CHPRC - REVIEW COMMENT RECORD (RCR)

1. Date	2. Review No
07/26/2011	
3. Project No.	Page 1 of 2

5. Document Number(s)/Title(s)	6. Program/Project/Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
VSR11-049		Scot Fitzgerald	Analytical Support Group	2753/373-7495

17. Comment Submittal Approval	10. Agreement With Indicated Comment Disposition(s)	11. CLOSED
Date / Organization Manager (optional) (print and sign)	SLF 8/3/11 Scot Fitzgerald Reviewer/Point of Contact (print and sign) ~~8/~~ 7/26/2011 ~~07/26/2011~~ Date Author/Originator (print and sign)	8/3/11 Date Reviewer/Point of Contact (print and sign) Author/Originator (print and sign)

12. Item	13a. Comments	13b. Basis	13c. Recommendation	14. Reviewer Concurrence Required (Y or N)	15. Disposition (provide justification if NOT accepted)	16. Status
1	Page 14 Volatile Organics Data Qualification summary lists cis-1,2-Dichloroethene as having UJ for sample B29H71 whereas the annotated data (page 60) does ~~on~~ not show a UJ flag for cis-1,2-Dichloroethene but does list a UJ for Propionitrile which is not discussed in the Volatile Organics Data Qualification summary. SLF 8/3/11		Reconcile the Volatile Organics Data Qualification summary with the annotated report.	Yes	The UJ flag for cis-1,2-dichloroethene was missing on the annotated Form I and has been added. Propionitrile is discussed in the Data Qualification Summary (flagged UJ due to poor MS/MSD precision).	closed
2	Phenol, 4-Chloroaniline and 4_Nitrophenol UR flags missing from annotated results for samples B29HH5, B29H61, B29HC5, B29HB5, B29H48 and B29H32		Add appropriate UR flags to annotated data.	Yes	UR flags added	closed
3	Page 800 states samples were analyzed within the prescribed hold time however, the attached SIR 11-315 states that samples B29N08, B29N17, B29N18 and B29N19 missed the 48 hour hold time for Nitrate nitrite and phosphate.		Correct data quality objectives statement on page 800, data validation checklist page 870 and flag data as appropriate.	Yes	Analysis times are not provided in WSCF data packages and therefore not typically used for HT assessment. Since the samples were collected on 1-07 and analyzed on 1-09 the validator did not originally qualify results. Results are now qualified.	closed

REVIEW COMMENT RECORD (RCR)	1. Date 07/26/2011	2. Review No.
	3. Project No.	Page 1 of 1

5. Document Number(s)/Title(s)	6. Program/Project/Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
VSR11-049, Data Validation Report for CHPRC - Project CERC11, Chemical and Radiochemical Validation - Level C	S&GRP Sample Data Groups (SDGs); SL1036, W06103, WSCF111069, WSCF111070, WSCF111206, and WSCF111207	JA Edwards	Environmental Quality Assurance (EQA)	2420 Stevens Rm. 345 376-4324

17. Comment Submittal Approval	10. Agreement With Indicated Comment Disposition(s)	11. CLOSED
Date / Organization Manager (optional) (print and sign)	JA Edwards / Reviewer/Point of Contact (print and sign); 08/03/2011 Date; JA Edwards Author/Originator (print and sign)	JA Edwards / Reviewer/Point of Contact (print and sign); 08/03/2011 Date; JA Edwards Author/Originator (print and sign)

12. Item	13a. Comments	13b. Basis	13c. Recommendation	14. Reviewer Concurrence Required (Y or N)	15. Disposition (provide justification if **NOT** accepted)	16. Status
	(Page 139 of 994) Appendix A - Chemical Data Validation Checklist DATE: 7-??-2011	Date missing	Correct date as indicated on the Appendix A - Chemical Data Validation Checklist	Y	Date corrected	CLOSED
	(Page 197 of 994) Surrogates All surrogate recoveries were acceptable with the following exceptions. Missing HNF-20433 notation	Exception not added for use of HNF-20433 as noted in the VOC section. However, HNF-20433 is listed in References	ADD to Surrogates; "It should be noted that per client request DV procedure HNF-20433, Rev. 0 was used for target analyte association to the surrogates."	Y	Statement added	CLOSED

Documents:

HNF-20433, Rev.0, *Data Validation Procedure for Chemical Analyses*, June 2004
DOE/RL-2009-42, Rev. 0, *Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study*, December 2010
GRP-GD-002, Rev. 0, Change 0, *Data Validation for Radiochemical Analyses*, August 2010
GRP-GD-003, Rev. 0, Change 0, *Data Validation for Chemical Analyses*, August 2010

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Data Validation Report for CH2M Hill Plateau Remediation Company

VSR11-049
Project CERC11

Chemical & Radiochemical Validation - Level C

Validation Performed By: Carl Schlosser **Date:** 7-14-2011

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Date: 14 July 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: CERC11
Subject: Volatile Organics - Sample Data Group (SDG) SL1036

INTRODUCTION

This memorandum presents the results of data validation for SDG SL1036 prepared by TestAmerica. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B29H90	1/09/2011	Water	C	8260B
B29HC0	1/07/2011	Water	C	8260B
B29H66	1/07/2011	Water	C	8260B
B29HK0	1/07/2011	Water	C	8260B
B29H72	1/07/2011	Water	C	8260B
B29H47	1/09/2011	Water	C	8260B
B29H56	1/07/2011	Water	C	8260B
B29HD5	1/07/2011	Water	C	8260B
B29HB0	1/07/2011	Water	C	8260B
B29HK1	1/07/2011	Water	C	8260B
B29H42	1/09/2011	Water	C	8260B
B29H85	1/09/2011	Water	C	8260B
B29HF0	1/07/2011	Water	C	8260B
B29H71	1/07/2011	Water	C	8260B
B29H95	1/09/2011	Water	C	8260B
B29HF5	1/09/2011	Water	C	8260B
B29HJ5	1/07/2011	Water	C	8260B
B29H37	1/09/2011	Water	C	8260B
B29HD0	1/07/2011	Water	C	8260B
B29HJ0	1/07/2011	Water	C	8260B
B29HH5	1/07/2011	Water	C	8260B
B29H61	1/09/2011	Water	C	8260B
B29HC5	1/09/2011	Water	C	8260B
B29HB5	1/07/2011	Water	C	8260B
B29H48	1/09/2011	Water	C	8260B
B29H32	1/10/2011	Water	C	8260B

Data validation was conducted in accordance with the CHPRC validation statement of work and the Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study, DOE/RL-2009-42, Rev. 0 (SAP). 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 OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements for volatile organics are analysis within 14 days of sample collection. Sample preservation requires chilling to 4 degrees Celsius and acid preservation with hydrochloric or sulfuric acid to pH <2.

The samples were analyzed within the prescribed holding time and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable with the following exceptions.

For batch 1018076, the cyclohexanone, 1,4-dioxane, acetone and methylene chloride laboratory blank results were > the method detection limits (MDLs) but < the reporting limits (RLs). The associated cyclohexanone, 1,4-dioxane and methylene chloride sample results were non-detects and should not be qualified for the blank infractions. The acetone results for samples B29HK1, B29H85, B29HF0, B29H71, B29H37, B29HD0 and B29H61 were detects < the RL and would be qualified as non-detects at the RL (2.0 ug/L) and flagged "U," but were further flagged "UJ" due to other QC infractions. The acetone results for the remaining associated samples were non-detects and should not be qualified for the blank infraction.

For batch 1021181, the methylene chloride laboratory blank result was > the MDL but < the RL. The methylene chloride result for sample B29H32 was a non-detect and should not be qualified for the blank infraction.

Trip Blanks

All trip blank results were acceptable with the following exception. Methylene chloride was detected in trip blank B29H72. According to the VSR sample summary report, sample B29H71 is associated with trip blank B29H72. The methylene chloride result for sample B29H71 was a non-detect and should not be qualified for the blank infraction.

Field Blanks

No field blanks were submitted for validation.

Equipment Blanks

No equipment blanks were submitted for validation.

- **Accuracy**

Accuracy is evaluated by reviewing surrogate results, matrix spike sample results, and laboratory control sample results. According to the SAP, the matrix spike and laboratory control sample accuracy limits are 80% to 120%. The limits for reported analytes not listed in the SAP are specified by the DV procedure. The surrogate accuracy limits used for data validation were the statistical ones established by the analytical laboratory.

Surrogates

All surrogate recoveries were acceptable with the following exceptions.

For sample B29HF0, the toluene-d8, dibromofluoromethane and 4-bromofluorobenzene recoveries were above the upper acceptance limits. The bromodichloromethane and chloroform sample results were detects and should be qualified as estimates and flagged "J." The acetone sample result was a detect and would be qualified as an estimate and flagged "J," but has been further qualified as a non-detect and flagged "UJ" due to other QC infractions. The remaining associated sample results were non-detects and should not be qualified for the surrogate recovery infractions.

For sample B29H71, the toluene-d8 and dibromofluoromethane recoveries were below the lower acceptance limits. The class of reported sample results associated with the surrogates should be qualified as estimates and flagged "UJ" for non-detects and "J" for detects. See the table in Appendix 2 for a listing of all affected sample results.

For sample B29H95, the toluene-d8, dibromofluoromethane and 4-bromofluorobenzene recoveries were above the upper acceptance limits. The bromodichloromethane, chloromethane, chloroform and tetrachloroethene sample results were detects and should be qualified as estimates and flagged "J." The remaining associated sample results were non-detects and should not be qualified for the surrogate recovery infractions.

For sample B29HF5, the toluene-d8 and 4-bromofluorobenzene recoveries were above the upper acceptance limits. The associated sample results were non-detects and should not be qualified for the surrogate recovery infractions.

For sample B29HJ0, the toluene-d8 recovery was above the upper acceptance limit. The associated sample results were non-detects and should not be qualified for the surrogate recovery infraction.

For sample B29H61, the toluene-d8, dibromofluoromethane, 1,2-dichloroethane-d4 and 4-bromofluorobenzene recoveries were below the lower acceptance limits. All sample results *except* acetone were non-detects and should be qualified as estimates and flagged "UJ." The acetone sample result was a detect and would be qualified as an estimate and flagged "J," but has been further qualified as a non-detect and flagged "UJ" due to other QC infractions. See the table in Appendix 2 for a listing of all affected sample results.

It should be noted that per client request DV procedure HNF-20433, Rev. 0 was used for target analyte association to the surrogates.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

For batches 1018076, 1021050 and 1021181, many MS/MSD recovery infractions occurred and are highlighted in the annotated QC summary forms in Appendix 5. Detected sample results with associated MS/MSD recoveries above or below the acceptance limits should be qualified as estimates and flagged "J." Non-detected sample results with associated MS/MSD recoveries below the lower acceptance limits should be qualified as estimates and flagged "UJ." See the table in Appendix 2 for a listing of all affected sample results.

Laboratory Control Samples (LCSs)

For batches 1018076, 1021050 and 1021181, several LCS recovery infractions occurred and are highlighted in the annotated QC summary forms in Appendix 5. Detected sample results with associated LCS recoveries above or below the acceptance limits should be qualified as estimates and flagged "J." Non-detected sample results with associated LCS recoveries below the lower acceptance limits should be qualified as estimates and flagged "UJ." See the table in Appendix 2 for a listing of all affected sample results.

- **Precision**

Precision is evaluated by reviewing MS/MSD results, field duplicate sample results, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limits are ±20%. The limits for reported analytes not listed in the SAP are specified by the DV procedure. When duplicate RPDs exceed the limits and have associated results <5X the reporting limits with differences <1X the reporting limits no precision infraction occurred.

MS/MSD Samples

For batches 1018076, 1021050 and 1021181, many MS/MSD RPD infractions occurred and are highlighted in the annotated QC summary forms in Appendix 5. Detected sample results with

associated RPD values above the acceptance limits should be qualified as estimates and flagged "J" for detects and "UJ" for non-detects. See the table in Appendix 2 for a listing of all affected sample results.

Field Duplicate Samples

All field duplicate results were acceptable.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs were below the CRDLs.

- **Completeness**

SDG SL1036 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

Multiple minor deficiencies leading to qualification of sample results as estimates occurred. See the table in Appendix 2 for a listing of all affected sample results.

REFERENCES

GRP-GD-003, Rev. 0, Change 0, *Data Validation for Chemical Analyses*, August 2010.

HNF-20433, Rev. 0, Data Validation Procedure for Chemical Analyses, June 2004.

DOE/RL-2009-42, Rev. 0, *Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study*, December 2010.

Appendix 1

Glossary of Data Reporting Qualifiers

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

- **U** — The constituent was analyzed for, but was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the RL. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J+** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J-** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **N** — The analysis indicates the presence of an analyte that has been tentatively identified.

- **NJ** — The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.

- **NJ+** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation.

