-155	4.45E-02 +- 3.32E-02	U	pCi/g		5.93E-02	1.00E-01	
9147322 SRTOT_SEP_PRECIP_GPC									
J18WN5									
	LDJEQ1AD	STRONTIUM	3.62E-01 +- 1.36E-01		pCi/g	85%	1.55E-01		
J18WN6									
	LDJET1AD	STRONTIUM	2.85E-01 +- 1.13E-01		pCi/g	91%	1.34E-01		
J18WN7									
	LDJEV1AD	STRONTIUM	2.86E-01 +- 1.16E-01		pCi/g	90%	1.47E-01		
J18WN8									
	LDJEX1AD	STRONTIUM	3.29E-01 +- 1.23E-01		pCi/g	94%	1.34E-01		
J18WN9									
	LDJE11AD	STRONTIUM	2.61E-01 +- 1.10E-01		pCi/g	94%	1.43E-01		
J18WP0									
	LDJE51AD	STRONTIUM	2.67E-01 +- 1.08E-01		pCi/g	100%	1.32E-01		
J18WP1									
	LDJE61AD	STRONTIUM	2.45E-01 +- 1.05E-01		pCi/g	100%	1.36E-01		
J18WP2									
	LDJE91AD	STRONTIUM	4.51E-01 +- 1.52E-01		pCi/g	100%	1.25E-01		
J18WP3									
	LDJFA1AD	STRONTIUM	2.58E-01 +- 1.04E-01		pCi/g	100%	1.23E-01		
J18WP4									
	LDJED1AD	STRONTIUM	2.20E-01 +- 9.93E-02		pCi/g	94%	1.40E-01		
J18WP5									
	LDJEM1AD	STRONTIUM	8.53E-02 +- 7.13E-02	U	pCi/g	95%	1.38E-01		
J18WP6									
	LDJEN1AD	STRONTIUM	8.84E-02 +- 7.29E-02	U	pCi/g	87%	1.40E-01		
J18WP7									

TestAmerica

rptSTLRchSaSummary2 V5.2.3
A2002

RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

000015

7/23/09

Sample Results Summary

Date: 16-Jun-09

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 41741

SDG No: J00499

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
9147322 SRTOT_SEP_PRECIP_GPC									
J18WP7									
	LDJEP1AD	STRONTIUM	1.54E-01 +- 8.34E-02		pCi/g	96%	1.34E-01		
J18WP7 DUP									
	LDJEP1AK	STRONTIUM	8.87E-02 +- 7.53E-02	U	pCi/g	87%	1.47E-01		53.8
9147325 NI63_LSC									
J18WN5									
	LDJEQ1AE	NI-63	8.31E-01 +- 3.27E+00	U	pCi/g	94%	5.22E+00	3.00E+01	
J18WN5 DUP									
	LDJEQ1AK	NI-63	6.40E-01 +- 3.57E+00	U	pCi/g	92%	5.68E+00	3.00E+01	26.0
J18WN6									
	LDJET1AE	NI-63	5.78E-01 +- 3.70E+00	U	pCi/g	90%	5.97E+00	3.00E+01	
J18WN7									
	LDJEV1AE	NI-63	-2.86E+00 +- 3.42E+00	U	pCi/g	95%	5.70E+00	3.00E+01	
J18WN8									
	LDJEX1AE	NI-63	-1.10E+00 +- 3.19E+00	U	pCi/g	93%	5.22E+00	3.00E+01	
J18WN9									
	LDJE11AE	NI-63	-4.31E-01 +- 3.59E+00	U	pCi/g	94%	5.79E+00	3.00E+01	
J18WP0									
	LDJE51AE	NI-63	-5.37E-01 +- 3.53E+00	U	pCi/g	96%	5.72E+00	3.00E+01	
J18WP1									
	LDJE61AE	NI-63	-1.42E+00 +- 3.36E+00	U	pCi/g	92%	5.51E+00	3.00E+01	
J18WP2									
	LDJE91AE	NI-63	2.11E+00 +- 3.68E+00	U	pCi/g	96%	5.73E+00	3.00E+01	
J18WP3									
	LDJFA1AE	NI-63	-1.64E+00 +- 3.32E+00	U	pCi/g	93%	5.55E+00	3.00E+01	
J18WP4									
	LDJED1AE	NI-63	1.75E-01 +- 3.83E+00	U	pCi/g	90%	6.22E+00	3.00E+01	
J18WP5									
	LDJEM1AE	NI-63	-1.33E+00 +- 3.90E+00	U	pCi/g	86%	6.57E+00	3.00E+01	
J18WP6									
	LDJEN1AE	NI-63	-2.79E-01 +- 3.76E+00	U	pCi/g	94%	6.07E+00	3.00E+01	
J18WP7									
	LDJEP1AE	NI-63	1.65E+00 +- 3.67E+00	U	pCi/g	95%	5.78E+00	3.00E+01	
9147327 C14_CHEM_LSC									
J18WN5									
	LDJEQ1AJ	C-14	-1.36E-01 +- 3.74E-01	U J	pCi/g	100%	8.11E-01	5.00E+01	
J18WN6									
	LDJET1AJ	C-14	1.77E-01 +- 3.90E-01	U J	pCi/g	100%	8.15E-01	5.00E+01	
J18WN6 DUP									

TestAmerica

rptSTLRchSaSummary2 V5.2.3 A2002

RPD - Relative Percent Difference.

U' Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

000016

7/27/09

Sample Results Summary

Date: 16-Jun-09

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 41741

SDG No: J00499

Batch	Client Id / Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
9147327	C14_CHEM_LSC								
	J18WN6 DUP								
	LDJET1AK	C-14	-4.03E-02 +- 3.80E-01	U J	pCi/g	100%	8.14E-01	5.00E+01	317.8
	J18WN7								
	LDJEV1AJ	C-14	-2.02E-02 +- 3.75E-01	U	pCi/g	100%	8.02E-01	5.00E+01	
	J18WN8								
	LDJEX1AJ	C-14	1.15E-01 +- 3.85E-01	U	pCi/g	100%	8.10E-01	5.00E+01	
	J18WN9								
	LDJE11AJ	C-14	-6.53E-02 +- 3.75E-01	U	pCi/g	100%	8.06E-01	5.00E+01	
	J18WP0								
	LDJE51AJ	C-14	6.18E-02 +- 3.82E-01	U	pCi/g	100%	8.10E-01	5.00E+01	
	J18WP1								
	LDJE61AJ	C-14	4.20E-01 +- 4.00E-01	U	pCi/g	100%	8.15E-01	5.00E+01	
	J18WP2								
	LDJE91AJ	C-14	3.01E-01 +- 3.92E-01	U	pCi/g	100%	8.09E-01	5.00E+01	
	J18WP3								
	LDJFA1AJ	C-14	2.02E-01 +- 3.87E-01	U	pCi/g	100%	8.08E-01	5.00E+01	
	J18WP4								
	LDJED1AJ	C-14	1.97E-01 +- 3.90E-01	U	pCi/g	100%	8.14E-01	5.00E+01	
	J18WP5								
	LDJEM1AJ	C-14	1.51E-01 +- 3.88E-01	U	pCi/g	100%	8.14E-01	5.00E+01	
	J18WP6								
	LDJEN1AJ	C-14	1.75E-02 +- 3.81E-01	U	pCi/g	100%	8.11E-01	5.00E+01	
	J18WP7								
	LDJEP1AJ	C-14	1.47E-01 +- 3.87E-01	U	pCi/g	100%	8.12E-01	5.00E+01	
9147328	906.0_H3_LSC								
	J18WN5								
	LDJEQ1AG	H-3	7.86E-03 +- 6.56E-03	U J	pCi/g	100%	1.43E-02	4.00E+02	
	J18WN6								
	LDJET1AG	H-3	8.96E-03 +- 6.86E-03	U	pCi/g	100%	1.49E-02	4.00E+02	
	J18WN7								
	LDJEV1AG	H-3	1.71E-02 +- 1.10E-02	U	pCi/g	100%	2.36E-02	4.00E+02	
	J18WN7 DUP								
	LDJEV1AK	H-3	2.69E-02 +- 1.39E-02	U	pCi/g	100%	2.94E-02	4.00E+02	44.4
	J18WN8								
	LDJEX1AG	H-3	1.10E-02 +- 6.03E-03	U	pCi/g	100%	1.29E-02	4.00E+02	
	J18WN9								
	LDJE11AG	H-3	5.74E-03 +- 5.67E-03	U	pCi/g	100%	1.24E-02	4.00E+02	
	J18WP0								
	LDJE51AG	H-3	9.45E-03 +- 7.02E-03	U	pCi/g	100%	1.52E-02	4.00E+02	

TestAmerica

rptSTLRchSaSummary2 V5.2.3
A2002

RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

000017

K 7/23/09

Sample Results Summary

Date: 16-Jun-09

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 41741

SDG No: J00499

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
9147328	906.0_H3_LSC								
	J18WP1								
	LDJE61AG	H-3	1.83E-02 +- 1.35E-02	U J	pCi/g	100%	2.92E-02	4.00E+02	
	J18WP2								
	LDJE91AG	H-3	8.81E-03 +- 6.67E-03	U	pCi/g	100%	1.45E-02	4.00E+02	
	J18WP3								
	LDJFA1AG	H-3	8.59E-03 +- 6.28E-03	U	pCi/g	100%	1.37E-02	4.00E+02	
	J18WP4								
	LDJED1AG	H-3	1.13E-02 +- 6.55E-03	U	pCi/g	100%	1.40E-02	4.00E+02	
	J18WP5								
	LDJEM1AG	H-3	1.45E-02 +- 7.06E-03	U	pCi/g	100%	1.49E-02	4.00E+02	
	J18WP6								
	LDJEN1AG	H-3	9.92E-03 +- 6.02E-03	U	pCi/g	100%	1.29E-02	4.00E+02	
	J18WP7								
	LDJEP1AG	H-3	5.48E-03 +- 6.98E-03	U	pCi/g	100%	1.55E-02	4.00E+02	
9147510	7196_CR6								
	J18WN5								
	LDJEQ1AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
	J18WN6								
	LDJET1AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
	J18WN7								
	LDJEV1AA	HEXCHROME	1.53E-01 +- 0.00E+00	U	mg/kg	N/A	1.53E-01	1.55E-01	
	J18WN8								
	LDJEX1AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
	J18WN9								
	LDJE11AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
	J18WP0								
	LDJE51AA	HEXCHROME	1.52E-01 +- 0.00E+00	U	mg/kg	N/A	1.52E-01	1.55E-01	
	J18WP1								
	LDJE61AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
	J18WP2								
	LDJE91AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
	J18WP3								
	LDJFA1AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
	J18WP4								
	LDJED1AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
	LDJED1AE	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	0.0
	J18WP5								
	LDJEM1AA	HEXCHROME	1.92E-01 +- 0.00E+00		mg/kg	N/A	1.54E-01	1.55E-01	
	J18WP6								

7/23/09

xs 6/16/09

TestAmerica

rptSTLRchSaSummary2 V5.2.3 A2002

RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

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7/23/09

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

June 16, 2009

Attention: Joan Kessner

SAF Number	:	RC-075
Date SDG Closed	:	May 21, 2009
Number of Samples	:	Thirteen (13)
Sample Type	:	Soil
SDG Number	:	J00499
Data Deliverable	:	21–Day / Summary

CASE NARRATIVE

I. Introduction

On May 21, 2009 thirteen soil samples were received at TestAmerica for radiochemical and chemical analyses. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Washington Closure Hanford (WCH) specific IDs:

WCH ID#	TARL ID#	MATRIX	DATE OF RECEIPT
J18WN5	LDJEQ	SOIL	5/21/09
J18WN6	LDJET	SOIL	5/21/09
J18WN7	LDJEV	SOIL	5/21/09
J18WN8	LDJEX	SOIL	5/21/09
J18WN9	LDJE1	SOIL	5/21/09
J18WP0	LDJE5	SOIL	5/21/09
J18WP1	LDJE6	SOIL	5/21/09
J18WP2	LDJE9	SOIL	5/21/09
J18WP3	LDJFA	SOIL	5/21/09
J18WP4	LDJED	SOIL	5/21/09
J18WP5	LDJEM	SOIL	5/21/09
J18WP6	LDJEN	SOIL	5/21/09
J18WP7	LDJEP	SOIL	5/21/09

2800 George Washington Way Richland, WA 99354 tel 509.375.3131 fax 509.375.5590 www.testamericainc.com

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.

The requested analyses were:

Alpha Spectroscopy
Plutonium-238, -239/240 by method RL-ALP-002 (RICH-RC-5010)*
Uranium 234, 235 and 238 by method RL-ALP-015 (RICH-RC-5039)*
Gas Proportional Counting
Total Strontium by method RL-GPC-003 (RICH-RC-5006)*
Gamma Spectroscopy
Gamma Spec by method RL-GAM-001 (RICH-RC-5017)*
Liquid Scintillation Counting
Tritium by method RL-LSC-005 (RICH-RC-5007)*
Carbon-14 by method RL-LSC-008 (RICH-RC-5022)*
Nickel-63 by method RL-LCS-017 (RICH-RC-5069)*
Chemical Analysis
Hexavalent Chromium by EPA method 7196A

*SOP ID's changed effective 7-01-2008. Attached is a cross reference until SOP ID's are changed in all systems.

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

Alpha Spectroscopy
Plutonium-238, -239/240 by method RL-ALP-002 (RICH-RC-5010):
The LCS, batch blank, sample and sample duplicate (J18WP4) results are within contractual requirements.

Uranium 234, 235 and 238 by method RL-ALP-015 (RICH-RC-5039):
The LCS, batch blank, sample and sample duplicate (J18WP5) results are within contractual requirements.

Gas Proportional Counting
Total Strontium by method RL-GPC-003 (RICH-RC-5006):
The LCS, batch blank, samples and sample duplicate (J18WP7) results are within contractual requirements.

Gamma Spectroscopy
Gamma Spec by method RL-GAM-001 (RICH-RC-5017):
There was insufficient volume for a duplicate. Sample J18WR3 was recounted on a different detector for the duplicate. The Am-241 CRDL was not met for samples J18WP2, J18WP6, J18WP7, J18WN7 and J18WN8. The data is reported based on the other acceptable MDAs. The LCS recovery was slightly elevated however, the difference between the found and expected values is less than twice the total uncertainty and therefore the data is accepted. Except as noted, the LCS, batch blank, samples and sample duplicate (B1V9W5) results are within contractual requirements.

Liquid Scintillation Counting
Tritium by method RL-LSC-005 (RICH-RC-5007):
The LCS, batch blank, samples and sample duplicate (J18WN7) results are within contractual requirements.

Carbon-14 by method RL-LSC-008 (RICH-RC-5022):
The LCS, batch blank, samples and sample duplicate (J18WN6) results are within contractual requirements.

Nickel-63 by method RL-LCS-017 (RICH-RC-5069):
The LCS, batch blank, sample and sample duplicate (J18WN5) results are within contractual requirements.

Chemical Analysis
Hexavalent Chromium by EPA method 7196A
The LCS, batch blank, samples, sample duplicate (J18WP3) and sample matrix spike (J18WP3) 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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TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 1 of 1

Collector: J Sellers	Company Contact: D.W.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH
Price Code: 8L	Data Turnaround: 21 days		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 116-DR-8, Verification I, excavation		SAF No.: RC-075
Ice Chest No.	Field Logbook No.: EL-1607-6	COA: R116R8N6W0	Method of Shipment
Shipped To: EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No.: See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

000023

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None	
Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	1	
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions.	Carbon-14, Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium	

Sample No.	Matrix *	Sample Date	Sample Time										
J18WN4	SOIL	5/20/09	0737										EB
J18WN5 LOJ8Q	SOIL	↓	0758					✓	✓	✓	✓	✓	A1
J18WN6 LOJ8T	SOIL	↓	0901					✓	✓	✓	✓	✓	A2
J18WN7 LOJ8V	SOIL	↓	0932					✓	✓	✓	✓	✓	A3
J18WN8 LDJ8X	SOIL	↓	0951					✓	✓	✓	✓	✓	A4

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CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: J Sellers	5-20-09 1006	Received By/Stored In: DWShea DWShea	5/20/09 1006
Relinquished By/Removed From: DWShea DWShea	5/20/09 1641	Received By/Stored In: Fridge 1B	5/20/09 1641
Relinquished By/Removed From: Fridge 1B / J.E. Bernal	5-21-09 0830	Received By/Stored In: J. E. Bernal	5-21-09 0830
Relinquished By/Removed From: J.E. Bernal	5-21-09 1000	Received By/Stored In: DAVID HARRISON	5-21-09 1000
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] DWShea 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108m, metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499 J9210355

Due 6/12/09

11 SKS 5/27/09

Matrix *

S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wi=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 2 of 2

Collector: J Sellers	Company Contact: D.W.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH
Price Code: 8L	Data Turnaround: 21 days		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 116-DR-8, Verification I, excavation		SAF No.: RC-075
Ice Chest No.	Field Logbook No.: EL-1607-6	COA: R116R8N6W0	Method of Shipment
Shipped To: EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No.: See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

000024

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None	
Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	1	
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (3) in Special Instructions	Carbon-14, Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium	
Sample No. / Matrix * / Sample Date / Sample Time											
J18WN9 LDJ21 / SOIL / 5/20/09 / 1025						✓	✓	✓	✓	✓	A5
J18WP0 LDJ25 / SOIL / ↓ / 1249						✓	✓	✓	✓	✓	A6
J18WP1 LDJ26 / SOIL / ↓ / 1331						✓	✓	✓	✓	✓	A7
J18WP2 LDJ29 / SOIL / ↓ / 1345						✓	✓	✓	✓	✓	A8
J18WP3 LDJFA / SOIL / ↓ / 1315						✓	✓	✓	✓	✓	A9

84 1 1 1

CHAIN OF POSSESSION — Sign/Print Names DWShea 5/20/09

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
J.Sellers	5-20-09 1440	DWSHEA	5/20/09 1440
DWShea	5/20/09 1641	Fridge 1B	5/20/09 1641
Fridge 1B / J.E. Benbal	5-21-09 0830	J.E. Benbal	5-21-09 0830
J.E. Benbal	5-21-09 1015	David HARDIN	5-21-09 1015

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108 metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499 J9Z210355 Due 6/10/09 11 SES 5/21/09

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 2 of 2

Collector: J Sellers	Company Contact: D.W.Shea — Telephone No.: 521-6014	Project Coordinator: KESSNER, JH	Price Code: 8L — Data Turnaround: 21 days
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 116-DR-8, Verification L excavation	SAF No.: RC-075	
Ice Chest No.	Field Logbook No.: EL-1607-6 — COA: R116R8N6W0	Method of Shipment	
Shipped To: EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.	Bill of Lading/Air Bill No.: See OSPC	

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

000025

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None	
Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P	
No. of Container(s)	1	1	1	1	1	1	1	1	1	1	
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL	
SAMPLE ANALYSIS	See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions.	Carbon-14; Tritium - H3	Nickel-63; Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium	
Sample No. / Matrix * / Sample Date / Sample Time											
J18WP4 LDJ9D / SOIL / 5/20/09 / 1345						✓	✓	✓	✓	✓	A10
J18WP5 LDJ9M / SOIL / ↓ / 1428						✓	✓	✓	✓	✓	A11
J18WP6 LDJ9N / SOIL / ↓ / 1039						✓	✓	✓	✓	✓	A12
J18WP7 LDJ9P / SOIL / ↓ / 1249						✓	✓	✓	✓	✓	D

86

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From: J. Sellers	J. Sellers	5-20-09 1440	DWShea DWSHEA	5/20/09 1440
Relinquished By/Removed From: DWSHEA	DWSHEA	5/20/09 1641	Fridge 1B	5/20/09 1641
Relinquished By/Removed From: Fridge 1B	J.E. Bernal	5-21-09 0830	J. E. Bernal	5-21-09 0830
Relinquished By/Removed From: J.E. Bernal		5-21-09 1015	Dand H&D, Inc.	5-21-09 1015
Relinquished By/Removed From			Received By/Stored In	
Relinquished By/Removed From			Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~ Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~ Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]: Mercury - 7471 - (CV) [Mercury] DWShea 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108 metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499
J9Q210Z355 LMA 5/21/09
Due 6/16/09
11 RKS 5/27/09

Matrix *
S=Soil
SE=Sediment
SO=Solid
Sl=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wi=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Appendix 5

Data Validation Supporting Documentation

APPENDIX A

RADIOCHEMICAL DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT:	116-DR-5		DATA PACKAGE:	J00498	
VALIDATOR:	ELR	LAB: TAL		DATE: 7/20/09	
			SDG:	J00498	

ANALYSES PERFORMED					
☐ Gross Alpha/Beta	X Strontium-90	☐ Technetium-99	X Alpha Spectroscopy	X Gamma Spectroscopy	
☐ Total Uranium	☐ Radium-22	X Tritium		Ni-63	C-14

SAMPLES/MATRIX				
J18WN5	J18WN6	J18WN7	J18WN8	J18WN9
J18WP0	J18WP1	J18WP2	J18WP3	J18WP4
J18WP5	J18WP6	J18WP7		
				Soil

1. Completeness ..... ☐ N/A

Technical verification forms present? ..... Yes (No) N/A

Comments: _____

2. Initial Calibration (Levels D, E) ..... ~~☐ N/A~~

Instruments/detectors calibrated? ..... Yes No N/A

Initial calibration acceptable? ..... Yes No N/A

Standards NIST traceable? ..... Yes No N/A

Standards Expired? ..... Yes No N/A

Calculation check acceptable? ..... Yes No N/A

Comments: _____

3. Continuing Calibration (Levels D, E) ☒ N/A

Calibration checked within required frequency? ..... Yes No N/A

Calibration check acceptable? ..... Yes No N/A

Calibration check standards traceable? ..... Yes No N/A

Calibration check standards expired? ..... Yes No N/A

Calculation check acceptable? ..... Yes No N/A

Comments: _____

4. Background Counts (Levels D, E) ..... ☒ N/A

Background Counts checked within required frequency? ..... Yes No N/A

Background Counts acceptable? ..... Yes No N/A

Calculation check acceptable? ..... Yes No N/A

Comments: _____

5. Blanks (Levels B, C, D, E) ..... ☐ N/A

Method blank analyzed within required frequency? ..... Yes No N/A

Method blank results acceptable? ..... Yes No N/A

Analytes detected in method blank? ..... Yes No N/A

Field blank(s) analyzed? ..... Yes No N/A

Field blank results acceptable? ..... Yes No N/A

Analytes detected in field blank(s)? ..... Yes No N/A

Transcription/Calculation Errors? (Levels D, E) ..... Yes No N/A

Comments: NO FB

6. Laboratory Control Samples or Blank Spike Samples (Levels C, D, E) ..... ☐ N/A

LCS /BSS analyzed within required frequency? ..... Yes No N/A

LCS/BSS recoveries acceptable? ..... Yes No N/A

LCS/BSS traceable? (Levels D,E) ..... Yes No N/A

LCS/BSS expired? (Levels D,E) ..... Yes No N/A

LCS/BSS levels correct? (Levels D,E) ..... Yes No N/A

Transcription/Calculation Errors? (Levels D, E) ..... Yes No N/A

Comments: CS-137 – 131% – J all det gamma spec

7. Chemical Carrier Recovery (Levels C, D, E) ..... ☒ N/A

Chemical carrier added? ..... Yes No N/A

Chemical recovery acceptable? ..... Yes No N/A

Chemical carrier traceable? (Levels D, E) ..... Yes No N/A

Chemical carrier expired? (Levels D, E) ..... Yes No N/A

Transcription/Calculation errors? (Levels D, E) ..... Yes No N/A

Comments: _____

8. Tracer Recovery (Levels C, D, E) ..... ☐ N/A

Tracer added? ..... Yes No N/A

Tracer recovery acceptable? ..... Yes No N/A

Tracer traceable? (Levels D, E) ..... Yes No N/A

Tracer expired? (Levels D, E) ..... Yes No N/A

Transcription/Calculation errors? (Levels D, E) ..... Yes No N/A

Comments: _____

9. Matrix Spikes (Levels C, D, E) ..... ☐ N/A

Matrix spike analyzed? ..... Yes No N/A

Spike recoveries acceptable? ..... Yes No N/A

Spike source traceable? (Levels D, E) ..... Yes No N/A

Spike source expired? Levels D, E) ..... Yes No N/A

Transcription/Calculation Errors? (Levels D, E) ..... Yes No N/A

Comments: no 3H or C14 — J all

10. Duplicates (Levels C, D, E) ..... ☐ N/A

Duplicates Analyzed at required frequency? ..... Yes No N/A

RPD Values Acceptable? ..... Yes No N/A

Transcription/Calculation Errors? (Levels D, E) ..... Yes No N/A

Comments:

FD - P0|P7

11. Field QC Samples (Levels C, D E) ..... ☐ N/A

Field duplicate sample(s) analyzed? ..... Yes No N/A

Field duplicate RPD values acceptable? ..... Yes No N/A

Field split sample(s) analyzed? ..... Yes No N/A

Field split RPD values acceptable? ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments: no FS or PAS

12. Holding Times (All levels)

Are sample holding times acceptable? ..... Yes No N/A

Comments:

13. Results and Detection Limits (All Levels) ☐ N/A

Results reported for all required sample analyses? Yes No N/A

Results supported in raw data?(Levels D, E) Yes No N/A

Results Acceptable? (Levels D, E) Yes No N/A

Transcription/Calculation errors? (Levels D, E) Yes No N/A

MDA's meet required detection limits? Yes No N/A

Transcription/calculation errors? (Levels D, E) Yes No N/A

Comments: HH over

Appendix 6

Additional Documentation Requested by Client

TESTAMERICA

FORM II

Date: 16-Jun-09

DUPLICATE RESULTS

Lab Name:	TestAmerica	SDG:	J00499	Collection Date:	5/20/2009 2:10:00 PM
Lot-Sample No.:	J9E210355-1	Report No. :	41741	Received Date:	5/21/2009 10:15:00 AM
Client Sample ID:	J18WP4 DUP	COC No.:	RC-075-074	Matrix:	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 9147301	PUISO_PLATE_AEA			Work Order: LDJED1AK		Report DB ID: LDJED1KR			Orig Sa DB ID: 9LDJED10			
PU-238	-2.76E-03	U	1.4E-02	1.4E-02	3.90E-02	pCi/g	89%	-0.07	6/12/09 02:03 p		1.04	ALP38
	7.04E-03	U	RPD	457.3		1.00E+00		-0.38			G	
PU239/40	5.51E-03	U	1.4E-02	1.4E-02	3.30E-02	pCi/g	89%	0.17	6/12/09 02:03 p		1.04	ALP38
	0.00E+00	U	RPD	200.0		1.00E+00		0.78			G	