- **NJ-** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

Volatile Organics Data Qualification Summary			
SDG: SL1036	Reviewer: AQA	Project: CERC11	
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
Cyclohexanone	UJ	B29H90, B29HC0, B29H66, B29HK0, B29H72, B29H47, B29H56, B29HD5, B29HB0, B29H42	Low MS/MSD recoveries
1-Butanol	UJ	B29H90, B29HC0, B29H66, B29HK0, B29H72, B29H47, B29H56, B29HD5, B29HB0, B29H42	Low MS recovery
Acetone	2.0UJ	B29HK1	Lab blank contamination, low LCS recovery, poor MS/MSD precision
Chloroform	J	B29HK1	High MS/MSD recoveries, poor MS/MSD precision
Tetrachloroethene	J	B29HK1	High MS/MSD recoveries
2-Hexanone	UJ	B29HK1	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29HK1	Poor MS/MSD precision
Acetone	2.0UJ	B29H85	Lab blank contamination, low LCS recovery, poor MS/MSD precision
Chloroform	J	B29H85	High MS/MSD recoveries, poor MS/MSD precision
2-Hexanone	UJ	B29H85	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29H85	Poor MS/MSD precision

Bromodichloromethane	J	B29HF0	High MS/MSD recoveries, high surrogate recovery
Acetone	2.0UJ	B29HF0	Lab blank contamination, low LCS recovery, poor MS/MSD precision
Chloroform	J	B29HF0	High MS/MSD recoveries, high surrogate recovery, poor MS/MSD precision
2-Hexanone	UJ	B29HF0	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29HF0	Poor MS/MSD precision
Acetone	2.0UJ	B29H71	Lab blank contamination, low LCS recovery, low surrogate recovery, poor MS/MSD precision
Chloroform	J	B29H71	High MS/MSD recoveries, low surrogate recovery, poor MS/MSD precision
2-Hexanone	UJ	B29H71	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29H71	Poor MS/MSD precision
Bromodichloromethane Bromoform Bromomethane Dibromochloromethane 1,2-Dibromo-3-chloropropane Chloroethane Chloromethane 1,2-Dibromoethane Dibromomethane Dichlorodifluoromethane 1,1-Dichloroethene	UJ	B29H71	Low surrogate recovery

1,2-Dichloroethene (total) 1,2-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene Trichlorofluoromethane Styrene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane Vinyl chloride Methylene chloride 1,1-Dichloroethane cis-1,2-Dichloroethene trans-1,2-Dichloroethene 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Benzene Trichloroethene 1,1,2-Trichloroethane Tetrachloroethene Xylenes (total) Toluene			
Bromodichloromethane Chloromethane Tetrachloroethene	J	B29H95	High MS/MSD recoveries, high surrogate recovery
Acetone	UJ	B29H95	Low LCS recovery, poor MS/MSD precision
Chloroform	J	B29H95	High MS/MSD recoveries, high surrogate recovery, poor MS/MSD precision
2-Hexanone	UJ	B29H95	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29H95	Poor MS/MSD precision
Bromodichloromethane Tetrachloroethene	J	B29HF5	High MS/MSD recoveries
Acetone	UJ	B29HF5	Low LCS recovery, poor MS/MSD precision

Chloroform	J	B29HF5	High MS/MSD recoveries, poor MS/MSD precision
2-Hexanone	UJ	B29HF5	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29HF5	Poor MS/MSD precision
Trichloroethene	J	B29HJ5	High MS/MSD recoveries
Acetone	UJ	B29HJ5	Low LCS recovery, poor MS/MSD precision
Chloroform	J	B29HJ5	High MS/MSD recoveries, poor MS/MSD precision
2-Hexanone	UJ	B29HJ5	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29HJ5	Poor MS/MSD precision
Acetone	2.0UJ	B29H37, B29HD0	Lab blank contamination, low LCS recovery, poor MS/MSD precision
Chloroform	J	B29H37, B29HD0	High MS/MSD recoveries, poor MS/MSD precision
2-Hexanone	UJ	B29H37, B29HD0	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29H37, B29HD0	Poor MS/MSD precision
Acetone	UJ	B29HJ0	Low LCS recovery, poor MS/MSD precision
Chloroform	J	B29HJ0	High MS/MSD recoveries, poor MS/MSD precision
Trichloroethene	J	B29HJ0	High MS/MSD recoveries
2-Hexanone	UJ	B29HJ0	Low LCS recovery

Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29HJ0	Poor MS/MSD precision
Chloromethane	J	B29HH5	High MS/MSD recoveries
Chloroform	J	B29HH5	High MS/MSD recoveries, poor MS/MSD precision
Acetone	UJ	B29HH5	Low LCS recovery, poor MS/MSD precision
2-Hexanone	UJ	B29HH5	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29HH5	Poor MS/MSD precision
Acetone	2.0UJ	B29H61	Lab blank contamination, low LCS recovery, low surrogate recovery, poor MS/MSD precision
2-Hexanone	UJ	B29H61	Low LCS recovery, low surrogate recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29H61	Low surrogate recovery, poor MS/MSD precision
Acrolein Bromodichloromethane Bromoform Bromomethane Chlorobenzene Chloroprene Dibromochloromethane 1,2-Dibromo-3-chloropropane Chloroethane Chloromethane Allyl chloride 1,2-Dibromoethane Dibromomethane trans-1,4-Dichloro-2-butene	UJ	B29H61	Low surrogate recovery

Dichlorodifluoromethane 1,1-Dichloroethene 1,2-Dichloroethene (total) 1,2-Dichloropropane cis-1,3-Dichloropropene trans-1,3-Dichloropropene Ethylbenzene Ethyl methacrylate Trichlorofluoromethane Iodomethane Isobutanol Methacrylonitrile Methyl methacrylate Styrene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,2,3-Trichloropropane Vinyl acetate Ethyl acetate Diethyl ether Vinyl chloride Methylene chloride Carbon disulfide 1,1-Dichloroethane 2-Butanone Chloroform cis-1,2-Dichloroethene trans-1,2-Dichloroethene 1,1,1-Trichloroethane Carbon tetrachloride 1,2-Dichloroethane Benzene Trichloroethene 4-Methyl-2-pentanone 1,1,2-Trichloroethane Tetrachloroethene Tetrahydrofuran Xylenes (total) 1,4-Dichlorobenzene Toluene			
Chloroform	J	B29HC5	High MS/MSD recoveries, poor MS/MSD precision
Acetone	UJ	B29HC5	Low LCS recovery, poor MS/MSD precision

2-Hexanone	UJ	B29HC5	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29HC5	Poor MS/MSD precision
Chloroform	J	B29HB5	High MS/MSD recoveries, poor MS/MSD precision
Tetrachloroethene	J	B29HB5	High MS/MSD recoveries
Acetone	UJ	B29HB5	Low LCS recovery, poor MS/MSD precision
2-Hexanone	UJ	B29HB5	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29HB5	Poor MS/MSD precision
Chloroform	J	B29H48	High MS/MSD recoveries, poor MS/MSD precision
Acetone	UJ	B29H48	Low LCS recovery, poor MS/MSD precision
2-Hexanone	UJ	B29H48	Low LCS recovery
Cyclohexanone Acetonitrile 1,4-Dioxane Propionitrile 1-Butanol	UJ	B29H48	Poor MS/MSD precision
cis-1,3-Dichloropropene trans-1,3-Dichloropropene Bromomethane Cyclohexanone	UJ	B29H32	Low MS/MSD recoveries

Comments: None

Appendix 3

Annotated Laboratory Reports

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H90

GC/MS Volatiles

Lot-Sample #...: F1A110510-001 **Work Order #...:** MC8C02AE **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	ND	10	ug/L	2.0
Acrolein	ND T	10	ug/L	2.8
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	2.0	ug/L	0.25
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroprene	ND	1.0	ug/L	0.097
Dibromochloromethane	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.41
Chloroethane	ND	2.0	ug/L	0.099
Chloromethane	ND	2.0	ug/L	0.077
Allyl chloride	ND	2.0	ug/L	0.11
1,2-Dibromoethane	ND	1.0	ug/L	0.13
Dibromomethane	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	ND	2.0	ug/L	0.084
1,1-Dichloroethene	ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.083
1,4-Dioxane	ND	80	ug/L	7.6
Ethylbenzene	ND	1.0	ug/L	0.086
Ethyl methacrylate	ND	1.0	ug/L	0.11
Trichlorofluoromethane	ND	1.0	ug/L	0.11
2-Hexanone	ND	5.0	ug/L	0.22
Iodomethane	ND	2.0	ug/L	0.092
Isobutanol	ND	80	ug/L	8.7
Methacrylonitrile	ND	5.0	ug/L	0.50
Methyl methacrylate	ND	1.0	ug/L	0.26
Styrene	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	ND	1.0	ug/L	0.15
Vinyl acetate	ND	2.0	ug/L	0.18
Cyclohexanone UJ	ND	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H90

GC/MS Volatiles

Lot-Sample #...: F1A110510-001 **Work Order #...:** MC8C02AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND	1.0	ug/L	0.26
Vinyl chloride		ND	2.0	ug/L	0.084
Acetone		ND	2.0	ug/L	0.34
Methylene chloride		ND	1.0	ug/L	0.11
Carbon disulfide		ND	1.0	ug/L	0.051
1,1-Dichloroethane		ND	1.0	ug/L	0.068
2-Butanone		ND	5.0	ug/L	0.52
Chloroform		**0.67 J**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND	1.0	ug/L	0.087
Propionitrile		ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND	1.0	ug/L	0.069
Carbon tetrachloride		ND	1.0	ug/L	0.12
1,2-Dichloroethane		ND	1.0	ug/L	0.10
Benzene		ND	1.0	ug/L	0.064
Trichloroethene		ND	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND	1.0	ug/L	0.15
Tetrachloroethene		ND	1.0	ug/L	0.18
Tetrahydrofuran		ND	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	106	(76 - 116)
Dibromofluoromethane	90	(78 - 116)
1,2-Dichloroethane-d4	94	(65 - 126)
4-Bromofluorobenzene	102	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29H90

GC/MS Volatiles

Lot-Sample #: F1A110510-001 **Work Order #:** MC8C02AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC0

GC/MS Volatiles

Lot-Sample #...: F1A110510-002 **Work Order #...:** MC8C52AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	ND	10	ug/L	2.0
Acrolein	ND T	10	ug/L	2.8
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	2.0	ug/L	0.25
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroprene	ND	1.0	ug/L	0.097
Dibromochloromethane	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.41
Chloroethane	ND	2.0	ug/L	0.099
Chloromethane	ND	2.0	ug/L	0.077
Allyl chloride	ND	2.0	ug/L	0.11
1,2-Dibromoethane	ND	1.0	ug/L	0.13
Dibromomethane	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	ND	2.0	ug/L	0.084
1,1-Dichloroethene	ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.083
1,4-Dioxane	ND	80	ug/L	7.6
Ethylbenzene	ND	1.0	ug/L	0.086
Ethyl methacrylate	ND	1.0	ug/L	0.11
Trichlorofluoromethane	ND	1.0	ug/L	0.11
2-Hexanone	ND	5.0	ug/L	0.22
Iodomethane	ND	2.0	ug/L	0.092
Isobutanol	ND	80	ug/L	8.7
Methacrylonitrile	ND	5.0	ug/L	0.50
Methyl methacrylate	ND	1.0	ug/L	0.26
Styrene	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	ND	1.0	ug/L	0.15
Vinyl acetate	ND	2.0	ug/L	0.18
Cyclohexanone UJ	ND	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC0

GC/MS Volatiles

Lot-Sample #...: F1A110510-002 **Work Order #...:** MC8C52AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND	1.0	ug/L	0.26
Vinyl chloride		ND	2.0	ug/L	0.084
Acetone		ND	2.0	ug/L	0.34
Methylene chloride		ND	1.0	ug/L	0.11
Carbon disulfide		ND	1.0	ug/L	0.051
1,1-Dichloroethane		ND	1.0	ug/L	0.068
2-Butanone		ND	5.0	ug/L	0.52
Chloroform		**0.31 J**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND	1.0	ug/L	0.087
Propionitrile		ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND	1.0	ug/L	0.069
Carbon tetrachloride		ND	1.0	ug/L	0.12
1,2-Dichloroethane		ND	1.0	ug/L	0.10
Benzene		ND	1.0	ug/L	0.064
Trichloroethene		ND	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND	1.0	ug/L	0.15
Tetrachloroethene		**0.24 J**	**1.0**	**ug/L**	**0.18**
Tetrahydrofuran		ND	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	114	(76 - 116)
Dibromofluoromethane	92	(78 - 116)
1,2-Dichloroethane-d4	94	(65 - 126)
4-Bromofluorobenzene	111	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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CH2M Hill Plateau Remediation DOE RL

B29HC0

GC/MS Volatiles

Lot-Sample #: F1A110510-002 **Work Order #:** MC8C52AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H66

GC/MS Volatiles

Lot-Sample #...: F1A110510-003 **Work Order #...:** MC8C62AF **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	ND	10	ug/L	2.0
Acrolein	ND T	10	ug/L	2.8
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	2.0	ug/L	0.25
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroprene	ND	1.0	ug/L	0.097
Dibromochloromethane	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.41
Chloroethane	ND	2.0	ug/L	0.099
Chloromethane	ND	2.0	ug/L	0.077
Allyl chloride	ND	2.0	ug/L	0.11
1,2-Dibromoethane	ND	1.0	ug/L	0.13
Dibromomethane	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	ND	2.0	ug/L	0.084
1,1-Dichloroethene	**0.22 J**	**1.0**	**ug/L**	**0.083**
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.083
1,4-Dioxane	ND	80	ug/L	7.6
Ethylbenzene	ND	1.0	ug/L	0.086
Ethyl methacrylate	ND	1.0	ug/L	0.11
Trichlorofluoromethane	**0.43 J**	**1.0**	**ug/L**	**0.11**
2-Hexanone	ND	5.0	ug/L	0.22
Iodomethane	ND	2.0	ug/L	0.092
Isobutanol	ND	80	ug/L	8.7
Methacrylonitrile	ND	5.0	ug/L	0.50
Methyl methacrylate	ND	1.0	ug/L	0.26
Styrene	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	ND	1.0	ug/L	0.15
Vinyl acetate	ND	2.0	ug/L	0.18
Cyclohexanone UJ	ND	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H66