Alpha Spec Result Sum = 2.8E-03

No. of Results: 2 Comments:

55 000034

TestAmerica
rptSTLRchDupV5.2
.3 A2002

RPD - Relative Percent Difference.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

TESTAMERICA

FORM II

Date: 16-Jun-09

DUPLICATE RESULTS

Lab Name:	TestAmerica	SDG:	J00499	Collection Date:	5/20/2009 2:28:00 PM
Lot-Sample No.:	J9E210355-2	Report No. :	41741	Received Date:	5/21/2009 10:15:00 AM
Client Sample ID:	J18WP5 DUP	COC No. :	RC-075-074	Matrix:	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 9147316	UISO_IE_PLATE_AEA			Work Order: LDJEM1AK		Report DB ID: LDJEM1KR			Orig Sa DB ID: 9LDJEM10			
U-234	8.70E-02		4.9E-02	5.1E-02	4.92E-02	pCi/g	90%	(1.8)	6/11/09 12:52 p		1.05	ALP4
	7.38E-02	U	RPD	16.4		1.00E+00		(3.4)			G	
U-235	2.52E-03	U	1.9E-02	1.9E-02	5.42E-02	pCi/g	90%	0.05	6/11/09 12:52 p		1.05	ALP4
	-3.63E-03	U	RPD	-1108.1		1.00E+00		0.26			G	
U-238	1.11E-01		5.4E-02	5.7E-02	3.56E-02	pCi/g	90%	(3.1)	6/11/09 12:52 p		1.05	ALP4
	1.52E-01		RPD	31.5		1.00E+00		(3.9)			G	

Ratio U-234/238 = 0.8 *Alpha Spec Result Sum = 2.0E-01*

No. of Results: 3 Comments:

56

000035

TestAmerica rptSTLRchDupV5.2 .3 A2002

RPD - Relative Percent Difference.

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

TESTAMERICA

FORM II

Date: 16-Jun-09

DUPLICATE RESULTS

Lab Name:	TestAmerica	SDG:	J00499	Collection Date:	5/20/2009 10:39:00 AM
Lot-Sample No.:	J9E210355-3	Report No. :	41741	Received Date:	5/21/2009 10:15:00 AM
Client Sample ID:	J18WP6 DUP	COC No. :	RC-075-074	Matrix:	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 9147317	GAMMA_GS			Work Order:	LDJEN1AK		Report DB ID:	LDJEN1KR	Orig Sa DB ID:	9LDJEN10		
AM-241	1.61E-02	U	2.7E-02	2.7E-02	4.78E-02	pCi/g		0.34	5/30/09 07:42 a		424.8	GER15$1
	2.69E-02	U	RPD	50.2				(1.2)			g	
CO-60	2.16E-03	U	1.6E-02	1.6E-02	2.91E-02	pCi/g		0.07	5/30/09 07:42 a		424.8	GER15$1
	-6.14E-03	U	RPD	-417.3		5.00E-02		0.27			g	
CS-137	2.32E-02	U	1.7E-02	1.7E-02	3.12E-02	pCi/g		0.74	5/30/09 07:42 a		424.8	GER15$1
	1.43E-02	U	RPD	47.6		1.00E-01		(2.8)			g	
EU-152	2.05E-02	U	4.2E-02	4.2E-02	7.38E-02	pCi/g		0.28	5/30/09 07:42 a		424.8	GER15$1
	-2.06E-03	U	RPD	244.6		1.00E-01		0.99			g	
EU-154	1.03E-02	U	5.0E-02	5.0E-02	9.01E-02	pCi/g		0.11	5/30/09 07:42 a		424.8	GER15$1
	-3.08E-02	U	RPD	-402.6		1.00E-01		0.42			g	
EU-155	3.53E-02	U	4.1E-02	4.1E-02	7.01E-02	pCi/g		0.5	5/30/09 07:42 a		424.8	GER15$1
	4.08E-02	U	RPD	14.4		1.00E-01		(1.7)			g	

No. of Results: 6 Comments:

TestAmerica RPD - Relative Percent Difference.

rptSTLRchDupV5.2 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

.3 A2002 U Qual = Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

TESTAMERICA

FORM II

Date: 16-Jun-09

DUPLICATE RESULTS

Lab Name:	TestAmerica	SDG:	J00499	Collection Date:	5/20/2009 12:49:00 PM
Lot-Sample No.:	J9E210355-4	Report No. :	41741	Received Date:	5/21/2009 10:15:00 AM
Client Sample ID:	J18WP7 DUP	COC No. :	RC-075-074	Matrix:	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 9147322	SRTOT_SEP_PRECIP_GPC			Work Order: LDJEP1AK		Report DB ID: LDJEP1KR			Orig Sa DB ID: 9LDJEP10			
STRONTIUM	8.87E-02	U	7.2E-02	7.5E-02	1.47E-01	pCi/g	87%	0.6	6/12/09 05:38 p		6.03	GPC27C
	1.54E-01		RPD	53.8				(2.4)			G	

No. of Results: 1 Comments:

000037

TestAmerica rptSTLRchDupV5.2.3 A2002

RPD - Relative Percent Difference.

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

TESTAMERICA

FORM II

BLANK RESULTS

Date: 16-Jun-09

Lab Name: TestAmerica

Matrix: SOIL

SDG: J00499

Report No. : 41741

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 9147510	7196_CR6			Work Order:	LDTV41AA		Report DB ID:	LDTV41AA				
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	1.	5/27/09		2.5	
						1.55E-01		N/A			G	
Batch: 9147327	C14_CHEM_LSC			Work Order:	LDR081AA		Report DB ID:	LDR081AB				
C-14	-2.06E-02	U	1.3E-01	1.5E-01	3.27E-01	pCi/g	100%	-0.06	6/12/09 11:04 p		5.0	LSC3
					1.57E-01	5.00E+01		-0.27			G	
Batch: 9147301	PUISO_PLATE_AEA			Work Order:	LDRVH1AA		Report DB ID:	LDRVH1AB				
PU-238	0.00E+00	U	0.0E+00	1.9E-02	4.52E-02	pCi/g	79%	0.	6/12/09 02:08 p		1.0	ALP128
					9.82E-03	1.00E+00		0.			G	
PU239/40	-3.78E-03	U	2.0E-02	2.0E-02	5.33E-02	pCi/g	79%	-0.07	6/12/09 02:08 p		1.0	ALP128
					1.39E-02	1.00E+00		-0.38			G	
Batch: 9147316	UISO_IE_PLATE_AEA			Work Order:	LDRXT1AA		Report DB ID:	LDRXT1AB				
U-234	-2.41E-03	U	1.3E-02	1.3E-02	3.41E-02	pCi/g	94%	-0.07	6/11/09 04:32 p		1.0	ALP9
					8.87E-03	1.00E+00		-0.38			G	
U-235	0.00E+00	U	0.0E+00	1.2E-02	2.89E-02	pCi/g	94%	0.	6/11/09 04:32 p		1.0	ALP9
					6.27E-03	1.00E+00		0.			G	
U-238	2.17E-02	U	2.4E-02	2.5E-02	3.41E-02	pCi/g	94%	0.64	6/11/09 04:32 p		1.0	ALP9
					8.87E-03	1.00E+00		(1.8)			G	
								Ratio U-234/238 = -0.1				
Batch: 9147325	NI63_LSC			Work Order:	LDR041AA		Report DB ID:	LDR041AB				
NI-63	-2.73E+00	U	2.1E+00	3.2E+00	5.31E+00	pCi/g	96%	-0.51	6/12/09 09:55 p		0.27	LSC4
					2.58E+00	3.00E+01		-(1.7)			G	
Batch: 9147328	906.0_H3_LSC			Work Order:	LDR1K1AA		Report DB ID:	LDR1K1AB				

TestAmerica
rptSTLRchBlank
V5.2.3 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

TESTAMERICA

FORM II

BLANK RESULTS

Date: 16-Jun-09

Lab Name: TestAmerica

Matrix: SOIL

SDG: J00499

Report No.: 41741

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
H-3	-4.30E-03	U	1.2E-01	1.3E-01	2.93E-01	pCi/g	100%	-0.01	6/10/09 06:36 p		5.0	LSC8
					1.39E-01	4.00E+02		-0.07			G	
Batch: 9147317	GAMMA_GS			Work Order:	LDRX21AA		Report DB ID:	LDRX21AB				
AM-241	-7.06E-04	U	1.9E-02	1.9E-02	3.24E-02	pCi/g		-0.02	5/30/09 11:13 a		348.0	GER8$1
								-0.07			g	
CO-60	-1.24E-02	U	1.1E-02	1.1E-02	1.56E-02	pCi/g		-0.8	5/30/09 11:13 a		348.0	GER8$1
						5.00E-02		-(2.3)			g	
CS-137	-3.45E-03	U	1.0E-02	1.0E-02	1.84E-02	pCi/g		-0.19	5/30/09 11:13 a		348.0	GER8$1
						1.00E-01		-0.66			g	
EU-152	3.00E-03	U	3.1E-02	3.1E-02	5.47E-02	pCi/g		0.05	5/30/09 11:13 a		348.0	GER8$1
						1.00E-01		0.2			g	
EU-154	-1.20E-02	U	3.6E-02	3.6E-02	6.30E-02	pCi/g		-0.19	5/30/09 11:13 a		348.0	GER8$1
						1.00E-01		-0.67			g	
EU-155	6.28E-03	U	2.5E-02	2.5E-02	4.39E-02	pCi/g		0.14	5/30/09 11:13 a		348.0	GER8$1
						1.00E-01		0.5			g	
Batch: 9147322	SRTOT_SEP_PRECIP_GPC			Work Order:	LDR0R1AA		Report DB ID:	LDR0R1AB				
STRONTIUM	3.04E-02	U	6.5E-02	6.6E-02	1.47E-01	pCi/g	90%	0.21	6/12/09 06:41 p		6.0	GPC28B
					6.82E-02			0.93			G	

No. of Results: 16 Comments:

TestAmerica
rptSTLRchBlank
V5.2.3 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

TESTAMERICA

FORM II

LCS RESULTS

Date: 16-Jun-09

Lab Name: TestAmerica

Matrix: SOIL

SDG: J00499

Report No. : 41741

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 9147510	7196_CR6			Work Order:	LDTV41AC		Report DB ID:	LDTV41AC					
HEXCHROME	1.84E+01			0.0E+00	1.55E-01	mg/kg	N/A	2.00E+01		92%	5/27/09	2.5	
							Rec Limits:	80	120	-0.1		G	
Batch: 9147327	C14_CHEM_LSC			Work Order:	LDR081AC		Report DB ID:	LDR081CS					
C-14	7.02E+00		3.0E-01	4.2E-01	3.27E-01	pCi/g	100%	7.44E+00	1.2E-01	94%	6/12/09 11:46 p	5.0	LSC3
							Rec Limits:	70	130	-0.1		G	
Batch: 9147301	PUISO_PLATE_AEA			Work Order:	LDRVH1AC		Report DB ID:	LDRVH1CS					
PU239/40	6.32E+00		4.2E-01	9.4E-01	3.32E-02	pCi/g	101%	6.85E+00	2.1E-01	92%	6/12/09 02:09 p	1.0	ALP130
							Rec Limits:	70	130	-0.1		G	
Batch: 9147316	UISO_IE_PLATE_AEA			Work Order:	LDRXT1AC		Report DB ID:	LDRXT1CS					
U-234	3.21E+00		2.8E-01	6.1E-01	2.91E-02	pCi/g	98%	3.15E+00	1.9E-02	102%	6/11/09 04:33 p	1.02	ALP10
							Rec Limits:	70	130	0.0		G	
U-238	3.36E+00		2.9E-01	6.3E-01	2.91E-02	pCi/g	98%	3.30E+00	1.9E-02	102%	6/11/09 04:33 p	1.02	ALP10
							Rec Limits:	70	130	0.0		G	
Batch: 9147325	NI63_LSC			Work Order:	LDR041AC		Report DB ID:	LDR041CS					
NI-63	5.22E+02		8.5E+00	4.9E+01	5.84E+00	pCi/g	94%	6.10E+02	1.0E+01	86%	6/12/09 11:38 p	0.25	LSC4
							Rec Limits:	70	130	-0.1		G	
Batch: 9147328	906.0_H3_LSC			Work Order:	LDR1K1AC		Report DB ID:	LDR1K1CS					
H-3	2.32E+00		2.0E-01	2.1E-01	2.94E-01	pCi/g	100%	2.71E+00	8.1E-02	85%	6/10/09 07:57 p	5.0	LSC8
							Rec Limits:	70	130	-0.1		G	
Batch: 9147317	GAMMA_GS			Work Order:	LDRX21AC		Report DB ID:	LDRX21CS					
CS-137	3.25E-01		8.2E-02	8.2E-02	6.89E-02	pCi/g		2.47E-01	1.1E-02	131%	5/30/09 11:14 a	200.01	GER5$1
							Rec Limits:	70	130	0.3		g	