GC/MS Volatiles

Lot-Sample #...: F1A110510-003 **Work Order #...:** MC8C62AF **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND	1.0	ug/L	0.26
Vinyl chloride		ND	2.0	ug/L	0.084
Acetone		**1.7 J**	**2.0**	**ug/L**	**0.34**
Methylene chloride		ND	1.0	ug/L	0.11
Carbon disulfide		ND	1.0	ug/L	0.051
1,1-Dichloroethane		ND	1.0	ug/L	0.068
2-Butanone		ND	5.0	ug/L	0.52
Chloroform		ND	1.0	ug/L	0.10
cis-1,2-Dichloroethene		ND	1.0	ug/L	0.087
Propionitrile		ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND	1.0	ug/L	0.069
Carbon tetrachloride		ND	1.0	ug/L	0.12
1,2-Dichloroethane		ND	1.0	ug/L	0.10
Benzene		ND	1.0	ug/L	0.064
Trichloroethene		ND	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND	1.0	ug/L	0.15
Tetrachloroethene		ND	1.0	ug/L	0.18
Tetrahydrofuran		ND	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	112	(76 - 116)
Dibromofluoromethane	96	(78 - 116)
1,2-Dichloroethane-d4	97	(65 - 126)
4-Bromofluorobenzene	107	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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CH2M Hill Plateau Remediation DOE RL

B29H66

GC/MS Volatiles

Lot-Sample #: F1A110510-003 **Work Order #:** MC8C62AF **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK0

GC/MS Volatiles

Lot-Sample #...: F1A110510-004 **Work Order #...:** MC8DA2AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	ND	10	ug/L	2.0
Acrolein	ND T	10	ug/L	2.8
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	2.0	ug/L	0.25
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroprene	ND	1.0	ug/L	0.097
Dibromochloromethane	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.41
Chloroethane	ND	2.0	ug/L	0.099
Chloromethane	ND	2.0	ug/L	0.077
Allyl chloride	ND	2.0	ug/L	0.11
1,2-Dibromoethane	ND	1.0	ug/L	0.13
Dibromomethane	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	ND	2.0	ug/L	0.084
1,1-Dichloroethene	ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.083
1,4-Dioxane	ND	80	ug/L	7.6
Ethylbenzene	ND	1.0	ug/L	0.086
Ethyl methacrylate	ND	1.0	ug/L	0.11
Trichlorofluoromethane	ND	1.0	ug/L	0.11
2-Hexanone	ND	5.0	ug/L	0.22
Iodomethane	ND	2.0	ug/L	0.092
Isobutanol	ND	80	ug/L	8.7
Methacrylonitrile	ND	5.0	ug/L	0.50
Methyl methacrylate	ND	1.0	ug/L	0.26
Styrene	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	ND	1.0	ug/L	0.15
Vinyl acetate	ND	2.0	ug/L	0.18
Cyclohexanone UJ	ND	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK0

GC/MS Volatiles

Lot-Sample #...: F1A110510-004 **Work Order #...:** MC8DA2AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND	1.0	ug/L	0.26
Vinyl chloride		ND	2.0	ug/L	0.084
Acetone		ND	2.0	ug/L	0.34
Methylene chloride		ND	1.0	ug/L	0.11
Carbon disulfide		ND	1.0	ug/L	0.051
1,1-Dichloroethane		ND	1.0	ug/L	0.068
2-Butanone		ND	5.0	ug/L	0.52
Chloroform		**0.20 J**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND	1.0	ug/L	0.087
Propionitrile		ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND	1.0	ug/L	0.069
Carbon tetrachloride		ND	1.0	ug/L	0.12
1,2-Dichloroethane		ND	1.0	ug/L	0.10
Benzene		ND	1.0	ug/L	0.064
Trichloroethene		ND	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND	1.0	ug/L	0.15
Tetrachloroethene		**0.47 J**	**1.0**	**ug/L**	**0.18**
Tetrahydrofuran		ND	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	111	(76 - 116)
Dibromofluoromethane	92	(78 - 116)
1,2-Dichloroethane-d4	97	(65 - 126)
4-Bromofluorobenzene	110	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29HK0

GC/MS Volatiles

Lot-Sample #: F1A110510-004 **Work Order #:** MC8DA2AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H72

GC/MS Volatiles

Lot-Sample #...: F1A110510-005 **Work Order #...:** MC8DC2AF **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	ND	10	ug/L	2.0
Acrolein	ND T	10	ug/L	2.8
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	2.0	ug/L	0.25
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroprene	ND	1.0	ug/L	0.097
Dibromochloromethane	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.41
Chloroethane	ND	2.0	ug/L	0.099
Chloromethane	ND	2.0	ug/L	0.077
Allyl chloride	ND	2.0	ug/L	0.11
1,2-Dibromoethane	ND	1.0	ug/L	0.13
Dibromomethane	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	ND	2.0	ug/L	0.084
1,1-Dichloroethene	ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.083
1,4-Dioxane	ND	80	ug/L	7.6
Ethylbenzene	ND	1.0	ug/L	0.086
Ethyl methacrylate	ND	1.0	ug/L	0.11
Trichlorofluoromethane	ND	1.0	ug/L	0.11
2-Hexanone	ND	5.0	ug/L	0.22
Iodomethane	ND	2.0	ug/L	0.092
Isobutanol	ND	80	ug/L	8.7
Methacrylonitrile	ND	5.0	ug/L	0.50
Methyl methacrylate	ND	1.0	ug/L	0.26
Styrene	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	ND	1.0	ug/L	0.15
Vinyl acetate	ND	2.0	ug/L	0.18
Cyclohexanone UJ	ND	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H72

GC/MS Volatiles

Lot-Sample #...: F1A110510-005 **Work Order #...:** MC8DC2AF **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND	1.0	ug/L	0.26
Vinyl chloride		ND	2.0	ug/L	0.084
Acetone		ND	2.0	ug/L	0.34
Methylene chloride		**2.6**	**1.0**	**ug/L**	**0.11**
Carbon disulfide		ND	1.0	ug/L	0.051
1,1-Dichloroethane		ND	1.0	ug/L	0.068
2-Butanone		ND	5.0	ug/L	0.52
Chloroform		ND	1.0	ug/L	0.10
cis-1,2-Dichloroethene		ND	1.0	ug/L	0.087
Propionitrile		ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND	1.0	ug/L	0.069
Carbon tetrachloride		ND	1.0	ug/L	0.12
1,2-Dichloroethane		ND	1.0	ug/L	0.10
Benzene		ND	1.0	ug/L	0.064
Trichloroethene		ND	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND	1.0	ug/L	0.15
Tetrachloroethene		ND	1.0	ug/L	0.18
Tetrahydrofuran		ND	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	111	(76 - 116)
Dibromofluoromethane	93	(78 - 116)
1,2-Dichloroethane-d4	95	(65 - 126)
4-Bromofluorobenzene	110	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

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CH2M Hill Plateau Remediation DOE RL

B29H72

GC/MS Volatiles

Lot-Sample #: F1A110510-005 **Work Order #:** MC8DC2AF **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H47

GC/MS Volatiles

Lot-Sample #...: F1A110510-006 **Work Order #...:** MC8DE2AE **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	ND	10	ug/L	2.0
Acrolein	ND T	10	ug/L	2.8
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	2.0	ug/L	0.25
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroprene	ND	1.0	ug/L	0.097
Dibromochloromethane	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.41
Chloroethane	ND	2.0	ug/L	0.099
Chloromethane	ND	2.0	ug/L	0.077
Allyl chloride	ND	2.0	ug/L	0.11
1,2-Dibromoethane	ND	1.0	ug/L	0.13
Dibromomethane	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	ND	2.0	ug/L	0.084
1,1-Dichloroethene	ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.083
1,4-Dioxane	ND	80	ug/L	7.6
Ethylbenzene	ND	1.0	ug/L	0.086
Ethyl methacrylate	ND	1.0	ug/L	0.11
Trichlorofluoromethane	ND	1.0	ug/L	0.11
2-Hexanone	ND	5.0	ug/L	0.22
Iodomethane	ND	2.0	ug/L	0.092
Isobutanol	ND	80	ug/L	8.7
Methacrylonitrile	ND	5.0	ug/L	0.50
Methyl methacrylate	ND	1.0	ug/L	0.26
Styrene	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	ND	1.0	ug/L	0.15
Vinyl acetate	ND	2.0	ug/L	0.18
Cyclohexanone UJ	ND	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H47

GC/MS Volatiles

Lot-Sample #...: F1A110510-006 **Work Order #...:** MC8DE2AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND	1.0	ug/L	0.26
Vinyl chloride		ND	2.0	ug/L	0.084
Acetone		**1.7 J**	**2.0**	**ug/L**	**0.34**
Methylene chloride		ND	1.0	ug/L	0.11
Carbon disulfide		ND	1.0	ug/L	0.051
1,1-Dichloroethane		ND	1.0	ug/L	0.068
2-Butanone		ND	5.0	ug/L	0.52
Chloroform		ND	1.0	ug/L	0.10
cis-1,2-Dichloroethene		ND	1.0	ug/L	0.087
Propionitrile		ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND	1.0	ug/L	0.069
Carbon tetrachloride		ND	1.0	ug/L	0.12
1,2-Dichloroethane		ND	1.0	ug/L	0.10
Benzene		ND	1.0	ug/L	0.064
Trichloroethene		ND	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND	1.0	ug/L	0.15
Tetrachloroethene		ND	1.0	ug/L	0.18
Tetrahydrofuran		ND	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	110	(76 - 116)
Dibromofluoromethane	93	(78 - 116)
1,2-Dichloroethane-d4	96	(65 - 126)
4-Bromofluorobenzene	110	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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CH2M Hill Plateau Remediation DOE RL

B29H47

GC/MS Volatiles

Lot-Sample #: F1A110510-006 **Work Order #:** MC8DE2AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H56

GC/MS Volatiles

Lot-Sample #...: F1A110510-007 **Work Order #...:** MC8DH2AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	ND	10	ug/L	2.0
Acrolein	ND T	10	ug/L	2.8
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	2.0	ug/L	0.25
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroprene	ND	1.0	ug/L	0.097
Dibromochloromethane	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.41
Chloroethane	ND	2.0	ug/L	0.099
Chloromethane	ND	2.0	ug/L	0.077
Allyl chloride	ND	2.0	ug/L	0.11
1,2-Dibromoethane	ND	1.0	ug/L	0.13
Dibromomethane	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	ND	2.0	ug/L	0.084
1,1-Dichloroethene	ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.083
1,4-Dioxane	ND	80	ug/L	7.6
Ethylbenzene	ND	1.0	ug/L	0.086
Ethyl methacrylate	ND	1.0	ug/L	0.11
Trichlorofluoromethane	ND	1.0	ug/L	0.11
2-Hexanone	ND	5.0	ug/L	0.22
Iodomethane	ND	2.0	ug/L	0.092
Isobutanol	ND	80	ug/L	8.7
Methacrylonitrile	ND	5.0	ug/L	0.50
Methyl methacrylate	ND	1.0	ug/L	0.26
Styrene	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	ND	1.0	ug/L	0.15
Vinyl acetate	ND	2.0	ug/L	0.18
Cyclohexanone UJ	ND	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H56

GC/MS Volatiles

Lot-Sample #...: F1A110510-007 **Work Order #...:** MC8DH2AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND	1.0	ug/L	0.26
Vinyl chloride		ND	2.0	ug/L	0.084
Acetone		ND	2.0	ug/L	0.34
Methylene chloride		ND	1.0	ug/L	0.11
Carbon disulfide		ND	1.0	ug/L	0.051
1,1-Dichloroethane		ND	1.0	ug/L	0.068
2-Butanone		ND	5.0	ug/L	0.52
Chloroform		**1.0**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND	1.0	ug/L	0.087
Propionitrile		ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND	1.0	ug/L	0.069
Carbon tetrachloride		ND	1.0	ug/L	0.12
1,2-Dichloroethane		ND	1.0	ug/L	0.10
Benzene		ND	1.0	ug/L	0.064
Trichloroethene		ND	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND	1.0	ug/L	0.15
Tetrachloroethene		ND	1.0	ug/L	0.18
Tetrahydrofuran		ND	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	110	(76 - 116)
Dibromofluoromethane	92	(78 - 116)
1,2-Dichloroethane-d4	93	(65 - 126)
4-Bromofluorobenzene	108	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

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CH2M Hill Plateau Remediation DOE RL

B29H56

GC/MS Volatiles

Lot-Sample #: F1A110510-007 **Work Order #:** MC8DH2AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD5

GC/MS Volatiles

Lot-Sample #...: F1A110510-008 **Work Order #...:** MC8DJ2AF **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	ND	10	ug/L	2.0
Acrolein	ND T	10	ug/L	2.8
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	2.0	ug/L	0.25
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroprene	ND	1.0	ug/L	0.097
Dibromochloromethane	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.41
Chloroethane	ND	2.0	ug/L	0.099
Chloromethane	ND	2.0	ug/L	0.077
Allyl chloride	ND	2.0	ug/L	0.11
1,2-Dibromoethane	ND	1.0	ug/L	0.13
Dibromomethane	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	ND	2.0	ug/L	0.084
1,1-Dichloroethene	ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.083
1,4-Dioxane	ND	80	ug/L	7.6
Ethylbenzene	ND	1.0	ug/L	0.086
Ethyl methacrylate	ND	1.0	ug/L	0.11
Trichlorofluoromethane	ND	1.0	ug/L	0.11
2-Hexanone	ND	5.0	ug/L	0.22
Iodomethane	ND	2.0	ug/L	0.092
Isobutanol	ND	80	ug/L	8.7
Methacrylonitrile	ND	5.0	ug/L	0.50
Methyl methacrylate	ND	1.0	ug/L	0.26
Styrene	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	ND	1.0	ug/L	0.15
Vinyl acetate	ND	2.0	ug/L	0.18
Cyclohexanone UJ	ND	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD5

GC/MS Volatiles

Lot-Sample #...: F1A110510-008 **Work Order #...:** MC8DJ2AF **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND	1.0	ug/L	0.26
Vinyl chloride		ND	2.0	ug/L	0.084
Acetone		ND	2.0	ug/L	0.34
Methylene chloride		ND	1.0	ug/L	0.11
Carbon disulfide		ND	1.0	ug/L	0.051
1,1-Dichloroethane		ND	1.0	ug/L	0.068
2-Butanone		ND	5.0	ug/L	0.52
Chloroform		**4.4**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND	1.0	ug/L	0.087
Propionitrile		ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND	1.0	ug/L	0.069
Carbon tetrachloride		ND	1.0	ug/L	0.12
1,2-Dichloroethane		ND	1.0	ug/L	0.10
Benzene		ND	1.0	ug/L	0.064
Trichloroethene		ND	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND	1.0	ug/L	0.15
Tetrachloroethene		ND	1.0	ug/L	0.18
Tetrahydrofuran		ND	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	112	(76 - 116)
Dibromofluoromethane	96	(78 - 116)
1,2-Dichloroethane-d4	98	(65 - 126)
4-Bromofluorobenzene	111	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

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CH2M Hill Plateau Remediation DOE RL

B29HD5

GC/MS Volatiles

Lot-Sample #: F1A110510-008 **Work Order #:** MC8DJ2AF **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
Unknown		1.1 J M		ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB0

GC/MS Volatiles

Lot-Sample #...: F1A110510-009 **Work Order #...:** MC8DR2AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	ND	10	ug/L	2.0
Acrolein	ND T	10	ug/L	2.8
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	2.0	ug/L	0.25
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroprene	ND	1.0	ug/L	0.097
Dibromochloromethane	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.41
Chloroethane	ND	2.0	ug/L	0.099
Chloromethane	ND	2.0	ug/L	0.077
Allyl chloride	ND	2.0	ug/L	0.11
1,2-Dibromoethane	ND	1.0	ug/L	0.13
Dibromomethane	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	ND	2.0	ug/L	0.084
1,1-Dichloroethene	ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.083
1,4-Dioxane	ND	80	ug/L	7.6
Ethylbenzene	ND	1.0	ug/L	0.086
Ethyl methacrylate	ND	1.0	ug/L	0.11
Trichlorofluoromethane	ND	1.0	ug/L	0.11
2-Hexanone	ND	5.0	ug/L	0.22
Iodomethane	ND	2.0	ug/L	0.092
Isobutanol	ND	80	ug/L	8.7
Methacrylonitrile	ND	5.0	ug/L	0.50
Methyl methacrylate	ND	1.0	ug/L	0.26
Styrene	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	ND	1.0	ug/L	0.15
Vinyl acetate	ND	2.0	ug/L	0.18
Cyclohexanone UJ	ND	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB0

GC/MS Volatiles

Lot-Sample #...: F1A110510-009 **Work Order #...:** MC8DR2AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND	1.0	ug/L	0.26
Vinyl chloride		ND	2.0	ug/L	0.084
Acetone		ND	2.0	ug/L	0.34
Methylene chloride		ND	1.0	ug/L	0.11
Carbon disulfide		ND	1.0	ug/L	0.051
1,1-Dichloroethane		ND	1.0	ug/L	0.068
2-Butanone		ND	5.0	ug/L	0.52
Chloroform		**2.0**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND	1.0	ug/L	0.087
Propionitrile		ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND	1.0	ug/L	0.069
Carbon tetrachloride		ND	1.0	ug/L	0.12
1,2-Dichloroethane		ND	1.0	ug/L	0.10
Benzene		ND	1.0	ug/L	0.064
Trichloroethene		ND	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND	1.0	ug/L	0.15
Tetrachloroethene		**0.56 J**	**1.0**	**ug/L**	**0.18**
Tetrahydrofuran		ND	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	113	(76 - 116)
Dibromofluoromethane	94	(78 - 116)
1,2-Dichloroethane-d4	96	(65 - 126)
4-Bromofluorobenzene	113	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29HB0

GC/MS Volatiles

Lot-Sample #: F1A110510-009 **Work Order #:** MC8DR2AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK1

GC/MS Volatiles

Lot-Sample #...: F1A110510-010 **Work Order #...:** MC8DV1AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane		ND T	1.0	ug/L	0.088
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK1

GC/MS Volatiles

Lot-Sample #...: F1A110510-010 **Work Order #...:** MC8DV1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	2.0UJ	**1.2 J,B**	**2.0**	**ug/L**	**0.34**
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**0.39 J,T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene		ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene	J	**0.74 J,T**	**1.0**	**ug/L**	**0.18**
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	111	(76 - 116)
Dibromofluoromethane	105	(78 - 116)
1,2-Dichloroethane-d4	102	(65 - 126)
4-Bromofluorobenzene	113	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29HK1

GC/MS Volatiles

Lot-Sample #: F1A110510-010 **Work Order #:** MC8DV1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H42

GC/MS Volatiles

Lot-Sample #...: F1A110510-011 **Work Order #...:** MC8DW2AE **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/20/11
Prep Batch #...: 1021050
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	ND	10	ug/L	2.0
Acrolein	ND T	10	ug/L	2.8
Bromodichloromethane	ND	1.0	ug/L	0.088
Bromoform	ND	1.0	ug/L	0.17
Bromomethane	ND	2.0	ug/L	0.25
Chlorobenzene	ND	1.0	ug/L	0.15
Chloroprene	ND	1.0	ug/L	0.097
Dibromochloromethane	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	0.41
Chloroethane	ND	2.0	ug/L	0.099
Chloromethane	ND	2.0	ug/L	0.077
Allyl chloride	ND	2.0	ug/L	0.11
1,2-Dibromoethane	ND	1.0	ug/L	0.13
Dibromomethane	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	ND	2.0	ug/L	0.084
1,1-Dichloroethene	ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)	ND	2.0	ug/L	0.15
1,2-Dichloropropane	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.083
1,4-Dioxane	ND	80	ug/L	7.6
Ethylbenzene	ND	1.0	ug/L	0.086
Ethyl methacrylate	ND	1.0	ug/L	0.11
Trichlorofluoromethane	ND	1.0	ug/L	0.11
2-Hexanone	ND	5.0	ug/L	0.22
Iodomethane	ND	2.0	ug/L	0.092
Isobutanol	ND	80	ug/L	8.7
Methacrylonitrile	ND	5.0	ug/L	0.50
Methyl methacrylate	ND	1.0	ug/L	0.26
Styrene	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	ND	1.0	ug/L	0.15
Vinyl acetate	ND	2.0	ug/L	0.18
Cyclohexanone UJ	ND	20	ug/L	5.8

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LS
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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H42

GC/MS Volatiles

Lot-Sample #...: F1A110510-011 **Work Order #...:** MC8DW2AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND	1.0	ug/L	0.26
Vinyl chloride		ND	2.0	ug/L	0.084
Acetone		ND	2.0	ug/L	0.34
Methylene chloride		ND	1.0	ug/L	0.11
Carbon disulfide		ND	1.0	ug/L	0.051
1,1-Dichloroethane		ND	1.0	ug/L	0.068
2-Butanone		ND	5.0	ug/L	0.52
Chloroform		**0.93 J**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND	1.0	ug/L	0.087
Propionitrile		ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND	1.0	ug/L	0.069
Carbon tetrachloride		ND	1.0	ug/L	0.12
1,2-Dichloroethane		ND	1.0	ug/L	0.10
Benzene		ND	1.0	ug/L	0.064
Trichloroethene		ND	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND	1.0	ug/L	0.15
Tetrachloroethene		ND	1.0	ug/L	0.18
Tetrahydrofuran		ND	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	110	(76 - 116)
Dibromofluoromethane	92	(78 - 116)
1,2-Dichloroethane-d4	96	(65 - 126)
4-Bromofluorobenzene	112	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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CH2M Hill Plateau Remediation DOE RL

B29H42

GC/MS Volatiles

Lot-Sample #: F1A110510-011 **Work Order #:** MC8DW2AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H85

GC/MS Volatiles

Lot-Sample #...: F1A110510-012 **Work Order #...:** MC8DX1AF **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane		ND T	1.0	ug/L	0.088
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H85

GC/MS Volatiles

Lot-Sample #...: F1A110510-012 **Work Order #...:** MC8DX1AF **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	2.0UJ	**1.4 J,B**	**2.0**	**ug/L**	**0.34**
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**2.5 T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene		ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene		ND T	1.0	ug/L	0.18
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	115	(76 - 116)
Dibromofluoromethane	107	(78 - 116)
1,2-Dichloroethane-d4	102	(65 - 126)
4-Bromofluorobenzene	117	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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

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CH2M Hill Plateau Remediation DOE RL

B29H85

GC/MS Volatiles

Lot-Sample #: F1A110510-012 **Work Order #:** MC8DX1AF **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF0

GC/MS Volatiles

Lot-Sample #...: F1A110510-013 **Work Order #...:** MC8D01AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane	J	**0.27 J,T**	**1.0**	**ug/L**	**0.088**
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF0

GC/MS Volatiles

Lot-Sample #...: F1A110510-013 **Work Order #...:** MC8D01AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	2.0UJ	**1.9 J,B**	**2.0**	**ug/L**	**0.34**
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**5.8 T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene		ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene		ND T	1.0	ug/L	0.18
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	138 *	(76 - 116)
Dibromofluoromethane	134 *	(78 - 116)
1,2-Dichloroethane-d4	126	(65 - 126)
4-Bromofluorobenzene	143 *	(67 - 122)

NOTE(S):

* Surrogate recovery is outside stated control limits.

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29HF0

GC/MS Volatiles

Lot-Sample #: F1A110510-013 **Work Order #:** MC8D01AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H71

GC/MS Volatiles

Lot-Sample #...: F1A110510-014 **Work Order #...:** MC8D21AF **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane	UJ	ND T	1.0	ug/L	0.088
Bromoform	UJ	ND T	1.0	ug/L	0.17
Bromomethane	UJ	ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane	UJ	ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	UJ	ND	1.0	ug/L	0.41
Chloroethane	UJ	ND	2.0	ug/L	0.099
Chloromethane	UJ	ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane	UJ	ND T	1.0	ug/L	0.13
Dibromomethane	UJ	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane	UJ	ND T	2.0	ug/L	0.084
1,1-Dichloroethene	UJ	ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)	UJ	ND T	2.0	ug/L	0.15
1,2-Dichloropropane	UJ	ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene	UJ	ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene	UJ	ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene	UJ	ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane	UJ	ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene	UJ	ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	UJ	ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	UJ	ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane	UJ	ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H71

GC/MS Volatiles

Lot-Sample #...: F1A110510-014 **Work Order #...:** MC8D21AF **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride	UJ	ND T	2.0	ug/L	0.084
Acetone	2.0UJ	**1.1 J,B**	**2.0**	**ug/L**	**0.34**
Methylene chloride	UJ	ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane	UJ	ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**8.4 T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene	UJ	ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene	UJ	ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane	UJ	ND T	1.0	ug/L	0.069
Carbon tetrachloride	UJ	ND T	1.0	ug/L	0.12
1,2-Dichloroethane	UJ	ND T	1.0	ug/L	0.10
Benzene	UJ	ND T	1.0	ug/L	0.064
Trichloroethene	UJ	ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane	UJ	ND T	1.0	ug/L	0.15
Tetrachloroethene	UJ	ND T	1.0	ug/L	0.18
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)	UJ	ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene	UJ	ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	69 *	(76 - 116)
Dibromofluoromethane	67 *	(78 - 116)
1,2-Dichloroethane-d4	65	(65 - 126)
4-Bromofluorobenzene	70	(67 - 122)

NOTE(S):

* Surrogate recovery is outside stated control limits.

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29H71

GC/MS Volatiles

Lot-Sample #: F1A110510-014 **Work Order #:** MC8D21AF **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H95

GC/MS Volatiles

Lot-Sample #...: F1A110510-015 **Work Order #...:** MC8EC1AE **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Cyclohexanone	UJ	ND T	20	ug/L	5.8
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane	J	**0.11 J,T**	**1.0**	**ug/L**	**0.088**
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane	J	**0.13 J,T**	**2.0**	**ug/L**	**0.077**
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H95

GC/MS Volatiles

Lot-Sample #...: F1A110510-015 **Work Order #...:** MC8EC1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	UJ	ND	2.0	ug/L	0.34
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**2.8 T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene		ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene	J	**0.26 J,T**	**1.0**	**ug/L**	**0.18**
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	124 *	(76 - 116)
Dibromofluoromethane	118 *	(78 - 116)
1,2-Dichloroethane-d4	115	(65 - 126)
4-Bromofluorobenzene	128 *	(67 - 122)

NOTE(S):

* Surrogate recovery is outside stated control limits.

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29H95

GC/MS Volatiles

Lot-Sample #: F1A110510-015 **Work Order #:** MC8EC1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF5

GC/MS Volatiles

Lot-Sample #...: F1A110510-016 **Work Order #...:** MC8EE1AE **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane	J	**0.099 J,T**	**1.0**	**ug/L**	**0.088**
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF5

GC/MS Volatiles

Lot-Sample #...: F1A110510-016 **Work Order #...:** MC8EE1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	UJ	ND	2.0	ug/L	0.34
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**3.1 T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene		ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene	J	**0.42 J,T**	**1.0**	**ug/L**	**0.18**
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	119 *	(76 - 116)
Dibromofluoromethane	114	(78 - 116)
1,2-Dichloroethane-d4	111	(65 - 126)
4-Bromofluorobenzene	125 *	(67 - 122)

NOTE(S):

* Surrogate recovery is outside stated control limits.