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchLcs
V5.2.3 A2002

TESTAMERICA

FORM II

LCS RESULTS

Date: 16-Jun-09

Lab Name: TestAmerica

Matrix: SOIL

SDG: J00499

Report No. : 41741

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 9147322	SRTOT_SEP_PRECIP_GPC			Work Order:	LDR0R1AC		Report DB ID:	LDR0R1CS					
STRONTIUM	2.48E+00		2.0E-01	6.7E-01	1.36E-01	pCi/g	99%	2.26E+00	6.1E-02	110%	6/12/09 06:41 p	6.0	GPC28D
							Rec Limits:	70	130	0.1		G	

No. of Results: 9 Comments:

000041

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchLcs
V5.2.3 A2002

TESTAMERICA

FORM II

MATRIX SPIKE RESULTS

Date: 16-Jun-09

Lab Name: TestAmerica SDG: J00499

Lot-Sample No.: J9E210355-1, J18WP4 Report No. : 41741 Matrix: SOIL

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 9147510	Work Order: LDJED1AC			Report DB ID: LDJED1AC			Orig Sa DB ID: 9LDJED10					
HEXCHROME	7.97E+00			0.0E+00	1.53E-01	mg/kg	N/A	79.84%	9.99E+00	5/27/09	2.54	7196_CR6
	1.54E-01										G	

Number of Results: 1

Comments:

63

000042

TestAmerica RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
rptSTLRchMs Bias - (Result/Expected)-1 as defined by ANSI N13.30.
V5.2.3 A2002

Date: 27 July 2009
To: Washington Closure Hanford Inc. (technical representative)
From: ELR Consulting
Project: 100-D/DR Burial Grounds & Remaining Sites – Soil Full Protocol - Waste Site 116-DR-8
Subject: PCB - Data Package No. J00499-TAL

INTRODUCTION

This memo presents the results of data validation on Data Package No. J00499 prepared by TestAmerica Laboratories Inc. (TAL). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample Date	Media	Validation	Analyte
J18WN5	5/20/09	Soil	C	See note 1
J18WN6	5/20/09	Soil	C	See note 1
J18WN7	5/20/09	Soil	C	See note 1
J18WN8	5/20/09	Soil	C	See note 1
J18WN9	5/20/09	Soil	C	See note 1
J18WP0	5/20/09	Soil	C	See note 1
J18WP1	5/20/09	Soil	C	See note 1
J18WP2	5/20/09	Soil	C	See note 1
J18WP3	5/20/09	Soil	C	See note 1
J18WP4	5/20/09	Soil	C	See note 1
J18WP5	5/20/09	Soil	C	See note 1
J18WP6	5/20/09	Soil	C	See note 1
J18WP7	5/20/09	Soil	C	See note 1

1 – Pesticides by 8082.

Data validation was conducted in accordance with the Washington Closure Hanford (WCH) validation statement of work and the 100 Area Remedial Action Sampling and Analysis Plan (DOE/RL-96-22, February 2005). Appendices 1 through 5 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports
Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Documentation Requested by Client

DATA QUALITY OBJECTIVES

Holding Times

Sample data were assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Soil samples must be extracted within 14 days of the date of sample collection and analyzed within 40 days from the date of extraction.

If holding times are exceeded by less than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detected sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

All holding times were acceptable.

Method Blank

Method blank analyses are performed to determine the extent of laboratory contamination introduced through sampling, sample preparation or analysis. At least one method blank analysis must be conducted for every 20 samples. Method blanks should not contain target compounds at a concentration greater than required quantitation limit (RQL). If target compounds are present, sample results less than five times the blank concentration are qualified as undetected and flagged "U". If the sample result is less than five times the blank concentration and less than RQL, the result is qualified as undetected and elevated to the RQL.

All method blank results were acceptable.

Field Blanks

No field blanks were submitted for analysis.

Accuracy

Matrix Spike & Laboratory Control Sample

Matrix spike (MS) and laboratory control sample (LCS) analyses are used to assess the analytical accuracy of the reported data. The matrix spike is used to assess the effect of the matrix on the ability to accurately quantify sample concentrations. Recoveries must fall within the range of 70% to 130%. If spike recoveries are outside control limits, detected sample results less than five times the spike concentration are qualified as estimates and flagged "J". Non-detected sample results with spike recoveries outside

control limits are qualified as estimates and flagged "UJ". Sample results greater than five times the spike concentration require no qualification.

All accuracy results were acceptable.

Surrogate Recovery

The analysis of surrogate compounds provides a measure of performance for individual samples. Matrix-specific surrogate compound recovery control windows have been established by the laboratory. When a surrogate compound recovery is outside the control window, all positively identified target compounds associated with the unacceptable surrogate recoveries are qualified as estimates and flagged "J". Non-detected compounds with surrogate recoveries less than the lower control limit are qualified as having an estimated detection limit and flagged "UJ". Non-detected compounds with surrogate recoveries above the upper control limit require no qualification.

All surrogate results were acceptable.

Precision

Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike/matrix spike duplicate results provide matrix-specific information on the precision of the method for specific target compound classes. Precision is expressed as the relative percent difference (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample. For soil samples, results must be within RPD limits of plus/minus 30%. If RPD values are out of specification and the sample concentration is less than five times the spike concentration, all associated detected sample results are qualified as estimates and flagged "J". If RPD values are out of specification and the sample concentration is greater than five times the spike concentration, no qualification is required.

All precision results were acceptable.

Field Duplicate Samples

One set of field duplicates (J18WP0/J18WP7) were submitted for analysis. Laboratory duplicates are compared using the same criteria as for laboratory duplicates. All field duplicate results were acceptable.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the 100 Area RQLs to ensure that laboratory detection levels meet the required criteria. All results met the RQL.

- **Completeness**

Data Package No. J00499 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

None found.

REFERENCES

Washington Closure Hanford Contract #S00W307A00 (March 2008), *Data Validation Services*, March 2008.

DOE/RL-96-22, Rev. 4, *100 Area Remedial Action Sampling and Analysis Plan*, U.S. Department of Energy, February 2005.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validators in compliance with the procedures herein are as follows:

U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

Appendix 2

Summary of Data Qualification

PCB DATA QUALIFICATION SUMMARY*

SDG: J00499	REVIEWER: ELR	Project: 116-DR-8	PAGE 1 OF 1
COMMENTS: No qualifiers assigned			

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Annotated Laboratory Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN5
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-002
Matrix:	SOLID	**Lab WorkOrder:**	LDMDW1A3
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 07:58

Analysis Method: 8082 **% Moisture:** 0.91 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	2.8	2.8	10	U	5/29/09	06/02/09 00:47	0.99
9149200	Aroclor 1221	8.0	8.0	16	U	5/29/09	06/02/09 00:47	0.99
9149200	Aroclor 1232	2.0	2.0	10	U	5/29/09	06/02/09 00:47	0.99
9149200	Aroclor 1242	4.7	4.7	10	U	5/29/09	06/02/09 00:47	0.99
9149200	Aroclor 1248	4.7	4.7	10	U	5/29/09	06/02/09 00:47	0.99
9149200	Aroclor 1254	2.6	2.6	10	U	5/29/09	06/02/09 00:47	0.99
9149200	Aroclor 1260	2.6	2.6	10	U	5/29/09	06/02/09 00:47	0.99

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	97	68	125	
Tetrachloro-m-xylene	89	67	129	

7/23/09

000010

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN6
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-003
Matrix:	SOLID	**Lab WorkOrder:**	LDMD01AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:01

Analysis Method: 8082 **% Moisture:** 1.9 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	2.7	2.7	9.8	U	5/29/09	06/02/09 01:52	0.96
9149200	Aroclor 1221	7.8	7.8	16	U	5/29/09	06/02/09 01:52	0.96
9149200	Aroclor 1232	2.0	2.0	9.8	U	5/29/09	06/02/09 01:52	0.96
9149200	Aroclor 1242	4.6	4.6	9.8	U	5/29/09	06/02/09 01:52	0.96
9149200	Aroclor 1248	4.6	4.6	9.8	U	5/29/09	06/02/09 01:52	0.96
9149200	Aroclor 1254	2.5	2.5	9.8	U	5/29/09	06/02/09 01:52	0.96
9149200	Aroclor 1260	2.5	2.5	9.8	U	5/29/09	06/02/09 01:52	0.96

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	94	68	125	
Tetrachloro-m-xylene	92	67	129	

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7/23/09

000011

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN7
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-004
Matrix:	SOLID	**Lab WorkOrder:**	LDMD11AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:32

Analysis Method: 8082 **% Moisture:** 1.1 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	2.7	2.7	9.7	U	5/29/09	06/02/09 02:08	0.96
9149200	Aroclor 1221	7.8	7.8	16	U	5/29/09	06/02/09 02:08	0.96
9149200	Aroclor 1232	1.9	1.9	9.7	U	5/29/09	06/02/09 02:08	0.96
9149200	Aroclor 1242	4.5	4.5	9.7	U	5/29/09	06/02/09 02:08	0.96
9149200	Aroclor 1248	4.5	4.5	9.7	U	5/29/09	06/02/09 02:08	0.96
9149200	Aroclor 1254	2.5	2.5	9.7	U	5/29/09	06/02/09 02:08	0.96
9149200	Aroclor 1260	2.5	2.5	9.7	U	5/29/09	06/02/09 02:08	0.96

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	90	68	125	
Tetrachloro-m-xylene	94	67	129	

7/23/09

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN8
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-005
Matrix:	SOLID	**Lab WorkOrder:**	LDMD21AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 09:51

Analysis Method: 8082 **% Moisture:** 2.9 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	2.8	2.8	10	U	5/29/09	06/02/09 02:24	0.99
9149200	Aroclor 1221	8.2	8.2	17	U	5/29/09	06/02/09 02:24	0.99
9149200	Aroclor 1232	2.0	2.0	10	U	5/29/09	06/02/09 02:24	0.99
9149200	Aroclor 1242	4.7	4.7	10	U	5/29/09	06/02/09 02:24	0.99
9149200	Aroclor 1248	4.7	4.7	10	U	5/29/09	06/02/09 02:24	0.99
9149200	Aroclor 1254	2.6	2.6	10	U	5/29/09	06/02/09 02:24	0.99
9149200	Aroclor 1260	2.6	2.6	10	U	5/29/09	06/02/09 02:24	0.99

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	96	68	125	
Tetrachloro-m-xylene	90	67	129	

7/27/09

000013

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WN9
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-006
Matrix:	SOLID	**Lab WorkOrder:**	LDMD31AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 10:25

Analysis Method: 8082 **% Moisture:** 1.7 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	2.6	2.6	9.6	U	5/29/09	06/02/09 02:40	0.94
9149200	Aroclor 1221	7.7	7.7	16	U	5/29/09	06/02/09 02:40	0.94
9149200	Aroclor 1232	1.9	1.9	9.6	U	5/29/09	06/02/09 02:40	0.94
9149200	Aroclor 1242	4.5	4.5	9.6	U	5/29/09	06/02/09 02:40	0.94
9149200	Aroclor 1248	4.5	4.5	9.6	U	5/29/09	06/02/09 02:40	0.94
9149200	Aroclor 1254	2.5	2.5	9.6	U	5/29/09	06/02/09 02:40	0.94
9149200	Aroclor 1260	2.5	2.5	9.6	U	5/29/09	06/02/09 02:40	0.94

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	94	68	125	
Tetrachloro-m-xylene	93	67	129	

7/23/09

000014

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP0
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-007
Matrix:	SOLID	**Lab WorkOrder:**	LDMD51AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 12:49

Analysis Method: 8082 **% Moisture:** 1.6 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	2.8	2.8	10	U	5/29/09	06/02/09 02:56	0.98
9149200	Aroclor 1221	8.0	8.0	16	U	5/29/09	06/02/09 02:56	0.98
9149200	Aroclor 1232	2.0	2.0	10	U	5/29/09	06/02/09 02:56	0.98
9149200	Aroclor 1242	4.6	4.6	10	U	5/29/09	06/02/09 02:56	0.98
9149200	Aroclor 1248	4.6	4.6	10	U	5/29/09	06/02/09 02:56	0.98
9149200	Aroclor 1254	2.6	2.6	10	U	5/29/09	06/02/09 02:56	0.98
9149200	Aroclor 1260	2.6	2.6	10	U	5/29/09	06/02/09 02:56	0.98

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	99	68	125	
Tetrachloro-m-xylene	92	67	129	

7/23/09

000015

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP1
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-008
Matrix:	SOLID	**Lab WorkOrder:**	LDMD61AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 13:31

nalysis Method: 8082 **% Moisture:** 3.2 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

C Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
149200	Aroclor 1016	2.8	2.8	10	U	5/29/09	06/02/09 03:12	0.99
149200	Aroclor 1221	8.2	8.2	17	U	5/29/09	06/02/09 03:12	0.99
149200	Aroclor 1232	2.0	2.0	10	U	5/29/09	06/02/09 03:12	0.99
149200	Aroclor 1242	4.8	4.8	10	U	5/29/09	06/02/09 03:12	0.99
149200	Aroclor 1248	4.8	4.8	10	U	5/29/09	06/02/09 03:12	0.99
149200	Aroclor 1254	2.7	2.7	10	U	5/29/09	06/02/09 03:12	0.99
149200	Aroclor 1260	2.7	2.7	10	U	5/29/09	06/02/09 03:12	0.99

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	92	68	125	
Tetrachloro-m-xylene	86	67	129	

7/23/09

000016

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP2
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-009
Matrix:	SOLID	**Lab WorkOrder:**	LDMD71AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 13:45

Analysis Method: 8082 **% Moisture:** 2.0 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	2.8	2.8	10	U	5/29/09	06/02/09 03:28	0.98
9149200	Aroclor 1221	8.0	8.0	16	U	5/29/09	06/02/09 03:28	0.98
9149200	Aroclor 1232	2.0	2.0	10	U	5/29/09	06/02/09 03:28	0.98
9149200	Aroclor 1242	4.7	4.7	10	U	5/29/09	06/02/09 03:28	0.98
9149200	Aroclor 1248	4.7	4.7	10	U	5/29/09	06/02/09 03:28	0.98
9149200	Aroclor 1254	2.6	2.6	10	U	5/29/09	06/02/09 03:28	0.98
9149200	Aroclor 1260	2.6	2.6	10	U	5/29/09	06/02/09 03:28	0.98

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	155	68	125	*
Tetrachloro-m-xylene	88	67	129	

7/23/09

000017

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP3
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-010
Matrix:	SOLID	**Lab WorkOrder:**	LDMD91AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 13:15

Analysis Method: 8082 **% Moisture:** 5.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
)149200	Aroclor 1016	2.9	2.9	10	U	5/29/09	06/02/09 03:45	0.97
)149200	Aroclor 1221	8.3	8.3	17	U	5/29/09	06/02/09 03:45	0.97
)149200	Aroclor 1232	2.1	2.1	10	U	5/29/09	06/02/09 03:45	0.97
)149200	Aroclor 1242	4.8	4.8	10	U	5/29/09	06/02/09 03:45	0.97
)149200	Aroclor 1248	4.8	4.8	10	U	5/29/09	06/02/09 03:45	0.97
)149200	Aroclor 1254	2.7	2.7	10	U	5/29/09	06/02/09 03:45	0.97
)149200	Aroclor 1260	2.7	2.7	10	U	5/29/09	06/02/09 03:45	0.97

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	92	68	125	
Tetrachloro-m-xylene	97	67	129	

7/23/09

000018

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP4
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-011
Matrix:	SOLID	**Lab WorkOrder:**	LDMEA1AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 14:10

Analysis Method: 8082 **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	2.8	2.8	10	U	5/29/09	06/02/09 04:17	0.98
9149200	Aroclor 1221	8.0	8.0	16	U	5/29/09	06/02/09 04:17	0.98
9149200	Aroclor 1232	2.0	2.0	10	U	5/29/09	06/02/09 04:17	0.98
9149200	Aroclor 1242	4.7	4.7	10	U	5/29/09	06/02/09 04:17	0.98
9149200	Aroclor 1248	4.7	4.7	10	U	5/29/09	06/02/09 04:17	0.98
9149200	Aroclor 1254	2.6	2.6	10	U	5/29/09	06/02/09 04:17	0.98
9149200	Aroclor 1260	2.6	2.6	10	U	5/29/09	06/02/09 04:17	0.98

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	122	68	125	
Tetrachloro-m-xylene	79	67	129	

7/23/09

000019

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP5
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-012
Matrix:	SOLID	**Lab WorkOrder:**	LDMEC1AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 14:28

Analysis Method: 8082 **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	2.7	2.7	9.7	U	5/29/09	06/02/09 04:33	0.95
9149200	Aroclor 1221	7.8	7.8	16	U	5/29/09	06/02/09 04:33	0.95
9149200	Aroclor 1232	1.9	1.9	9.7	U	5/29/09	06/02/09 04:33	0.95
9149200	Aroclor 1242	4.5	4.5	9.7	U	5/29/09	06/02/09 04:33	0.95
9149200	Aroclor 1248	4.5	4.5	9.7	U	5/29/09	06/02/09 04:33	0.95
9149200	Aroclor 1254	2.5	2.5	9.7	U	5/29/09	06/02/09 04:33	0.95
9149200	Aroclor 1260	2.5	2.5	9.7	U	5/29/09	06/02/09 04:33	0.95

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	92	68	125	
Tetrachloro-m-xylene	101	67	129	

7/23/09

000020

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP6
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-013
Matrix:	SOLID	**Lab WorkOrder:**	LDMED1AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 10:39

Analysis Method: 8082 **% Moisture:** 2.1 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	2.8	2.8	10	U	5/29/09	06/02/09 04:49	0.98
9149200	Aroclor 1221	8.0	8.0	17	U	5/29/09	06/02/09 04:49	0.98
9149200	Aroclor 1232	2.0	2.0	10	U	5/29/09	06/02/09 04:49	0.98
9149200	Aroclor 1242	4.7	4.7	10	U	5/29/09	06/02/09 04:49	0.98
9149200	Aroclor 1248	4.7	4.7	10	U	5/29/09	06/02/09 04:49	0.98
9149200	Aroclor 1254	2.6	2.6	10	U	5/29/09	06/02/09 04:49	0.98
9149200	Aroclor 1260	2.6	2.6	10	U	5/29/09	06/02/09 04:49	0.98

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	92	68	125	
Tetrachloro-m-xylene	91	67	129	

7/23/09

000021

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Sample Analysis Data Sheet

Lab Name:	TESTAMERICA DENVER	**Client Sample ID:**	J18WP7
Lot/SDG Number:	D9E220401	**Lab Sample ID:**	D9E220401-014
Matrix:	SOLID	**Lab WorkOrder:**	LDMEE1AE
Date/Time Received:	05/22/09 09:00	**Date/Time Collected:**	05/20/09 12:49

nalysis Method: 8082 **% Moisture:** 1.8 **Basis:** Dry **Leach Date:** **Unit:** ug/kg

C Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
149200	Aroclor 1016	2.8	2.8	10	U	5/29/09	06/02/09 05:05	0.98
149200	Aroclor 1221	8.0	8.0	16	U	5/29/09	06/02/09 05:05	0.98
149200	Aroclor 1232	2.0	2.0	10	U	5/29/09	06/02/09 05:05	0.98
149200	Aroclor 1242	4.7	4.7	10	U	5/29/09	06/02/09 05:05	0.98
149200	Aroclor 1248	4.7	4.7	10	U	5/29/09	06/02/09 05:05	0.98
149200	Aroclor 1254	2.6	2.6	10	U	5/29/09	06/02/09 05:05	0.98
149200	Aroclor 1260	2.6	2.6	10	U	5/29/09	06/02/09 05:05	0.98

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	93	68	125	
Tetrachloro-m-xylene	87	67	129	

K 7/20/09

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

CASE NARRATIVE
J00499 / RC-075 / D9E220401

The following report contains the analytical results for fifteen soil samples submitted to TestAmerica by Washington Closure Hanford. The samples were received May 2 2, 2009, according to documented sample acceptance procedures.

Client ID	Lab ID	Analyses Requested	Analyses Performed
J18WN4	D9E220401-001	6010/7471/8270A	6010B/7471A/8270C
J18WN5	D9E220401-002	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN6	D9E220401-003	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN7	D9E220401-004	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN8	D9E220401-005	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WN9	D9E220401-006	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP0	D9E220401-007	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP1	D9E220401-008	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP2	D9E220401-009	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP3	D9E220401-010	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP4	D9E220401-011	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP5	D9E220401-012	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP6	D9E220401-013	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18WP7	D9E220401-014	6010/7471/8082/8270A/8260A	6010B/7471A/8082/8270C/8260B
J18X44	D9E220401-015	8260A	8260B

Dilution factors and qualifiers are provided to assist in the interpretation of the results. In some cases, due to interferences or analytes present above the linear calibration curve, samples must be analyzed at a dilution. For samples analyzed at a dilution, the reporting limits are adjusted relative to the dilution required. Dilutions made for reasons other than the presence of target compounds are addressed in the Supplemental QC Information section.

This report includes reporting limits (RLs) less than TestAmerica Denver's practical quantitation limits. These reporting limits are being used specifically at the client's request to meet the needs of this project. Please note that data are not normally reported to these levels without qualification, since they are inherently less reliable and potentially less defensible than required by the current NELAC standards. Please note that Non-Detect (U) results have been evaluated down to the Method Detection Limit (MDL) and should be considered Non-Detect (U) at the MDL. The results, RLs and MDLs included in this report have been adjusted for dry weight.

TestAmerica utilizes USEPA approved methods in all analytical work. The results apply only to the samples included in this report and meet all requirements of NELAC. All data have been reviewed for compliance with the laboratory QA/QC plan and have been found to be compliant with laboratory protocols, with the exception of any items noted below.

SUPPLEMENTAL QC INFORMATION

Sample Receipt

Samples were received in good condition at a temperature of 3.6°C. No anomalies were encountered during sample receipt.

GCMS Volatiles – SW846 8260B

Low levels of Methylene chloride, a common laboratory contaminant, are present in the method blank associated with QC batch 9154075. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

GCMS Volatiles – SW846 8260B (cont.)
The MSD aliquot of the MS/MSD performed on sample J18WN5 exhibited a percent recovery outside the QC control limits for 1,1-Dichloroethene. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

GCMS Semivolatiles – SW846 8270C
Compounds Benzo(b)fluoranthene and Benzo(k)fluoranthene were unresolved in sample J18WN4 due to matrix interferences. It can be noted that these compounds were adequately resolved in associated standards, indicating the instrument is achieving separation. The combined peak was reported as Benzo(b)fluoranthene, while Benzo(k)fluoranthene was reported as undetected even though it may be present. Associated results in the analytical report have been flagged with a "K".

Sample J18WN5 exhibited surrogate recoveries outside the QC control limits, biased high. As no detectable concentrations are present at levels greater than the reporting limits in the sample, corrective action is deemed unnecessary.

No other anomalies were encountered.

GC Semivolatiles – SW846 8082 – PCBs
Surrogate Decachlorobiphenyl was recovered outside the QC control limits, biased high, in sample J18WP2. This is an indicator that data may be biased high. As no detectable concentrations are present in the sample, corrective action is deemed unnecessary. The laboratory noted that the sample chromatogram shows obvious evidence of matrix interference.

A Continuing Calibration Verification (CCV) standard exhibited %Difference (%D) values >15%, biased high, for Aroclor 1260 and surrogate Tetrachloro-m-xylene. The overall mean %D is ≤15%; therefore, method criteria have been met and corrective action is deemed unnecessary.

No other anomalies were encountered.

Total Metals – SW846 6010B/7471A
Low levels of Zinc are present in the method blank associated with QC batch 9146376. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary.

The duplicate analysis of sample J18WN4 exhibited RPD data outside the QC control limits for Barium, Beryllium, Lead, Manganese, Zinc and Mercury. In some cases, the RPD was calculated based on a value below the method detection limit, and as such, could not be reliably calculated. There is no indication that the analytical systems were operating out of control, and method accuracy has been verified by the acceptable LCS analysis data; therefore, corrective action is deemed unnecessary.

No other anomalies were encountered.

I certify that this data package 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:

Kae E. Yoder
Project Manager

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 1 of 2

Collector J Sellers	Company Contact D.W.Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 116-DR-8, Verification I, excavation		SAF No. RC-075
Ice Chest No.	Field Logbook No. EL-1607-6	COA R116R8N6W0	Method of Shipment
Shipped To EBERLINE SERVICES LLIONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No. See OSPC

Price Code: 8 L

Data Turnaround: 21 days

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL
SAMPLE ANALYSIS	See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium

920000

Sample No.	Matrix *	Sample Date	Sample Time											
J18WN4	SOIL	5/20/09	0737	✓			✓							EB
J18WN5	SOIL		0758	✓	✓	✓	✓	✓						A1
J18WN6	SOIL		0901	✓	✓	✓	✓	✓						A2
J18WN7	SOIL		0932	✓	✓	✓	✓	✓						A3
J18WN8	SOIL		0951	✓	✓	✓	✓	✓						A4

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	J.Sellers	5-20-09 1006	DWShea DWShea	5/20/09 1006
Relinquished By/Removed From	DWShea DWShea	5/20/09 1641	Fridge 1B	5/20/09 1641
Relinquished By/Removed From	Fridge 1B / J. E. Benhal	5-21-09 0830	J. E. Benhal	5-21-09 0830
Relinquished By/Removed From	J. E. Benhal	5-21-09 1000	DAVID HARBISON	5-21-09 1000
Relinquished By/Removed From	DAVID HARBISON	5-21-09 1000	Received By/Stored In	Date/Time
Relinquished By/Removed From		Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] DWShea 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108m metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W=Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By: Lanny Birdell	Title	Date/Time: 5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 2 of 2

Collector: J Sellers	Company Contact: D.W.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH
Price Code: 8L	Data Turnaround: 21 days		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 116-DR-8, Verification I, excavation		SAF No.: RC-075
Ice Chest No.	Field Logbook No.: EL-1607-6	COA: R116R8N6W0	Method of Shipment
Shipped To: EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No.: See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

220027

SAMPLE ANALYSIS													
			Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
			Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P
			No. of Container(s)	1	1	1	1	1	1	1	1	1	1
			Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL
				See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium
Sample No.	Matrix *	Sample Date	Sample Time										
J18WN9	SOIL	5/20/09	1025	✓	✓	✓	✓	✓					
J18WP0	SOIL		1249	✓	✓	✓	✓	✓					
J18WP1	SOIL		1331	✓	✓	✓	✓	✓					
J18WP2	SOIL		1345	✓	✓	✓	✓	✓					
J18WP3	SOIL		1325	✓	✓	✓	✓	✓					