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29HF5

GC/MS Volatiles

Lot-Sample #: F1A110510-016 **Work Order #:** MC8EE1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ5

GC/MS Volatiles

Lot-Sample #...: F1A110510-017 **Work Order #...:** MC8EF1AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane		ND T	1.0	ug/L	0.088
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ5

GC/MS Volatiles

Lot-Sample #...: F1A110510-017 **Work Order #...:** MC8EF1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	UJ	ND	2.0	ug/L	0.34
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**0.76 J,T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene	J	**11 T**	**1.0**	**ug/L**	**0.25**
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene		ND T	1.0	ug/L	0.18
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	100	(76 - 116)
Dibromofluoromethane	97	(78 - 116)
1,2-Dichloroethane-d4	93	(65 - 126)
4-Bromofluorobenzene	105	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29HJ5

GC/MS Volatiles

Lot-Sample #: F1A110510-017 **Work Order #:** MC8EF1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H37

GC/MS Volatiles

Lot-Sample #...: F1A110510-018 **Work Order #...:** MC8EG1AE **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane		ND T	1.0	ug/L	0.088
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H37

GC/MS Volatiles

Lot-Sample #...: F1A110510-018 **Work Order #...:** MC8EG1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	2.0UJ	**0.70 J,B**	**2.0**	**ug/L**	**0.34**
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**0.72 J,T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene		ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene		ND T	1.0	ug/L	0.18
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	113	(76 - 116)
Dibromofluoromethane	110	(78 - 116)
1,2-Dichloroethane-d4	104	(65 - 126)
4-Bromofluorobenzene	118	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29H37

GC/MS Volatiles

Lot-Sample #: F1A110510-018 **Work Order #:** MC8EG1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD0

GC/MS Volatiles

Lot-Sample #...: F1A110510-019 **Work Order #...:** MC8EH1AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane		ND T	1.0	ug/L	0.088
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD0

GC/MS Volatiles

Lot-Sample #...: F1A110510-019 **Work Order #...:** MC8EH1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	2.0UJ	**0.79 J,B**	**2.0**	**ug/L**	**0.34**
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**1.4 T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene		ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene		ND T	1.0	ug/L	0.18
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(76 - 116)
Dibromofluoromethane	99	(78 - 116)
1,2-Dichloroethane-d4	93	(65 - 126)
4-Bromofluorobenzene	104	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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

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7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29HD0

GC/MS Volatiles

Lot-Sample #: F1A110510-019 **Work Order #:** MC8EH1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ0

GC/MS Volatiles

Lot-Sample #...: F1A110510-020 **Work Order #...:** MC8EJ1AF **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane		ND T	1.0	ug/L	0.088
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ0

GC/MS Volatiles

Lot-Sample #...: F1A110510-020 **Work Order #...:** MC8EJ1AF **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	UJ	ND	2.0	ug/L	0.34
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**0.15 J,T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene	J	**0.33 J,T**	**1.0**	**ug/L**	**0.25**
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene		ND T	1.0	ug/L	0.18
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	118 *	(76 - 116)
Dibromofluoromethane	113	(78 - 116)
1,2-Dichloroethane-d4	106	(65 - 126)
4-Bromofluorobenzene	118	(67 - 122)

NOTE(S):

* Surrogate recovery is outside stated control limits.

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29HJ0

GC/MS Volatiles

Lot-Sample #: F1A110510-020 **Work Order #:** MC8EJ1AF **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HH5

GC/MS Volatiles

Lot-Sample #...: F1A110510-021 **Work Order #...:** MC8EL1AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane		ND T	1.0	ug/L	0.088
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane	J	**0.091 J,T**	**2.0**	**ug/L**	**0.077**
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HH5

GC/MS Volatiles

Lot-Sample #...: F1A110510-021 **Work Order #...:** MC8EL1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	UJ	ND	2.0	ug/L	0.34
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**1.8 T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene		ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene		ND T	1.0	ug/L	0.18
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	106	(76 - 116)
Dibromofluoromethane	102	(78 - 116)
1,2-Dichloroethane-d4	97	(65 - 126)
4-Bromofluorobenzene	107	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29HH5

GC/MS Volatiles

Lot-Sample #: F1A110510-021 **Work Order #:** MC8EL1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H61

GC/MS Volatiles

Lot-Sample #...: F1A110510-022 **Work Order #...:** MC8EM1AE **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein	UJ	ND	10	ug/L	2.8
Bromodichloromethane	UJ	ND	1.0	ug/L	0.088
Bromoform	UJ	ND	1.0	ug/L	0.17
Bromomethane	UJ	ND	2.0	ug/L	0.25
Chlorobenzene	UJ	ND	1.0	ug/L	0.15
Chloroprene	UJ	ND	1.0	ug/L	0.097
Dibromochloromethane	UJ	ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane	UJ	ND	1.0	ug/L	0.41
Chloroethane	UJ	ND	2.0	ug/L	0.099
Chloromethane	UJ	ND	2.0	ug/L	0.077
Allyl chloride	UJ	ND	2.0	ug/L	0.11
1,2-Dibromoethane	UJ	ND	1.0	ug/L	0.13
Dibromomethane	UJ	ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene	UJ	ND	2.0	ug/L	0.29
Dichlorodifluoromethane	UJ	ND	2.0	ug/L	0.084
1,1-Dichloroethene	UJ	ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)	UJ	ND	2.0	ug/L	0.15
1,2-Dichloropropane	UJ	ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	UJ	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	UJ	ND	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene	UJ	ND	1.0	ug/L	0.086
Ethyl methacrylate	UJ	ND	1.0	ug/L	0.11
Trichlorofluoromethane	UJ	ND	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane	UJ	ND	2.0	ug/L	0.092
Isobutanol	UJ	ND	80	ug/L	8.7
Methacrylonitrile	UJ	ND	5.0	ug/L	0.50
Methyl methacrylate	UJ	ND	1.0	ug/L	0.26
Styrene	UJ	ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane	UJ	ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane	UJ	ND	1.0	ug/L	0.098
1,2,3-Trichloropropane	UJ	ND	1.0	ug/L	0.15
Vinyl acetate	UJ	ND	2.0	ug/L	0.18
Cyclohexanone	UJ	ND	20	ug/L	5.8

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LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H61

GC/MS Volatiles

Lot-Sample #...: F1A110510-022 **Work Order #...:** MC8EM1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate	UJ	ND	2.0	ug/L	0.18
Diethyl ether	UJ	ND	1.0	ug/L	0.26
Vinyl chloride	UJ	ND	2.0	ug/L	0.084
Acetone	2.0UJ	**0.49 J,B**	**2.0**	**ug/L**	**0.34**
Methylene chloride	UJ	ND	1.0	ug/L	0.11
Carbon disulfide	UJ	ND	1.0	ug/L	0.051
1,1-Dichloroethane	UJ	ND	1.0	ug/L	0.068
2-Butanone	UJ	ND	5.0	ug/L	0.52
Chloroform	UJ	ND	1.0	ug/L	0.10
cis-1,2-Dichloroethene	UJ	ND	1.0	ug/L	0.087
Propionitrile	UJ	ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene	UJ	ND	1.0	ug/L	0.083
1,1,1-Trichloroethane	UJ	ND	1.0	ug/L	0.069
Carbon tetrachloride	UJ	ND	1.0	ug/L	0.12
1,2-Dichloroethane	UJ	ND	1.0	ug/L	0.10
Benzene	UJ	ND	1.0	ug/L	0.064
Trichloroethene	UJ	ND	1.0	ug/L	0.25
4-Methyl-2-pentanone	UJ	ND	5.0	ug/L	0.12
1,1,2-Trichloroethane	UJ	ND	1.0	ug/L	0.15
Tetrachloroethene	UJ	ND	1.0	ug/L	0.18
Tetrahydrofuran	UJ	ND	10	ug/L	1.1
Xylenes (total)	UJ	ND	3.0	ug/L	0.20
1,4-Dichlorobenzene	UJ	ND	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene	UJ	ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	62 *	(76 - 116)
Dibromofluoromethane	61 *	(78 - 116)
1,2-Dichloroethane-d4	58 *	(65 - 126)
4-Bromofluorobenzene	62 *	(67 - 122)

NOTE(S):

* Surrogate recovery is outside stated control limits.

J Estimated result. Result is less than RL.

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

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29H61

GC/MS Volatiles

Lot-Sample #: F1A110510-022 **Work Order #:** MC8EM1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC5

GC/MS Volatiles

Lot-Sample #...: F1A110510-023 **Work Order #...:** MC8EN1AE **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane		ND T	1.0	ug/L	0.088
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC5

GC/MS Volatiles

Lot-Sample #...: F1A110510-023 **Work Order #...:** MC8EN1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	UJ	ND	2.0	ug/L	0.34
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**1.7 T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene		ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene		ND T	1.0	ug/L	0.18
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	95	(76 - 116)
Dibromofluoromethane	91	(78 - 116)
1,2-Dichloroethane-d4	88	(65 - 126)
4-Bromofluorobenzene	100	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29HC5

GC/MS Volatiles

Lot-Sample #: F1A110510-023 **Work Order #:** MC8EN1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB5

GC/MS Volatiles

Lot-Sample #...: F1A110510-024 **Work Order #...:** MC8EP1AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane		ND T	1.0	ug/L	0.088
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB5

GC/MS Volatiles

Lot-Sample #...: F1A110510-024 **Work Order #...:** MC8EP1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	UJ	ND	2.0	ug/L	0.34
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**0.30 J,T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene		ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene	J	**0.21 J,T**	**1.0**	**ug/L**	**0.18**
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	96	(76 - 116)
Dibromofluoromethane	95	(78 - 116)
1,2-Dichloroethane-d4	89	(65 - 126)
4-Bromofluorobenzene	99	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29HB5

GC/MS Volatiles

Lot-Sample #: F1A110510-024 **Work Order #:** MC8EP1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H48

GC/MS Volatiles

Lot-Sample #...: F1A110510-025 **Work Order #...:** MC8EQ2AE **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile	UJ	ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane		ND T	1.0	ug/L	0.088
Bromoform		ND T	1.0	ug/L	0.17
Bromomethane		ND T	2.0	ug/L	0.25
Chlorobenzene		ND T	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND T	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND T	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND T	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND T	2.0	ug/L	0.084
1,1-Dichloroethene		ND T	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND T	2.0	ug/L	0.15
1,2-Dichloropropane		ND T	1.0	ug/L	0.097
cis-1,3-Dichloropropene		ND T	1.0	ug/L	0.073
trans-1,3-Dichloropropene		ND T	1.0	ug/L	0.083
1,4-Dioxane	UJ	ND	80	ug/L	7.6
Ethylbenzene		ND T	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND T	1.0	ug/L	0.11
2-Hexanone	UJ	ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND T	5.0	ug/L	0.50
Methyl methacrylate		ND T	1.0	ug/L	0.26
Styrene		ND T	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND T	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND T	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND T	2.0	ug/L	0.18
Cyclohexanone	UJ	ND T	20	ug/L	5.8

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LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H48

GC/MS Volatiles

Lot-Sample #...: F1A110510-025 **Work Order #...:** MC8EQ2AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate		ND	2.0	ug/L	0.18
Diethyl ether		ND T	1.0	ug/L	0.26
Vinyl chloride		ND T	2.0	ug/L	0.084
Acetone	UJ	ND	2.0	ug/L	0.34
Methylene chloride		ND T	1.0	ug/L	0.11
Carbon disulfide		ND T	1.0	ug/L	0.051
1,1-Dichloroethane		ND T	1.0	ug/L	0.068
2-Butanone		ND T	5.0	ug/L	0.52
Chloroform	J	**0.40 J,T**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene		ND T	1.0	ug/L	0.087
Propionitrile	UJ	ND T	5.0	ug/L	1.4
trans-1,2-Dichloroethene		ND T	1.0	ug/L	0.083
1,1,1-Trichloroethane		ND T	1.0	ug/L	0.069
Carbon tetrachloride		ND T	1.0	ug/L	0.12
1,2-Dichloroethane		ND T	1.0	ug/L	0.10
Benzene		ND T	1.0	ug/L	0.064
Trichloroethene		ND T	1.0	ug/L	0.25
4-Methyl-2-pentanone		ND	5.0	ug/L	0.12
1,1,2-Trichloroethane		ND T	1.0	ug/L	0.15
Tetrachloroethene		ND T	1.0	ug/L	0.18
Tetrahydrofuran		ND T	10	ug/L	1.1
Xylenes (total)		ND	3.0	ug/L	0.20
1,4-Dichlorobenzene		ND T	1.0	ug/L	0.12
1-Butanol	UJ	ND	40	ug/L	12
Toluene		ND T	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	102	(76 - 116)
Dibromofluoromethane	98	(78 - 116)
1,2-Dichloroethane-d4	93	(65 - 126)
4-Bromofluorobenzene	105	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29H48

GC/MS Volatiles

Lot-Sample #: F1A110510-025 **Work Order #:** MC8EQ2AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H32

GC/MS Volatiles

Lot-Sample #...: F1A120486-001 **Work Order #...:** MC9HM1AE **Matrix.....:** WATER
Date Sampled...: 01/10/11 **Date Received..:** 01/12/11
Prep Date.....: 01/21/11 **Analysis Date..:** 01/24/11
Prep Batch #...: 1021181
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acetonitrile		ND	10	ug/L	2.0
Acrolein		ND T	10	ug/L	2.8
Bromodichloromethane		ND	1.0	ug/L	0.088
Bromoform		ND	1.0	ug/L	0.17
Bromomethane	UJ	ND	2.0	ug/L	0.25
Chlorobenzene		ND	1.0	ug/L	0.15
Chloroprene		ND	1.0	ug/L	0.097
Dibromochloromethane		ND	1.0	ug/L	0.13
1,2-Dibromo-3-chloro-propane		ND	1.0	ug/L	0.41
Chloroethane		ND	2.0	ug/L	0.099
Chloromethane		ND	2.0	ug/L	0.077
Allyl chloride		ND	2.0	ug/L	0.11
1,2-Dibromoethane		ND	1.0	ug/L	0.13
Dibromomethane		ND	1.0	ug/L	0.21
trans-1,4-Dichloro-2-butene		ND	2.0	ug/L	0.29
Dichlorodifluoromethane		ND	2.0	ug/L	0.084
1,1-Dichloroethene		ND	1.0	ug/L	0.083
1,2-Dichloroethene (total)		ND	2.0	ug/L	0.15
1,2-Dichloropropane		ND	1.0	ug/L	0.097
cis-1,3-Dichloropropene	UJ	ND	1.0	ug/L	0.073
trans-1,3-Dichloropropene	UJ	ND	1.0	ug/L	0.083
1,4-Dioxane		ND	80	ug/L	7.6
Ethylbenzene		ND	1.0	ug/L	0.086
Ethyl methacrylate		ND	1.0	ug/L	0.11
Trichlorofluoromethane		ND	1.0	ug/L	0.11
2-Hexanone		ND	5.0	ug/L	0.22
Iodomethane		ND	2.0	ug/L	0.092
Isobutanol		ND	80	ug/L	8.7
Methacrylonitrile		ND	5.0	ug/L	0.50
Methyl methacrylate		ND	1.0	ug/L	0.26
Styrene		ND	1.0	ug/L	0.074
1,1,1,2-Tetrachloroethane		ND	1.0	ug/L	0.090
1,1,2,2-Tetrachloroethane		ND	1.0	ug/L	0.098
1,2,3-Trichloropropane		ND	1.0	ug/L	0.15
Vinyl acetate		ND	2.0	ug/L	0.18
Cyclohexanone	UJ	ND	20	ug/L	5.8

(Continued on next page)

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H32

GC/MS Volatiles

Lot-Sample #...: F1A120486-001 **Work Order #...:** MC9HM1AE **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethyl acetate	ND	2.0	ug/L	0.18
Diethyl ether	ND	1.0	ug/L	0.26
Vinyl chloride	ND	2.0	ug/L	0.084
Acetone	ND	2.0	ug/L	0.34
Methylene chloride	ND	1.0	ug/L	0.11
Carbon disulfide	ND	1.0	ug/L	0.051
1,1-Dichloroethane	ND	1.0	ug/L	0.068
2-Butanone	ND	5.0	ug/L	0.52
Chloroform	**5.7**	**1.0**	**ug/L**	**0.10**
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.087
Propionitrile	ND	5.0	ug/L	1.4
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.083
1,1,1-Trichloroethane	ND	1.0	ug/L	0.069
Carbon tetrachloride	ND	1.0	ug/L	0.12
1,2-Dichloroethane	ND	1.0	ug/L	0.10
Benzene	ND	1.0	ug/L	0.064
Trichloroethene	ND	1.0	ug/L	0.25
4-Methyl-2-pentanone	ND	5.0	ug/L	0.12
1,1,2-Trichloroethane	ND	1.0	ug/L	0.15
Tetrachloroethene	ND	1.0	ug/L	0.18
Tetrahydrofuran	ND	10	ug/L	1.1
Xylenes (total)	ND	3.0	ug/L	0.20
1,4-Dichlorobenzene	ND	1.0	ug/L	0.12
1-Butanol	ND	40	ug/L	12
Toluene	ND	1.0	ug/L	0.072

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	101	(76 - 116)
Dibromofluoromethane	89	(78 - 116)
1,2-Dichloroethane-d4	92	(65 - 126)
4-Bromofluorobenzene	103	(67 - 122)

NOTE(S):

T Spike sample recovery is outside control limits.

CH2M Hill Plateau Remediation DOE RL

B29H32

GC/MS Volatiles

Lot-Sample #: F1A120486-001 **Work Order #:** MC9HM1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
MS B3-60
Richland, Washington 99352
February 22, 2011
Attention: Mike Neely

TestAmerica Laboratories, Inc.

SDG	: SL1036
Number of Samples	: 26 samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: January 12, 2011

II. Introduction

Between January 11, 2011 and January 12, 2011, 26 water samples were received by TestAmerica - St. Louis for chemical analysis. The samples were received within temperature criteria. See the COC and CUR forms for documentation of any variations on receipt conditions and temperature. Upon receipt, the samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

One container for both SVOA 8270 and Pesticides 8081 was received broken. Sufficient sample volume from other containers was received to perform both analyses. Issue Resolution Form 11-303 accepted the proposed resolution to proceed with analysis.

The following SAFs are associated with this SDG: X11-016

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with a LCS/LCS duplicate.

Deviation from Request: None

IV. Definitions

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate
MS-	Matrix Spike
MSD-	Matrix Spike Duplicate

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

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CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

The following data qualifiers may be applicable to the results in this report, as appropriate.

- **B** – For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** – For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **J** – For organic analyses, the sample is estimated and less than the RL.
- **C** – For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **D** – For all analyses, the sample result was obtained from the analysis of a dilution.
- **N** – For inorganics and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** – For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.

Volatiles

Batch: 1021050

The LCS recovery for Acrolein is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (11): B29H42

The MS/MSD recoveries for Acrolein are outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. This analyte has been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (11): B29H42

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TestAmerica Laboratories, Inc.

Batch: 1018076

The surrogate recoveries are outside the upper QC limits, indicating a potential positive bias. There were no target analytes associated with these surrogates detected above the reporting limit in the samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (16): B29HF5
F1A110510 (20): B29HJ0

Sample surrogate recoveries are outside established QC limits. Samples were reprepared and reanalyzed outside hold time. The reanalysis yielded acceptable and similar results. Issue Resolution Form 11-317 accepted the proposed resolution to report the original analysis performed within hold time.
Affected Samples:
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (22): B29H61

The sample was analyzed outside of the 12 hour clock but within the hold time. The sample was re-analyzed 3 days outside the hold time with all QC recovering within limits. Both the original sample analysis and the final analysis had comparable results. Issue Resolution Form 11-317 accepted the proposed resolution to report the original analysis performed within hold time.
Affected Samples:
F1A110510 (25): B29H48

Cyclohexanone, 1,4-Dioxane, Acetone and Methylene chloride were detected in the method blank above the method detection limit but below the reporting limit. Acetone has been qualified accordingly with a "B" flag in the associated samples.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5

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F1A110510 (25): B29H48

The ICV and LCS recoveries for Acrolein are outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48

The MS recoveries for Dichlorodifluoromethane, Acrolein, Bromoform, Bromobenzene and 1,4-Dichlorobenzene are outside the upper QC limits, indicating a potential positive bias for these analytes. These analytes were not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The MSD recoveries for several compounds are outside the upper QC limits. This is the result of a low internal standard response in the MSD (between 32%D - 35%D). Although the IS %D in the MSD is within the lower QC limits, the affect on the spike recoveries are inversely higher. Even with the higher, out of QC control recoveries in the MSD, there were only 9 RPD values outside the QC limits. Method performance is demonstrated by the remaining acceptable MS and LCS recoveries. These analytes have been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5

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TestAmerica Laboratories, Inc.

F1A110510 (24): B29HB5
F1A110510 (25): B29H48

Batch: 1021181

Methylene chloride was detected in the method blank above the method detection limit but below the reporting limit. This analyte was not detected in the associated samples.
Affected Samples:
F1A120486 (1): B29H32

The CCV recoveries are outside the upper QC limits (greater than 20% D) for Vinyl acetate and Ethyl methacrylate indicating a potential high bias for these analytes in the samples associated with this CCV. These analytes were not detected above the reporting limit in the associated samples. The RRF for 1,1,2,2-Tetrachloroethane is less than the method detection limit of 0.300 but greater than the QC limit 0.100. The RRF will be monitored and maintenance will be performed before the next calibration to try to rectify this problem.
Affected Samples:
F1A120486 (1): B29H32

The LCS recovery for Acrolein is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A120486 (1): B29H32

The MS recovery for Acrolein is outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. This analyte has been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A120486 (1): B29H32

Semivolatiles

Batch: 1012097

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

The MS/MSD RPD for Indeno (1,2,3-cd) pyrene is not within method acceptance criteria. MS/MSD recoveries are within QC limits demonstrating good extraction performance in the sample matrix.
Affected Samples:

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F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

Due to the large number of compounds that may be analyzed by this method, it is expected that some compounds will fail to meet the criterion. If compounds fail to meet these criteria, the associated concentrations may still be determined. Hexachlorophene is outside the lower QC limits in the CCV. This compound is a poor responding compound.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1

Batch: 1013085

Three liters is the method suggested volume for sample, MS and MSD. Lab practice is to retain volume in case a QC failure requires a re-extraction. A reduced volume was used for the MS/MSD in order to retain volume.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

The CCV recovery was outside the upper QC limits (greater than 20% RSD) for Famphur indicating a potential high bias for this analyte in the samples associated with this CCV. This analyte was not detected above the reporting limit in the associated samples.
Affected Samples:
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

Samples exhibited poor surrogate recovery. Laboratory QC practices, based on CLP methodology, allow for one acid surrogate and/or one base surrogate recovery excursion without necessitating re-extraction/re-analysis. Sample extraction efficiency and compliance is demonstrated by the remaining acceptable surrogate recoveries.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5

The MS/MSD recoveries are outside the established QC limits for 4 analytes. The RPD values are not within method acceptance criteria for 2 analytes. Matrix interference is not physically evident in the sample but interference may still exist. Method performance is demonstrated by acceptable LCS recoveries. These analytes have been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

Pesticides

Batch: 1013083

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly. The dilution factor was used to elevate the MDL and RL. No dilution was performed on the sample.
Affected Samples:
F1A110510 (5): B29H72

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

The LCS recovery for delta-BHC is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

The MS and MSD recoveries for 4,4'-DDT and Endrin aldehyde are outside the upper QC limits, indicating a potential positive bias for these analytes. These analytes were not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The RPD for Endrin aldehyde is also outside QC limits. These analytes have been qualified accordingly with an "N" flag in the associated samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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SDG: SL1036

TestAmerica Laboratories, Inc.

Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

Batch: 1013084

The LCS recovery for delta-BHC is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

PAHs

Batch: 1012098

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

The MS/MSD recoveries for Chrysene are outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The RPD for the target analytes Chrysene and Pyrene are not within method acceptance criteria. This analyte has been qualified accordingly with an "N" flag in the associated samples.
Affected Samples:
F1A110510 (3): B29H66
F1A110510 (5): B29H72
F1A110510 (8): B29HD5
F1A110510 (12): B29H85
F1A110510 (14): B29H71
F1A110510 (20): B29HJ0

Two analytes detected in the associated samples were given the "S" qualifier. The "S" was used to designate positive analyte detection on the primary column that appeared questionable during spectral confirmation.
Affected Samples:
F1A110510 (3): B29H66
F1A110510 (14): B29H71

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

Reviewed and approved:

Michael Franks
St. Louis Project Manager

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-303

Date: January 12, 2011 SAF Nos. X11-016

SDG: SL1036 LOGIN No.: **F1A110510** TEST: SVOA , Pesticides

Sample No.(s) : **B29HH5**

Submitted By: Mike Franks
Phone No. 314-298-8566
Fax No. 314-298-8757

Submitted To: Sara Champoux
Phone No. 509-373-5290
Fax No. 509-373-1788

ISSUE	PROPOSED RESOLUTION
One container for both SVOA 8270 and Pesticides 8081 was received broken. There is still sufficient sample volume from the other containers received to perform both analyses	1) Proceed with analysis and note in the case narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 1/12/11
Signature and Date

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-317

Date: January 30, 2011 SAF Nos. X11-016

SDG: SL1036 LOGIN No.: **F1A110510** TEST: Volatiles

Sample No.(s) : **B29HF0, B29H71. B29H95, B29H61, B29H48**

Submitted By: Mike Franks
Phone No. 314-298-8566
Fax No. 314-298-8757

Submitted To: Sara Champoux
Phone No. 509-373-5290
Fax No. 509-373-1788

ISSUE	PROPOSED RESOLUTION
Please see below for details regarding issues with volatiles analysis for the samples listed above.	1) Report results from the out of hold re-analysis for all samples. 2) Report results from the initial in hold analysis for all samples.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution (2): report results from the initial in-hold analysis for all samples.

J. G. Douglas 1/31/2011
Signature and Date

-Sample F1A110510-013 (B29HF0) had three surrogates outside the upper QC limit, indicating a high bias. Except for Chloroform at 5.8 ppb, the associated target compounds were less than the reporting limit.
-Sample F1A110510-014 (B29H71) had two surrogates outside the lower QC limit, indicating a low bias. Except for Chloroform at 8.4 ppb, the associated client target compounds were less than the reporting limit.
-Sample F1A110510-015 (B29H95) had three surrogates outside the upper QC limit, indicating a high bias. Except for Chloroform at 2.8 ppb, the associated client target compounds were less than the reporting limit.
All 3 samples were re-analyzed outside sample hold time (1-3 days), but had surrogate recoveries within the QC limits. All 3 samples had similar result for Chloroform.
-Sample F1A110510-013 (B29HF0) reports Chloroform at 3.4 ppb, F1A110510-014 (B29H71) reports Chloroform at 5.9 ppb and F1A110510-015 (B29H95) reports Chloroform at 1.6 ppb.