A5
A6
A7
A8
A9

CHAIN OF POSSESSION — Sign/Print Names DWShea 5/20/09

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
J.Sellers	5-20-09 1440	DWSHEA	5/20/09 1440
DWShea	5/20/09 1641	Fridge 1B	5/20/09 1641
Fridge 1B/J.E.Benhal	5-21-09 0830	J.E.Benhal	5-21-09 0830
J.E.Benhal	5-21-09 1000	DAVID HARBINSON	5-21-09 1000
DAVID HARBINSON	5-21-09 1000		

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108m metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By: Aaron Rindell	Title	Date/Time: 5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica

3.6 CHK
IRZAB 5.22.09

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 2 of 2

Collector J Sellers	Company Contact D.W.Shea	Telephone No. 521-6014	Project Coordinator KESSNER, JH
Price Code 8L	Data Turnaround 21days		
Project Designation 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location 116-DR-8, Verification I, excavation		SAF No. RC-075
Ice Chest No.	Field Logbook No. EL-1607-6	COA R116R8N6W0	Method of Shipment
Shipped To EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No. See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS
potentially radioactive

Special Handling and/or Storage

820028

SAMPLE ANALYSIS												
			Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
			Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P
			No. of Container(s)	1	1	1	1	1	1	1	1	1	1
			Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL
				See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions.	Carbon-14; Tritium - H3	Nickel-63; Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium	
Sample No.	Matrix *	Sample Date	Sample Time											
J18WP4	SOIL	5/20/09	~~1345~~ 1410	✓	✓	✓	✓	✓					A	A10
J18WP5	SOIL		1428	✓	✓	✓	✓	✓						A11
J18WP6	SOIL		1039	✓	✓	✓	✓	✓						A12
J18WP7	SOIL		1249	✓	✓	✓	✓	✓						D

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From J. Sellers	Date/Time 5-20-09 1440	Received By/Stored In DWSHEA	Date/Time 5/20/09 1440
Relinquished By/Removed From DWSHEA	Date/Time 5/20/09 1641	Received By/Stored In Fridge 1B	Date/Time 5/20/09 1641
Relinquished By/Removed From Fridge 1B / J.E. Bernal	Date/Time 0830 5-21-09	Received By/Stored In J.E. Bernal	Date/Time 0830 5-21-09
Relinquished By/Removed From J.E. Bernal	Date/Time 1015 5-21-09	Received By/Stored In DAVID HARDI	Date/Time 1015 5-21-09
Relinquished By/Removed From DAVID HARDI	Date/Time 1015 5-21-09	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

5/21/09 SKS

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~ Chromium, Cobalt, Copper, ~~Iron~~ Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~ Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] DWShea 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108 metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W = Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
Wi=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
	Nancy Bindell		5/22/09 0900
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TestAmerica

Appendix 5

Data Validation Supporting Documentation

PCB DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 116-DR-8			DATA PACKAGE: J00499		
VALIDATOR: ELR		LAB: TAL		DATE: 7/20/07	
			SDG: J00499		
ANALYSES PERFORMED					
SW-846 8081	SW-846 8081 (TCLP)	SW-846 8082	SW-846 8081 (TCLP)		
SAMPLES/MATRIX					
J18WN5	J18WN6	J18WN7	J18WN8	J18WN9	
J18WP0	J18WP1	J18WP2	J18WP3	J18WP4	
J18WP5	J18WP6	J18WP7	~~J18W~~ 7/20/07		
				Soil	

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? ..... Yes (No) N/A

Comments:

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations acceptable? ..... Yes No (N/A)

Continuing calibrations acceptable? ..... Yes No (N/A)

Standards traceable? ..... Yes No (N/A)

Standards expired? ..... Yes No (N/A)

Calculation check acceptable? ..... Yes No (N/A)

DDT and endrin breakdowns acceptable? ..... Yes No (N/A)

Comments:

PCB DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

Calibration blanks analyzed? (Levels D, E) ..... Yes No N/A

Calibration blank results acceptable? (Levels D, E) ..... Yes No N/A

Laboratory blanks analyzed? ..... Yes No N/A

Laboratory blank results acceptable? ..... Yes No N/A

Field/trip blanks analyzed? (Levels C, D, E) ..... Yes No N/A

Field/trip blank results acceptable? (Levels C, D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: no FB

4. ACCURACY (Levels C, D, and E)

Surrogates analyzed? ..... Yes No N/A

Surrogate recoveries acceptable? ..... Yes No N/A

Surrogates traceable? (Levels D, E) ..... Yes No N/A

Surrogates expired? (Levels D, E) ..... Yes No N/A

MS/MSD samples analyzed? ..... Yes No N/A

MS/MSD results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

LCS/BSS samples analyzed? ..... Yes No N/A

LCS/BSS results acceptable? ..... Yes No N/A

Standards traceable? (Levels D, E) ..... Yes No N/A

Standards expired? (Levels D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments: no FB

PCB DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

Duplicate RPD values acceptable? ..... Yes No N/A

Duplicate results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

Field duplicate RPD values acceptable? ..... Yes No N/A

Field split RPD values acceptable? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: _____

6. SYSTEM PERFORMANCE (Levels D and E)

Chromatographic performance acceptable? ..... Yes No N/A

Positive results resolved acceptably? ..... Yes No N/A

Comments: _____

7. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A

Sample holding times acceptable? ..... Yes No N/A

Comments: _____

PCB DATA VALIDATION CHECKLIST

8. COMPOUND IDENTIFICATION, QUANTITATION, AND DETECTION LIMITS (all levels)

Compound identification acceptable? (Levels D, E) ..... Yes No N/A

Compound quantitation acceptable? (Levels D, E) ..... Yes No N/A

Results reported for all requested analyses? ..... Yes No N/A

Results supported in the raw data? (Levels D, E) ..... Yes No N/A

Samples properly prepared? (Levels D, E) ..... Yes No N/A

Detection limits meet RDL? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

9. SAMPLE CLEANUP (Levels D and E)

Fluoricil ® (or other absorbent) cleanup performed? ..... Yes No N/A

Lot check performed? ..... Yes No N/A

Check recoveries acceptable? ..... Yes No N/A

GPC cleanup performed? ..... Yes No N/A

GPC check performed? ..... Yes No N/A

GPC check recoveries acceptable? ..... Yes No N/A

GPC calibration performed? ..... Yes No N/A

GPC calibration check performed? ..... Yes No N/A

GPC calibration check retention times acceptable? ..... Yes No N/A

Check/calibration materials traceable? ..... Yes No N/A

Check/calibration materials Expired? ..... Yes No N/A

Analytical batch QC given similar cleanup? ..... Yes No N/A

Transcription/Calculation Errors? ..... Yes No N/A

Comments:

Appendix 6

Additional Documentation Requested by Client

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC
GC Semi-Volatiles Method Blank Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Lab Sample ID: D9E290000-200B **Work Order:** LD0D51AA **Analysis Method:** 8082 **Matrix:** SOLID **Unit:** µg/kg

QC Batch	Analyte	Conc.	MDL	RL	Q	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	2.8	2.8	10	U	05/29/09	06/02/09 00:15	1
9149200	Aroclor 1221	8.0	8.0	16	U	05/29/09	06/02/09 00:15	1
9149200	Aroclor 1232	2.0	2.0	10	U	05/29/09	06/02/09 00:15	1
9149200	Aroclor 1242	4.7	4.7	10	U	05/29/09	06/02/09 00:15	1
9149200	Aroclor 1248	4.7	4.7	10	U	05/29/09	06/02/09 00:15	1
9149200	Aroclor 1254	2.6	2.6	10	U	05/29/09	06/02/09 00:15	1
9149200	Aroclor 1260	2.6	2.6	10	U	05/29/09	06/02/09 00:15	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	103	68	125	
Tetrachloro-m-xylene	82	67	129	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Laboratory Control Sample Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Lab Sample ID: D9E290000-200C **WorkOrder:** LD0D51AC **Analysis Method:** 8082 **Matrix:** SOLID **Unit:** ug/kg

QC Batch	Analyte	True	Found	%Rec	Q	Limits	Prep Date	Analysis Date	Dilution
9149200	Aroclor 1016	32.6	27.2	84		71 - 118	05/29/09	06/02/09 00:31	1
9149200	Aroclor 1260	32.6	30.5	94		65 - 123	05/29/09	06/02/09 00:31	1

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	92	68	125	
Tetrachloro-m-xylene	79	67	129	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Matrix Spike Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Client Sample ID: J18WN5 **Lab WorkOrder:** LDMDW1A **% Moisture:** 0.91 **Basis:** Dry

Lab Sample ID: D9E220401-002S **Analysis Method** 8082 **Matrix:** SOLID **Unit:** ug/kg

QC Batch ID: 9149200

Analyte	Spike Amount	Sample Result	Q	MS Result	% Rec	Q	QC Limit	Prep Date	Analysis Date	Dilution
Aroclor 1016	33.2	2.8	U	29.5	89		71 - 118	05/29/09	06/02/09 01:19	0.99
Aroclor 1260	33.2	2.6	U	34.3	103		65 - 123	05/29/09	06/02/09 01:19	0.99

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	94	68	125	
Tetrachloro-m-xylene	86	67	129	

000037

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Washington Closure Hanford LLC

GC Semi-Volatiles Matrix Spike Duplicate Analysis Data Sheet

Lab Name: TESTAMERICA DENVER **Lot/SDG Number:** D9E220401

Client Sample ID: J18WN5 **Lab WorkOrder:** LDMDW1A6 **% Moisture:** 0.91 **Basis:** Dry

Lab Sample ID: D9E220401-002D **Analysis Method:** 8082 **Matrix:** SOLID **Unit:** ug/kg

QC Batch ID: 9149200

Analyte	Spike Amount	Sample Result	MSD Result	% Rec	RPD	Q	QC Limits % Rec	QC Limits RPD	Prep Date	Analysis Date	Dilution
Aroclor 1016	33.2	2.8	31.3	94	6.0		71 - 118	36	05/29/09	06/02/09 01:36	0.99
Aroclor 1260	33.2	2.6	32.8	99	4.4		65 - 123	44	05/29/09	06/02/09 01:36	0.99

Surrogate	% Rec	Lower Limit	Upper Limit	Q
Decachlorobiphenyl	91	68	125	
Tetrachloro-m-xylene	87	67	129	

Date: 27 July 2009
To: Washington Closure Hanford Inc. (technical representative)
From: ELR Consulting
Project: 100-D/DR Burial Grounds & Remaining Sites – Soil Full Protocol - Waste Site 116-DR-8
Subject: Wet Chemistry - Data Package No. J00499-TAL

INTRODUCTION

This memo presents the results of data validation on Data Package No. J00499 prepared by TestAmerica Laboratory Inc. (TAL). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample Date	Media	Validation	Analyte
J18WN5	5/20/09	Soil	C	See note 1
J18WN6	5/20/09	Soil	C	See note 1
J18WN7	5/20/09	Soil	C	See note 1
J18WN8	5/20/09	Soil	C	See note 1
J18WN9	5/20/09	Soil	C	See note 1
J18WP0	5/20/09	Soil	C	See note 1
J18WP1	5/20/09	Soil	C	See note 1
J18WP2	5/20/09	Soil	C	See note 1
J18WP3	5/20/09	Soil	C	See note 1
J18WP4	5/20/09	Soil	C	See note 1
J18WP5	5/20/09	Soil	C	See note 1
J18WP6	5/20/09	Soil	C	See note 1
J18WP7	5/20/09	Soil	C	See note 1

1 – Chromium VI by 7196A.

Data validation was conducted in accordance with the Washington Closure Hanford (WCH) validation statement of work and the 100 Area Remedial Action Sampling and Analysis Plan (DOE/RL-96-22, Rev. 4, February 2005). Appendices 1 through 6 provide the following information as indicated below:

Appendix 1. Glossary of Data Reporting Qualifiers
Appendix 2. Summary of Data Qualification
Appendix 3. Annotated Laboratory Reports
Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
Appendix 5. Data Validation Supporting Documentation
Appendix 6. Additional Documentation Requested by Client

DATA QUALITY PARAMETERS

Holding Times

Analytical holding times for metals are assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as

follows: Soil samples must be analyzed within 30 days for chromium VI

If holding times are exceeded, but not by greater than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detectable sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

All holding times were acceptable.

- **Method Blanks**

Method Blanks

Method blank analyses are performed to determine the extent of laboratory contamination introduced through sampling, sample preparation and analysis. At least one acceptable method blank analysis must be conducted for every 20 samples. No contaminants should be present in the method blank. All blank results must fall below the contract required detection limit (CRQL) to be acceptable.

All method blank results were acceptable.

Field (Equipment) Blank

No field blanks were submitted for analysis.

- **Accuracy**

Matrix Spike and Laboratory Control Sample

Matrix spike (MS) and laboratory control sample (LCS) analyses are used to assess the analytical accuracy of the reported data. The matrix spike is used to assess the effect of the matrix on the ability to accurately quantify sample concentrations. Recoveries must fall within the range of 70% to 130%. Samples with a recovery of less than 30% and a sample result below the IDL are rejected and flagged "UR". Samples with a recovery of 30% to 69% and a sample result less than the IDL are qualified "UJ". Samples with a recovery of greater than 130% or less than 70% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a recovery greater than 130% and a sample result less than the IDL, no qualification is required.

All accuracy results were acceptable.