-Sample F1A110510-022 (B29H61) had low surrogate recoveries and all results are ND (below the MDL) The samples was re-analyzed outside hold time with all surrogate recoveries within QC limits and all results ND (below MDL).

-Sample FIA110510-025 (B29H48): the first analysis was outside the 12 hour clock on 01/17/11, it was re-analyzed on 01/21/11 and the auto sampler jammed. The sample was re-analyzed on

01/24/11 all surrogate recoveries are within QC limits and analyzed within the 12 hour clock but its 3 days out of the holding time.

50 lbs

CHPRC CWR 86 SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-3

Page 1 of 1

Collector: MS McCoy ~~CHPRC~~	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 32 194	Ice Chest No.: 6WS-107
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0664 2539
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H32	N	W	01/10/11	1200	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H32	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H32	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H32	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Date/Time	Received By	Date/Time
MS McCoy CHPRC (Print) (Sign)	1330 JAN 10 2011	SSU-1 (Print) (Sign)	1330 JAN 10 2011
SSU-	JAN 11 2011 0700	L.D. Wall CHPRC L.D. Wall	JAN 11 2011 0700
L.D. Wall CHPRC L.D. Wall	JAN 11 2011 1400	FEDEX	
Fed Ex		NICHOLAS OWENS	1/12/11 0915

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

SL1036
CUL82

CHPRC

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-72

Page 1 of 1

Collector: JOSH ARTZER, CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 38 / 10	Ice Chest No.: GWS-188
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 7169
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: ~~7943 0384 7169~~ N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time (7 D-1) Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H90	N	W	01-9-11	1150	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H90	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H90	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H90	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
JOSH ARTZER CHPRC			1250 JAN 09 2011	SSU #1			1250 JAN 09 2011
SSU- 1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1430 JAN 10 2011	FEDEX			
FEDEX				Nicholas Davis		1/11/11	1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-104

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: GWS-188
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 7169
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: 15 ~~7943 0384 7169~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HC0	N	W	1/7/11	1254	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HC0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HC0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HC0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1430 JAN 10 2011	FEDEX			
FEDEX				NICHOLAS OWENS		1/11/11	1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By / Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-40

Page 1 of 1

Collector: FM Hall CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 381 9	Ice Chest No.: GWS-252
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.:
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H66	N	W	JAN 07 2011	0845	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H66	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H66	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H66	N	W			2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H66	N	W	JAN 07 2011	0845	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC			1300 JAN 07 2011				1300 JAN 07 2011
SSIL 1			0800 1/10/11 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				NICHOLAS DUFFUS			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-184

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64 lbs

Collector J.S. Artzer CHRPC	Contact/Requester Karen Waters-Husted	Telephone No. 376-4650
SAF No. X11-016	Sampling Origin Hanford Site	Purchase Order/Charge Code 300104ES20
Project Title NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33/96	Ice Chest No. GWS-252
Shipped To (Lab) TestAmerica St. Louis	Method of Shipment Commercial Carrier	Bill of Lading/Air Bill No. 7966 3878 9580
Protocol CERCLA	Priority: 30 Days PRIORITY	Offsite Property No. N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HK0	N	W	01/07/11	1224	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HK0	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HK0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HK0	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0800 JAN 10 2011	SE Hamaker CHRPC	0800 JAN 10 2011
SE Hamaker CHRPC	1400 JAN 10 2011	FEDEX	
FEDEX		NICHOLAS OWENS	1/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-49

Page 1 of 1

Collector CA Snyder CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 3716	**Ice Chest No.** GWS-222-4
Shipped To (Lab) TestAmerica St. Louis	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.** 7966 3883 2849
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** ~~7966 3883 2849~~ N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H72	N	W	1/7/11	0730	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H72	N	W	|	|	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H72	N	W	|	|	1x20-mL P	Activity Scan	6 Months	None
B29H72	N	W	|	|	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H72	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1430 JAN 10 2011	FEDEX			
FEDEX				NICHOLAS OWENS		1/11/11	1008

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

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CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-16

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 3919	Ice Chest No.: GWS-222-4
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 2849
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 2849~~ MA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H47	N	W	1-9-11	1100	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H47	N	W	|	|	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H47	N	W	|	|	1x20-mL P	Activity Scan	6 Months	None
B29H47	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1230 JAN 09 2011	SSU- 1			1230 JAN 09 2011
SSU- 1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1430	FEDEX			
FedEx				NICHOLAS OWENS			1/11/11 1008

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-24

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: GUS-063
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0383 5945
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0383 5945~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** j-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H56	N	W	1/7/11	0945	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H56	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H56	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H56	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			JAN 07 2011 1540	SSU- 1			JAN 07 2011 1540
SSU- 1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1420	FEDEX			
FedEx				Nicholas Owens			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-128 (64/160)

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 371 6	Ice Chest No.: GWS-063
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 79430383 5945
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0383 5945~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HD5	N	W	1/7/11	1012	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HD5	N	W	|	|	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HD5	N	W	|	|	1x20-mL P	Activity Scan	6 Months	None
B29HD5	N	W	|	|	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29HD5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By: CA Snyder CHPRC (Print / Sign) Date/Time: 1300 JAN 07 2011	Received By: SSU- 1 (Print / Sign) Date/Time: 1300 JAN 07 2011	Matrix *
Relinquished By: SSU- 1 Date/Time: 0920 JAN 10 2011	Received By: RT Sickle CHPRC Date/Time: 0920 JAN 10 2011	S = Soil; SE = Sediment; SO = Solid; SL = Sludge; W = Water; O = Oil; A = Air; DS = Drum Solid; DL = Drum Liqui; T = Tissue; WI = Wipe; L = Liquid; V = Vegetation; X = Other
Relinquished By: RT Sickle CHPRC Date/Time: 1430 JAN 10 2011	Received By: FEDEX Date/Time	
Relinquished By: FedEx Date/Time	Received By: NICHOLAS OWENS 1/11/11 1000 Date/Time	
FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-88

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 391 8	Ice Chest No.: GWS-196
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 8856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3881 8856~~ HA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB0	N	W	1/7/11	1109	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HB0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HB0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HB0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1470 JAN 10 2011	FEDEX			
FEDEX				Nicholas Owens			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-185

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61165

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 / 196	Ice Chest No.: GWS-196
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 8856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3881 8856~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HK1	N	W	01/07/11	1224	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HK1	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HK1	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HK1	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer, CHRPC			1407 JAN 07 2011	SSU-1			1407 JAN 07 2011
SSU-1			0920 JAN 10 2011	RT Sickle, CHPRC			0920 JAN 10 2011
RT Sickle, CHPRC			1430 JAN 10 2011	FEDEX			
FedEx				NICHOLAS OWENS			1/11/11 1000

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-11 (0010)

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39 / 9	Ice Chest No.: GWS-238
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3884 6856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3884 6856~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H42	N	W	1-9-11	0930	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H42	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H42	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H42	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
CA Snyder CHPRC	1230 JAN 09 2011	SSU-1	1230 JAN 09 2011
SSU-1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	0920 JAN 10 2011	FEDEX	
FedEx		Brian Daniels B-1	1/11/11 1000

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-64

Page 1 of 1

Collector: SE Hamaker CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 32 / 93	Ice Chest No.: GWS-238
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3884 6856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3884 6856~~ N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H85	N	W	01/09/11	0854	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H85	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H85	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H85	N	W			2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H85	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
SE Hamaker CHPRC	SE Hamaker	1400 JAN 09 2011	SSU #1		1400 JAN 09 2011
SSU-1		0920 JAN 10 2011	RT Sickle CHPRC		0920 JAN 10 2011
RT Sickle CHPRC		1430 JAN 10 2011	FEDEX		
FedEx			Brian Daniels		1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-136

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65/15

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 3716	Ice Chest No.: GWS-029
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3880 2776
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF0	N	W	1/7/11	1210	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HF0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HF0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HF0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-48

Page 1 of 1

Collector: CA Snyder, CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 37 / 6	Ice Chest No.: GWS-029
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3880 2776
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H71	N	W	1/7/11	0913	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H71	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H71	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29H71	N	W	/	/	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H71	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to ~~pH <2 Cool~4C~~

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-80

Page 1 of 1

Collector: JOSH ARTZER CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 38 / 10	Ice Chest No.: GWS-115
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 1296
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0384 1296~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1404 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H95	N	W	01-9-11	1010	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H95	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H95	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H95	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
JOSH ARTZER CHPRC			JAN 09 2011 1250	SSU #1			JAN 09 2011 1250
SSU-1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1430	FEDEX			
FedEx				Brian Daniels			1/11/11 1030

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-144

Page 1 of 1

Collector: JOSH ARTZER CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 38 / 10	Ice Chest No.: GWS-115
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 1296
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0384 1296~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF5	N	W	01-9-11	0904	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HF5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HF5	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HF5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
JOSH ARTZER CHPRC	1250 JAN 09 2011	SSU#1	1250 JAN 09 2011
SSU- 1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	1430 JAN 10 2011	FEDEX	
FedEx		Brian Daniels B-X	1/11/10 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-176

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74 lbs

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 196	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HJ5	N	W	01/07/11	1041	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HJ5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HJ5	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HJ5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer, CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0800 JAN 10 2011	S. Hamaker, CHPRC	0800 JAN 10 2011
S. Hamaker, CHPRC	1400 JAN 10 2011	FEDEX	
FEDEX		Brian Daniels	1/11/11 1000

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-7

Page 1 of 1

Collector: D. R. Williamson CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 37 / 7	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H37	N	W	1-9-11	1016	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H37	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H37	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29H37	N	W	/	/	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D. R. Williamson CHPRC			JAN 09 2011 / 1130	SSU #1		1/9/11	JAN 09 2011 / 1130
SSU #1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels		B-1	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-120

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 3716	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HD0	N	W	1/7/11	1113	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HD0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HD0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HD0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Received By
CA Snyder CHPRC (Print) Sign — Date/Time 1300 JAN 07 2011	SSU-1 (Print) Sign — Date/Time 1300 JAN 07 2011
SSU-1 — Date/Time 0800 JAN 10 2011	SE Hamaker CHPRC — Date/Time 0800 JAN 10 2011
SE Hamaker CHPRC — Date/Time 1400 JAN 10 2011	FEDEX — Date/Time
FEDEX — Date/Time	Brian Daniels — Date/Time 1/11/11 1000

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION — Disposal Method (e.g., Return to customer, per lab procedure, used in process) — Disposed By — Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-168

Page 1 of 1

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 196	Ice Chest No.: GWS-192
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3879 6538
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HJ0	N	W	01/07/11	0918	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HJ0	N	W	↓	↓	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer, CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0800 JAN 10 2011	SE Hamaker, CHPRC	0800 JAN 10 2011
SE Hamaker, CHPRC	1400 JAN 10 2011	FEDEX	
FedEx		Brian Daniels	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-160

Page 1 of 1

66lbs

Collector: FM Hall CHPRC F. HALL	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 381 9	Ice Chest No.: GWS-192
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3879 6538
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HH5	N	W	JAN 07 2011	1157	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HH5	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HH5	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HH5	N	W	JAN 07 2011	1157	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC			JAN 07 2011 1300	S Suttl			JAN 07 2011 1300
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

SDG# SL1036

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-32

Page 1 of 1

6/105

Collector: SE Hamaker	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: CHPRC X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 32 / 93	Ice Chest No.: GWS-16
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3882 5571
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: ~~7966 3882 5571~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H61	N	W	01/09/11	1255	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H61	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H61	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H61	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
SE Hamaker CHPRC	Scott Hamaker	1400 JAN 09 2011	SSU #1		1400 JAN 09 2011
SSU-1		0920 JAN 10 2011	RT Sickle CHPRC		0920 JAN 10 2011
RT Sickle CHPRC		1430 JAN 10 2011	FEDEX		
FedEx			Brian Daniels		1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

TestAmerica St. Louis

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-112

Page 1 of 1

Collector: SE Hamaker CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 32 193	Ice Chest No.: GWS-110
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3882 5571
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: NA ~~7966 3882 5571~~

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HC5	N	W	01/09/11	1043	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HC5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HC5	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HC5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
SE Hamaker CHPRC	1400 JAN 0 9 2011	SSU #2	1400 JAN 0 9 2011
SSU- 1	0920 JAN 1 0 2011	RT Sickle CHPRC	0920 JAN 1 0 2011
RT Sickle CHPRC	1430 JAN 1 0 2011	FEDEX	
Fedex		Brian Daniels B-1	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

SDG# SL1036

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-96

60105

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: GWS-500
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 9670
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 9670~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB5	N	W	1/7/11	1048	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HB5	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HB5	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29HB5	N	W	✓	✓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	KS Hulse		1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			1-10-11 0920	R.T. Sickle			1-10-11 0920
R.T. Sickle			1-10-11 1430	FedEx			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-17

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39/9	Ice Chest No.: GWS-500
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 9670
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 9670~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H48	N	W	1-9-11	1100	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H48	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H48	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H48	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1230 JAN 09 2011	SSU-1			JAN 09 2011 1230
SSU-1			1-10-11 0920	RT. SICKLE			1-10-11 0920
RT. SICKLE			1-10-11 1430	FedEx			
FedEx				Brian Daniels			1/11/10 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

Appendix 5

Data Validation Supporting Documentation

Appendix A - Chemical Data Validation Checklist

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: CERC11			DATA PACKAGE: VSR11-049		
VALIDATOR: Carl Schloesslin		LAB: TestAmerica		DATE: 7-14-2011	
			SDG: SL1036		
ANALYSES PERFORMED					
SW-846 8260 X		SW-846 8260 (TCLP)	SW-846 8270		SW-846 8270 (TCLP)