- **Precision**

Laboratory Duplicate Samples

Analytical precision is expressed by the relative percent differences (RPD) between the recoveries of matrix spike duplicate (MSD) analyses performed on a sample in the analytical batch. Precision may alternatively be assessed using unspiked duplicate analyses performed on a sample in the analytical batch. If both sample and replicate activities (concentrations) are greater than five times the CRDL and the RPD is less than 30%, no qualification is required. If either activity (concentration) is less than five times the CRDL, the RPD control limit is less than or equal to two times the CRDL. If the RPD is outside the applicable control limit, associated results are qualified as estimated detects or estimated non-detects.

All laboratory duplicate results were acceptable.

Field Duplicate

One set of field duplicates (J18WP0/J18WP7) was submitted for analysis. Field duplicates are compared using the same criteria as for laboratory duplicates. All field duplicate results were acceptable.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the required quantitation limits (RQLs) to ensure that laboratory detection levels meet the required criteria. All analytes met the RQL.

- **Completeness**

Data package J00499 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

None found.

REFERENCES

Washington Closure Hanford Contract #S00W307A00 (March 2008), *Data Validation Services*.

DOE/RL-96-22, Rev. 4, *100 Area Remedial Action Sampling and Analysis Plan*, U.S. Department of Energy, February 2005.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validators in compliance with WCH validation SOW are as follows:

U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated concentration is an estimate, but the data are usable for decision-making purposes.

BJ - Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

Appendix 2

Summary of Data Qualification

WET CHEMISTRY DATA QUALIFICATION SUMMARY*

SDG: J00499	REVIEWER: ELR	Project: 116-DR-8	PAGE 1 OF 1
COMMENTS: No qualifiers assigned			

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Annotated Laboratory Reports

Sample Results Summary

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Date: 16-Jun-09

Report No. : 41741

SDG No: J00499

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
9147328	906.0_H3_LSC								
J18WP1									
	LDJE61AG	H-3	1.83E-02 +- 1.35E-02	U	pCi/g	100%	2.92E-02	4.00E+02	
J18WP2									
	LDJE91AG	H-3	8.81E-03 +- 6.67E-03	U	pCi/g	100%	1.45E-02	4.00E+02	
J18WP3									
	LDJFA1AG	H-3	8.59E-03 +- 6.28E-03	U	pCi/g	100%	1.37E-02	4.00E+02	
J18WP4									
	LDJED1AG	H-3	1.13E-02 +- 6.55E-03		pCi/g	100%	1.40E-02	4.00E+02	
J18WP5									
	LDJEM1AG	H-3	1.45E-02 +- 7.06E-03	U	pCi/g	100%	1.49E-02	4.00E+02	
J18WP6									
	LDJEN1AG	H-3	9.92E-03 +- 6.02E-03	U	pCi/g	100%	1.29E-02	4.00E+02	
J18WP7									
	LDJEP1AG	H-3	5.48E-03 +- 6.98E-03	U	pCi/g	100%	1.55E-02	4.00E+02	
9147510	7196_CR6								
J18WN5									
	LDJEQ1AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
J18WN6									
	LDJET1AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
J18WN7									
	LDJEV1AA	HEXCHROME	1.53E-01 +- 0.00E+00	U	mg/kg	N/A	1.53E-01	1.55E-01	
J18WN8									
	LDJEX1AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
J18WN9									
	LDJE11AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
J18WP0									
	LDJE51AA	HEXCHROME	1.52E-01 +- 0.00E+00	U	mg/kg	N/A	1.52E-01	1.55E-01	
J18WP1									
	LDJE61AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
J18WP2									
	LDJE91AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
J18WP3									
	LDJFA1AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
J18WP4									
	LDJED1AA	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	
	LDJED1AE	HEXCHROME	1.54E-01 +- 0.00E+00	U	mg/kg	N/A	1.54E-01	1.55E-01	0.0
J18WP5									
	LDJEM1AA	HEXCHROME	1.92E-01 +- 0.00E+00		mg/kg	N/A	1.54E-01	1.55E-01	
J18WP6									

SXS 6/16/09

TestAmerica

rptSTLRchSaSummary2 V5.2.3 A2002

RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

7/23/09

Sample Results Summary

Date: 16-Jun-09

TestAmerica TARL

Ordered by Method, Batch No., Client Sample ID.

Report No. : 41741

SDG No: J00499

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDC or MDA	CRDL	RPD
9147510	7196_CR6								
J18WP6									
	LDJEN1AA	HEXCHROME	1.51E-01 +- 0.00E+00		mg/kg	N/A	1.51E-01	1.55E-01	
J18WP7									
	LDJEP1AA	HEXCHROME	1.52E-01 +- 0.00E+00	U	mg/kg	N/A	1.52E-01	1.55E-01	

No. of Results: 224

7/23/09

TestAmerica

rptSTLRchSaSummary2 V5.2.3 A2002

RPD - Relative Percent Difference.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

Washington Hanford Closure
2620 Fermi Avenue
Richland, WA 99354

June 16, 2009

Attention: Joan Kessner

SAF Number	:	RC-075
Date SDG Closed	:	May 21, 2009
Number of Samples	:	Thirteen (13)
Sample Type	:	Soil
SDG Number	:	J00499
Data Deliverable	:	21–Day / Summary

CASE NARRATIVE

I. Introduction

On May 21, 2009 thirteen soil samples were received at TestAmerica for radiochemical and chemical analyses. Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the Washington Closure Hanford (WCH) specific IDs:

WCH ID#	TARL ID#	MATRIX	DATE OF RECEIPT
J18WN5	LDJEQ	SOIL	5/21/09
J18WN6	LDJET	SOIL	5/21/09
J18WN7	LDJEV	SOIL	5/21/09
J18WN8	LDJEX	SOIL	5/21/09
J18WN9	LDJE1	SOIL	5/21/09
J18WP0	LDJE5	SOIL	5/21/09
J18WP1	LDJE6	SOIL	5/21/09
J18WP2	LDJE9	SOIL	5/21/09
J18WP3	LDJFA	SOIL	5/21/09
J18WP4	LDJED	SOIL	5/21/09
J18WP5	LDJEM	SOIL	5/21/09
J18WP6	LDJEN	SOIL	5/21/09
J18WP7	LDJEP	SOIL	5/21/09

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.

The requested analyses were:

Alpha Spectroscopy
Plutonium-238, -239/240 by method RL-ALP-002 (RICH-RC-5010)*
Uranium 234, 235 and 238 by method RL-ALP-015 (RICH-RC-5039)*
Gas Proportional Counting
Total Strontium by method RL-GPC-003 (RICH-RC-5006)*
Gamma Spectroscopy
Gamma Spec by method RL-GAM-001 (RICH-RC-5017)*
Liquid Scintillation Counting
Tritium by method RL-LSC-005 (RICH-RC-5007)*
Carbon-14 by method RL-LSC-008 (RICH-RC-5022)*
Nickel-63 by method RL-LCS-017 (RICH-RC-5069)*
Chemical Analysis
Hexavalent Chromium by EPA method 7196A

*SOP ID's changed effective 7-01-2008. Attached is a cross reference until SOP ID's are changed in all systems.

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

Alpha Spectroscopy
Plutonium-238, -239/240 by method RL-ALP-002 (RICH-RC-5010):
The LCS, batch blank, sample and sample duplicate (J18WP4) results are within contractual requirements.

Uranium 234, 235 and 238 by method RL-ALP-015 (RICH-RC-5039):
The LCS, batch blank, sample and sample duplicate (J18WP5) results are within contractual requirements.

Gas Proportional Counting

Total Strontium by method RL-GPC-003 (RICH-RC-5006):

The LCS, batch blank, samples and sample duplicate (J18WP7) results are within contractual requirements.

Gamma Spectroscopy

Gamma Spec by method RL-GAM-001 (RICH-RC-5017):

There was insufficient volume for a duplicate. Sample J18WR3 was recounted on a different detector for the duplicate. The Am-241 CRDL was not met for samples J18WP2, J18WP6, J18WP7, J18WN7 and J18WN8. The data is reported based on the other acceptable MDAs. The LCS recovery was slightly elevated however, the difference between the found and expected values is less than twice the total uncertainty and therefore the data is accepted. Except as noted, the LCS, batch blank, samples and sample duplicate (B1V9W5) results are within contractual requirements.

Liquid Scintillation Counting

Tritium by method RL-LSC-005 (RICH-RC-5007):

The LCS, batch blank, samples and sample duplicate (J18WN7) results are within contractual requirements.

Carbon-14 by method RL-LSC-008 (RICH-RC-5022):

The LCS, batch blank, samples and sample duplicate (J18WN6) results are within contractual requirements.

Nickel-63 by method RL-LCS-017 (RICH-RC-5069):

The LCS, batch blank, sample and sample duplicate (J18WN5) results are within contractual requirements.

Chemical Analysis

Hexavalent Chromium by EPA method 7196A

The LCS, batch blank, samples, sample duplicate (J18WP3) and sample matrix spike (J18WP3) 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

Sandra Seger
Project Manager

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 1 of 3

Collector: J Sellers	Company Contact: D.W.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH
Price Code: 8L	Data Turnaround: 21 days		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 116-DR-8, Verification I, excavation		SAF No.: RC-075
Ice Chest No.	Field Logbook No.: EL-1607-6	COA: R116R8N6W0	Method of Shipment
Shipped To: EBERLINE SERVICES/LIONVILLE (Due 5-21-09) TA	Offsite Property No.		Bill of Lading/Air Bill No.: See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS
potentially radioactive

Special Handling and/or Storage

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL
SAMPLE ANALYSIS	See Item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See Item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium

Sample No.	Matrix *	Sample Date	Sample Time										
J18WN4	SOIL	5/20/09	0737	✓			✓						EB
J18WN5 LDJ2Q	SOIL	↓	0758	✓	✓	✓	✓	✓					A1
J18WN6 LDJ2T	SOIL	↓	0901	✓	✓	✓	✓	✓					A2
J18WN7 LDJ2V	SOIL	↓	0932	✓	✓	✓	✓	✓					A3
J18WN8 LDJ2X	SOIL	↓	0951	✓	✓	✓	✓	✓					A4

81 000016

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
J. Sellers / J. Sellers	5-20-09 1006	DWShea / DWShea	5/20/09 1006
DWShea / DWShea	5/20/09 1641	Fridge 1B	5/20/09 1641
Fridge 1B / J.E. Bennett	0830 5-21-09	J.E. Bennett	0830 5-21-09
J.E. Bennett	1000 5-21-09	DAVID HARBINSON	1000 5-21-09
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

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] DWShea 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silicon-108 metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499
J9Q210355 SES 5/27/09
Due Lab 10/09

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W=Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
W=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 2 of 2

Collector: J Sellers	Company Contact: D.W.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 116-DR-8, Verification I. excavation		SAF No.: RC-075
Ice Chest No.	Field Logbook No.: EL-1607-6	COA: R116R8N6W0	Method of Shipment
Shipped To: EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No.: See OSPC

Price Code: 8L

Data Turnaround: 21 days

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None
Type of Container	G/P	G/P	aG	aG	G	G/P	G/P	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	See Item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See Item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63, Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium	
J18WN9 LDJE1	SOIL	5/20/09	1025	✓	✓	✓	✓	✓						A5
J18WP0 LDJE5	SOIL		1249	✓	✓	✓	✓	✓						A6
J18WP1 LDJ6	SOIL		1331	✓	✓	✓	✓	✓						A7
J18WP2 LDJE9	SOIL		1345	✓	✓	✓	✓	✓						A8
J18WP3 LDJFA	SOIL		1325	✓	✓	✓	✓	✓						A9

CHAIN OF POSSESSION — Sign/Print Names: DWShea 5/20/09

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
J.Sellers	5-20-09 1440	DWSHEA	5/20/09 1440
DWShea	5/20/09 1641	Fridge 1B	5/20/09 1641
Fridge 1B/J.E. Bernal	5-21-09 0830	J.E. Bernal	5-21-09 0830
J.E. Bernal	5-21-09 1000	DAVID HARB	5-21-09 1000

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~, Chromium, Cobalt, Copper, ~~Iron~~, Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~, Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) [Mercury] 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108 metastable, Sodium-22, Zirconium-95~~] DWShea 5/12/09

J00499 J92210355 Due 6/10/09 SKS 5/27/09

Matrix *: S=Soil, SE=Sediment, SO=Solid, SL=Sludge, W=Water, O=Oil, A=Air, DS=Drum Solids, DL=Drum Liquids, T=Tissue, WI=Wipe, L=Liquid, V=Vegetation, X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

83' 000017

TESTAMERICA

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-075-074	Page 3 of 3

Collector: J Sellers	Company Contact: D.W.Shea	Telephone No.: 521-6014	Project Coordinator: KESSNER, JH
Price Code: 8L	Data Turnaround: 21 days		
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Full Prot	Sampling Location: 116-DR-8, Verification I, excavation		SAF No.: RC-075
Ice Chest No.	Field Logbook No.: EL-1607-6	COA: R116R8N6W0	Method of Shipment
Shipped To: EBERLINE SERVICES / LIONVILLE TA	Offsite Property No.		Bill of Lading/Air Bill No.: See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

potentially radioactive

Special Handling and/or Storage

SAMPLE ANALYSIS												
Preservation	None	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None	None	None	None
Type of Container	G/P	G/P	sG	sG	G	G/P	G/P	G/P	G/P	G/P
No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Volume	250mL	60mL	60mL	120mL	120mL	500mL	60mL	60mL	60mL	60mL
	See item (1) in Special Instructions	Chromium Hex - 7196	PCBs - 8082	Semi-VOA - 8270A (TCL)	VOA - 8260A (TCL)	See item (2) in Special Instructions	Carbon-14; Tritium - H3	Nickel-63; Strontium-89,90 -- Total Sr	Isotopic Plutonium	Isotopic Uranium

Sample No.	Matrix *	Sample Date	Sample Time											
J18WP4 LDJ2D	SOIL	5/20/09	1345	✓	✓	✓	✓	✓					1	A10
J18WP5 LDJ2M	SOIL		1428	✓	✓	✓	✓	✓						A11
J18WP6 LDJ2N	SOIL		1039	✓	✓	✓	✓	✓						A12
J18WP7 LDJ2P	SOIL		1249	✓	✓	✓	✓	✓						D

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: J. Sellers	Date/Time: 5-20-09 1440	Received By/Stored In: DWSHEA DWSHEA	Date/Time: 5/20/09 1440
Relinquished By/Removed From: DWSHEA DWSHEA	Date/Time: 5/20/09 1641	Received By/Stored In: Fridge 1B	Date/Time: 5/20/09 1641
Relinquished By/Removed From: Fridge 1B	Date/Time: 0830 5-21-09	Received By/Stored In: J.E. Bernhard	Date/Time: 0830 5-21-09
Relinquished By/Removed From: J.E. Bernhard	Date/Time: 1015 5-21-09	Received By/Stored In: David HARDIN	Date/Time: 1015 5-21-09
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

(1) ICP Metals - 6010 (Client List) [~~Aluminum~~, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, ~~Calcium~~ Chromium, Cobalt, Copper, ~~Iron~~ Lead, Lithium, ~~Magnesium~~, Manganese, Molybdenum, Nickel, ~~Potassium~~ Selenium, ~~Silicon~~, Silver, Sodium, Vanadium, Zinc]; Mercury - 7471 - (CV) (Mercury) DWSHEA 5/12/09

(2) Gamma Spec - Add-on [Americium-241, Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, ~~Silver-108m metastable, Sodium-22, Zirconium-95~~] DWSHEA 5/12/09

J00499
J9Z210355
Due 6/10/09
11 SKS 5/27/09

Matrix *
S=Soil
SE=Sediment
SO=Solid
SL=Sludge
W=Water
O=Oil
A=Air
DS=Drum Solids
DL=Drum Liquids
T=Tissue
WI=Wipe
L=Liquid
V=Vegetation
X=Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

85 - 1 - 1

000018

Appendix 5

Data Validation Supporting Documentation

GENERAL CHEMISTRY ANALYSIS DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT:	116-DR-8		DATA PACKAGE:	J00499	
VALIDATOR:	ELR	LAB: TAL		DATE: 7/20/09	
			SDG: J00499		

ANALYSES PERFORMED					
Anions/IC	TOC	TOX	TPH-418.1	Oil and Grease	Alkalinity
Ammonia	BOD/COD	Chloride	Chromium-VI	pH	NO_3/NO_2
Sulfate	TDS	TKN	Phosphate		

SAMPLES/MATRIX				
J18WN5	J18WN6	J18WN7	J18WN8	J18WN9
J18WP0	J18WP1	J18WP2	J18WP3	J18WP4
J18WP5	J18WP6	J18WP7		
				Soil

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? ..... Yes No N/A

Comments:

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations performed on all instruments? ..... Yes No N/A

Initial calibrations acceptable? ..... Yes No N/A

ICV and CCV checks performed on all instruments? ..... Yes No N/A

ICV and CCV checks acceptable? ..... Yes No N/A

Standards traceable? ..... Yes No N/A

Standards expired? ..... Yes No N/A

Calculation check acceptable? ..... Yes No N/A

Comments:

GENERAL CHEMISTRY ANALYSIS DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

ICB and CCB checks performed for all applicable analyses? (Levels D, E) ..... Yes No N/A

ICB and CCB results acceptable? (Levels D, E) ..... Yes No N/A

Laboratory blanks analyzed? ..... Yes No N/A

Laboratory blank results acceptable? ..... Yes No N/A

Field blanks analyzed? (Levels C, D, E) ..... Yes No N/A

Field blank results acceptable? (Levels C, D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: no FB

4. ACCURACY (Levels C, D, and E)

Spike samples analyzed? ..... Yes No N/A

Spike recoveries acceptable? ..... Yes No N/A

Sike standards NIST traceable? (Levels D, E) ..... Yes No N/A

Spike standards expired? (Levels D, E) ..... Yes No N/A

LCS/BSS samples analyzed? ..... Yes No N/A

LCS/BSS results acceptable? ..... Yes No N/A

Standards traceable? (Levels D, E) ..... Yes No N/A

Standards expired? (Levels D, E) ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Performance audit sample(s) analyzed? ..... Yes No N/A

Performance audit sample results acceptable? ..... Yes No N/A

Comments:

GENERAL CHEMISTRY ANALYSIS DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

Duplicate RPD values acceptable? ..... Yes No N/A

Duplicate results acceptable? ..... Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) ..... Yes No N/A

MS/MSD standards expired? (Levels D, E) ..... Yes No N/A

Field duplicate RPD values acceptable? ..... Yes No N/A

Field split RPD values acceptable? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments: P2 / P7 – FD

6. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A

Sample holding times acceptable? ..... Yes No N/A

Comments:

GENERAL CHEMISTRY ANALYSIS DATA VALIDATION CHECKLIST

7. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

Results reported for all requested analyses? ..... Yes No N/A

Results supported in the raw data? (Levels D, E) ..... Yes No N/A

Samples properly prepared? (Levels D, E) ..... Yes No N/A

Detection limits meet RDL? ..... Yes No N/A

Transcription/calculation errors? (Levels D, E) ..... Yes No N/A

Comments:

Appendix 6

Additional Documentation Requested by Client

TESTAMERICA

FORM II

BLANK RESULTS

Date: 16-Jun-09

Lab Name: TestAmerica

Matrix: SOIL

SDG: J00499

Report No.: 41741

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA ,	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 9147510	7196_CR6			Work Order:	LDTV41AA		Report DB ID:	LDTV41AA				
HEXCHROME	1.55E-01	U		0.0E+00	1.55E-01	mg/kg	N/A	1.	5/27/09		2.5	
						1.55E-01		N/A			G	
Batch: 9147327	C14_CHEM_LSC			Work Order:	LDR081AA		Report DB ID:	LDR081AB				
C-14	-2.06E-02	U	1.3E-01	1.5E-01	3.27E-01	pCi/g	100%	-0.06	6/12/09 11:04 p		5.0	LSC3
					1.57E-01	5.00E+01		-0.27			G	
Batch: 9147301	PUISO_PLATE_AEA			Work Order:	LDRVH1AA		Report DB ID:	LDRVH1AB				
PU-238	0.00E+00	U	0.0E+00	1.9E-02	4.52E-02	pCi/g	79%	0.	6/12/09 02:08 p		1.0	ALP128
					9.82E-03	1.00E+00		0.			G	
PU239/40	-3.78E-03	U	2.0E-02	2.0E-02	5.33E-02	pCi/g	79%	-0.07	6/12/09 02:08 p		1.0	ALP128
					1.39E-02	1.00E+00		-0.38			G	
Batch: 9147316	UISO_IE_PLATE_AEA			Work Order:	LDRXT1AA		Report DB ID:	LDRXT1AB				
U-234	-2.41E-03	U	1.3E-02	1.3E-02	3.41E-02	pCi/g	94%	-0.07	6/11/09 04:32 p		1.0	ALP9
					8.87E-03	1.00E+00		-0.38			G	
U-235	0.00E+00	U	0.0E+00	1.2E-02	2.89E-02	pCi/g	94%	0.	6/11/09 04:32 p		1.0	ALP9
					6.27E-03	1.00E+00		0.			G	
U-238	2.17E-02	U	2.4E-02	2.5E-02	3.41E-02	pCi/g	94%	0.64	6/11/09 04:32 p		1.0	ALP9
					8.87E-03	1.00E+00		(1.8)			G	
								Ratio U-234/238 = -0.1				
Batch: 9147325	NI63_LSC			Work Order:	LDR041AA		Report DB ID:	LDR041AB				
NI-63	-2.73E-00	U	2.1E+00	3.2E+00	5.31E+00	pCi/g	96%	-0.51	6/12/09 09:55 p		0.97	LSC4
					2.58E+00	3.00E+01		-(1.7)			G	
Batch: 9147328	906.0_H3_LSC			Work Order:	LDR1K1AA		Report DB ID:	LDR1K1AB				

TestAmerica
rptSTLRchBlank
V5.2.3 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

7/23/09

TESTAMERICA

FORM II

LCS RESULTS

Date: 16-Jun-09

Lab Name: TestAmerica

Matrix: SOIL

SDG: J00499

Report No.: 41741

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 9147510	7196_CR6			Work Order:	LDTV41AC		Report DB ID:	LDTV41AC		-			
HEXCHROME	1.84E+01			0.0E+00	1.55E-01	mg/kg	N/A	2.00E+01		92%	5/27/09	2.5	
							Rec Limits:	80	120	-0.1		G	
Batch: 9147327	C14_CHEM_LSC			Work Order:	LDR081AC		Report DB ID:	LDR081CS					
C-14	7.02E+00		3.0E-01	4.2E-01	3.27E-01	pCi/g	100%	7.44E+00	1.2E-01	94%	6/12/09 11:46 p	5.0	LSC3
							Rec Limits:	70	130	-0.1		G	
Batch: 9147301	PUISO_PLATE_AEA			Work Order:	LDRVH1AC		Report DB ID:	LDRVH1CS					
PU239/40	6.32E+00		4.2E-01	9.4E-01	3.32E-02	pCi/g	101%	6.85E+00	2.1E-01	92%	6/12/09 02:09 p	1.0	ALP130
							Rec Limits:	70	130	-0.1		G	
Batch: 9147316	UISO_IE_PLATE_AEA			Work Order:	LDRXT1AC		Report DB ID:	LDRXT1CS					
U-234	3.21E+00		2.8E-01	6.1E-01	2.91E-02	pCi/g	98%	3.15E+00	1.9E-02	102%	6/11/09 04:33 p	1.02	ALP10
							Rec Limits:	70	130	0.0		G	
U-238	3.36E+00		2.9E-01	6.3E-01	2.91E-02	pCi/g	98%	3.30E+00	1.9E-02	102%	6/11/09 04:33 p	1.02	ALP10
							Rec Limits:	70	130	0.0		G	
Batch: 9147325	NI63_LSC			Work Order:	LDR041AC		Report DB ID:	LDR041CS					
NI-63	5.22E+02		8.5E+00	4.9E+01	5.84E+00	pCi/g	94%	6.10E+02	1.0E+01	86%	6/12/09 11:38 p	0.25	LSC4
							Rec Limits:	70	130	-0.1		G	
Batch: 9147328	906.0_H3_LSC			Work Order:	LDR1K1AC		Report DB ID:	LDR1K1CS					
H-3	2.32E+00		2.0E-01	2.1E-01	2.94E-01	pCi/g	100%	2.71E+00	8.1E-02	85%	6/10/09 07:57 p	5.0	LSC8
							Rec Limits:	70	130	-0.1		G	
Batch: 9147317	GAMMA_GS			Work Order:	LDRX21AC		Report DB ID:	LDRX21CS					
CS-137	3.25E-01		8.2E-02	8.2E-02	6.89E-02	pCi/g		2.47E-01	1.1E-02	131%	5/30/09 11:14 a	200.01	GER5$1
							Rec Limits:	70	130	0.3		g	

TestAmerica Bias - (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchLcs
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TESTAMERICA

FORM II

MATRIX SPIKE RESULTS

Date: 16-Jun-09

Lab Name: TestAmerica SDG: J00499

Lot-Sample No.: J9E210355-1, J18WP4 Report No. : 41741 Matrix: SOIL

Parameter	SpikeResult, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rec-overy	Expected, Uncert	Analysis, Prep Date	Aliquot Size	Analy Method, Primary Detector
Batch: 9147510	Work Order: LDJED1AC			Report DB ID: LDJED1AC			Orig Sa DB ID: 9LDJED10					
HEXCHROME	7.97E+00			0.0E+00	1.53E-01	mg/kg	N/A	79.84%	9.99E+00	5/27/09	2.54	7196_CR6
	1.54E-01										G	

Number of Results: 1

Comments:

TestAmerica RER - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

rptSTLRchMs Bias - (Result/Expected)-1 as defined by ANSI N13.30.

V5.2.3 A2002

TESTAMERICA

FORM II

Date: 16-Jun-09

DUPLICATE RESULTS

Lab Name:	TestAmerica	SDG:	J00499	Collection Date:	5/20/2009 2:10:00 PM
Lot-Sample No.:	J9E210355-1	Report No. :	41741	Received Date:	5/21/2009 10:15:00 AM
Client Sample ID:	J18WP4	COC No. :	RC-075-074	Matrix:	SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 9147510	NI63_LSC			Work Order: LDJED1AE		Report DB ID: LDJED1AE			Orig Sa DB ID: 9LDJED10			
HEXCHROME	1.54E-01	U		0.0E+00	1.54E-01	mg/kg	N/A	(1.)	5/27/09		2.51	
	1.54E-01	U	RPD 0.0					N/A			G	

No. of Results: 1 Comments:

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TestAmerica
rptSTLRchDupV5.2.3 A2002

RPD - Relative Percent Difference.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.