SAMPLES/MATRIX Water samples

B29H90, B29HC0, B29H66, B29HK0, B29H72, B29H47, B29H56, B29HD5, B29HB0, B29HK1, B29H42, B29H85, B29HF0, B29H71, B29H95, B29HF5, B29HJ5, B29H37, B29HD0, B29HJ0, B29HH5, B29H61, B29HC5, B29HB5, B29H48, B29H32

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments: None

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:

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:

Batch 1018076 MB Hits (ug/L): cyclohexanone 6.0, 1,4-dioxane 10, acetone 0.94, methylene chloride 0.20

Batch 1021181 MB Hit (ug/L): methylene chloride 0.18

Trip Blank B29H72 Hit (ug/L): methylene chloride 2.6

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:

LCS and MS/MSD recovery infractions: see attached annotated QC summary forms

Surrogate recovery infractions:
Sample B29HF0 (-013): toluene-d8 138%, dibromofluoromethane 134%, 4-bromofluorobenzene 143%
Sample B29H71 (-014): toluene-d8 69%, dibromofluoromethane 67%
Sample B29H95 (-015): toluene-d8 124%, dibromofluoromethane 118%, 4-bromofluorobenzene 128%
Sample B29HF5 (-016): toluene-d8 119%, 4-bromofluorobenzene 125%
Sample B29HJ0 (-020): toluene-d8 118%
Sample B29H61 (-022): toluene-d8 62%, dibromofluoromethane 61%, 1,2-dichloroethane-d4 58%, 4-bromofluorobenzene 128%

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:

MS/MSD RPD infractions: see attached annotated QC summary forms

6. SYSTEM PERFORMANCE (Levels D and E)

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

Internal 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: None

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: None

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:

Comments (attach additional sheets as necessary): None

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 Work Order #...: MDEVQ1AC Matrix.....: WATER
LCS Lot-Sample#: F1A180000-076
Prep Date.....: 01/17/11 Analysis Date..: 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Cyclohexanone	100	80.1	ug/L	80	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	10.0	8.90	ug/L	89	SW846 8260B
1,2-Dibromoethane	10.0	9.44	ug/L	94	SW846 8260B
trans-1,4-Dichloro-2-butene	10.0	8.86	ug/L	89	SW846 8260B
Dichlorodifluoromethane (Freon 12)	10.0	11.6	ug/L	116	SW846 8260B
Ethyl methacrylate	10.0	9.00	ug/L	90	SW846 8260B
Methyl methacrylate	10.0	9.07	ug/L	91	SW846 8260B
1,1,1,2-Tetrachloroethane	10.0	9.56	ug/L	96	SW846 8260B
Trichlorofluoromethane	10.0	9.88	ug/L	99	SW846 8260B
Diethyl ether	20.0	20.2	ug/L	101	SW846 8260B
Acetonitrile	50.0	34.9	ug/L	70	SW846 8260B
Ethyl acetate	20.0	17.0	ug/L	85	SW846 8260B
Iodomethane	10.0	8.76	ug/L	88	SW846 8260B
Vinyl acetate	10.0	8.76	ug/L	88	SW846 8260B
Acrolein	50.0	71.7 X	ug/L	143	SW846 8260B
Isobutanol	200	159	ug/L	79	SW846 8260B
Methacrylonitrile	50.0	43.6	ug/L	87	SW846 8260B
1,4-Dioxane	200	134	ug/L	67	SW846 8260B
Chloroprene	10.0	9.34	ug/L	93	SW846 8260B
cis-1,3-Dichloropropene	10.0	9.81	ug/L	98	SW846 8260B
Dibromochloromethane	10.0	9.42	ug/L	94	SW846 8260B
Chloromethane	10.0	10.2	ug/L	102	SW846 8260B
Bromomethane	10.0	9.18	ug/L	92	SW846 8260B
Chloroethane	10.0	8.63	ug/L	86	SW846 8260B
1,1-Dichloroethene	10.0	9.38	ug/L	94	SW846 8260B
1,2-Dichloroethene (total)	20.0	19.0	ug/L	95	SW846 8260B
1,2-Dichloropropane	10.0	9.72	ug/L	97	SW846 8260B
Bromodichloromethane	10.0	9.34	ug/L	93	SW846 8260B
trans-1,3-Dichloropropene	10.0	9.55	ug/L	95	SW846 8260B
2-Hexanone	10.0	7.72	ug/L	77	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDEVQ1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A180000-076

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chlorobenzene	10.0	9.70	ug/L	97	SW846 8260B
Bromoform	10.0	10.0	ug/L	100	SW846 8260B
Ethylbenzene	10.0	9.62	ug/L	96	SW846 8260B
Styrene	10.0	9.97	ug/L	100	SW846 8260B
1,1,2,2-Tetrachloroethane	10.0	10.1	ug/L	101	SW846 8260B
Allyl chloride	10.0	8.66	ug/L	87	SW846 8260B
Vinyl chloride	10.0	9.95	ug/L	99	SW846 8260B
Acetone	10.0	7.54	ug/L	75	SW846 8260B
Methylene chloride	10.0	9.10	ug/L	91	SW846 8260B
Carbon disulfide	10.0	9.47	ug/L	95	SW846 8260B
1,1-Dichloroethane	10.0	9.46	ug/L	95	SW846 8260B
2-Butanone	10.0	9.21	ug/L	92	SW846 8260B
Chloroform	10.0	9.24	ug/L	92	SW846 8260B
cis-1,2-Dichloroethene	10.0	9.50	ug/L	95	SW846 8260B
Propionitrile	50.0	43.7	ug/L	87	SW846 8260B
trans-1,2-Dichloroethene	10.0	9.46	ug/L	95	SW846 8260B
1,1,1-Trichloroethane	10.0	9.30	ug/L	93	SW846 8260B
Carbon tetrachloride	10.0	9.60	ug/L	96	SW846 8260B
1,2-Dichloroethane	10.0	8.90	ug/L	89	SW846 8260B
Benzene	10.0	9.91	ug/L	99	SW846 8260B
Trichloroethene	10.0	9.37	ug/L	94	SW846 8260B
4-Methyl-2-pentanone	10.0	8.18	ug/L	82	SW846 8260B
1,1,2-Trichloroethane	10.0	9.32	ug/L	93	SW846 8260B
Tetrachloroethene	10.0	9.54	ug/L	95	SW846 8260B
Tetrahydrofuran	50.0	47.0	ug/L	94	SW846 8260B
1,4-Dichlorobenzene	10.0	9.45	ug/L	95	SW846 8260B
1-Butanol	100	81.4	ug/L	81	SW846 8260B
Toluene	10.0	10.0	ug/L	100	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	93	(81 - 118)
Dibromofluoromethane	89	(80 - 117)
1,2-Dichloroethane-d4	84	(69 - 123)
4-Bromofluorobenzene	93	(75 - 119)

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJTH1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A210000-050
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,2-Dichloropropane	10.0	10.4	ug/L	104	SW846 8260B
Bromodichloromethane	10.0	10.3	ug/L	103	SW846 8260B
trans-1,3-Dichloropropene	10.0	9.78	ug/L	98	SW846 8260B
2-Hexanone	10.0	9.86	ug/L	99	SW846 8260B
Chlorobenzene	10.0	9.64	ug/L	96	SW846 8260B
Bromoform	10.0	9.98	ug/L	100	SW846 8260B
Ethylbenzene	10.0	9.50	ug/L	95	SW846 8260B
Styrene	10.0	10.6	ug/L	106	SW846 8260B
1,1,2,2-Tetrachloroethane	10.0	9.35	ug/L	93	SW846 8260B
Allyl chloride	10.0	10.5	ug/L	105	SW846 8260B
Cyclohexanone	100	85.6	ug/L	86	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	10.0	9.36	ug/L	94	SW846 8260B
1,2-Dibromoethane	10.0	9.58	ug/L	96	SW846 8260B
trans-1,4-Dichloro-2-butene	10.0	9.87	ug/L	99	SW846 8260B
Dichlorodifluoromethane (Freon 12)	10.0	11.9	ug/L	119	SW846 8260B
Ethyl methacrylate	10.0	10.4	ug/L	104	SW846 8260B
Methyl methacrylate	10.0	9.63	ug/L	96	SW846 8260B
1,1,1,2-Tetrachloroethane	10.0	9.91	ug/L	99	SW846 8260B
Trichlorofluoromethane	10.0	10.4	ug/L	104	SW846 8260B
Diethyl ether	20.0	21.3	ug/L	106	SW846 8260B
Acetonitrile	50.0	47.7	ug/L	95	SW846 8260B
Ethyl acetate	20.0	19.9	ug/L	99	SW846 8260B
Iodomethane	10.0	9.55	ug/L	96	SW846 8260B
Vinyl acetate	10.0	7.14	ug/L	71	SW846 8260B
Acrolein	50.0	85.2 X	ug/L	170	SW846 8260B
Isobutanol	200	196	ug/L	98	SW846 8260B
Methacrylonitrile	50.0	50.4	ug/L	101	SW846 8260B
1,4-Dioxane	200	168	ug/L	84	SW846 8260B
Chloroprene	10.0	10.8	ug/L	108	SW846 8260B
cis-1,3-Dichloropropene	10.0	10.1	ug/L	101	SW846 8260B
Dibromochloromethane	10.0	10.2	ug/L	102	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJTH1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A210000-050

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	10.0	10.6	ug/L	106	SW846 8260B
Bromomethane	10.0	10.3	ug/L	103	SW846 8260B
Chloroethane	10.0	10.2	ug/L	102	SW846 8260B
1,1-Dichloroethene	10.0	9.48	ug/L	95	SW846 8260B
1,2-Dichloroethene (total)	20.0	19.4	ug/L	97	SW846 8260B
Vinyl chloride	10.0	10.4	ug/L	104	SW846 8260B
Acetone	10.0	9.84	ug/L	98	SW846 8260B
Methylene chloride	10.0	9.36	ug/L	94	SW846 8260B
Carbon disulfide	10.0	9.86	ug/L	99	SW846 8260B
1,1-Dichloroethane	10.0	10.2	ug/L	102	SW846 8260B
2-Butanone	10.0	9.47	ug/L	95	SW846 8260B
Chloroform	10.0	9.94	ug/L	99	SW846 8260B
cis-1,2-Dichloroethene	10.0	9.81	ug/L	98	SW846 8260B
Propionitrile	50.0	48.9	ug/L	98	SW846 8260B
trans-1,2-Dichloroethene	10.0	9.59	ug/L	96	SW846 8260B
1,1,1-Trichloroethane	10.0	10.1	ug/L	101	SW846 8260B
Carbon tetrachloride	10.0	10.1	ug/L	101	SW846 8260B
1,2-Dichloroethane	10.0	10.1	ug/L	101	SW846 8260B
Benzene	10.0	10.2	ug/L	102	SW846 8260B
Trichloroethene	10.0	10.5	ug/L	105	SW846 8260B
4-Methyl-2-pentanone	10.0	10.2	ug/L	102	SW846 8260B
1,1,2-Trichloroethane	10.0	9.78	ug/L	98	SW846 8260B
Tetrachloroethene	10.0	9.67	ug/L	97	SW846 8260B
Tetrahydrofuran	50.0	55.6	ug/L	111	SW846 8260B
1,4-Dichlorobenzene	10.0	9.53	ug/L	95	SW846 8260B
1-Butanol	100	86.4	ug/L	86	SW846 8260B
Toluene	10.0	10.3	ug/L	103	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	95	(81 - 118)
Dibromofluoromethane	98	(80 - 117)
1,2-Dichloroethane-d4	98	(69 - 123)
4-Bromofluorobenzene	102	(75 - 119)

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDN561AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A210000-181
Prep Date.....: 01/21/11 **Analysis Date..:** 01/24/11
Prep Batch #...: 1021181
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Ethyl methacrylate	10.0	11.5	ug/L	115	SW846 8260B
Methyl methacrylate	10.0	10.8	ug/L	108	SW846 8260B
1,1,1,2-Tetrachloroethane	10.0	10.7	ug/L	107	SW846 8260B
Trichlorofluoromethane	10.0	8.99	ug/L	90	SW846 8260B
Diethyl ether	20.0	21.7	ug/L	108	SW846 8260B
Acetonitrile	50.0	57.1	ug/L	114	SW846 8260B
Ethyl acetate	20.0	21.3	ug/L	107	SW846 8260B
Iodomethane	10.0	9.89	ug/L	99	SW846 8260B
Vinyl acetate	10.0	11.2	ug/L	112	SW846 8260B
Acrolein	50.0	103 X	ug/L	205	SW846 8260B
Isobutanol	200	203	ug/L	101	SW846 8260B
Methacrylonitrile	50.0	53.0	ug/L	106	SW846 8260B
1,4-Dioxane	200	226	ug/L	113	SW846 8260B
Chloroprene	10.0	11.2	ug/L	112	SW846 8260B
cis-1,3-Dichloropropene	10.0	11.2	ug/L	112	SW846 8260B
Dibromochloromethane	10.0	10.9	ug/L	109	SW846 8260B
Chloromethane	10.0	11.4	ug/L	114	SW846 8260B
Bromomethane	10.0	9.58	ug/L	96	SW846 8260B
Chloroethane	10.0	9.49	ug/L	95	SW846 8260B
1,1-Dichloroethene	10.0	10.3	ug/L	103	SW846 8260B
1,2-Dichloroethene (total)	20.0	20.3	ug/L	102	SW846 8260B
1,2-Dichloropropane	10.0	11.1	ug/L	111	SW846 8260B
Bromodichloromethane	10.0	10.8	ug/L	108	SW846 8260B
trans-1,3-Dichloropropene	10.0	11.1	ug/L	111	SW846 8260B
2-Hexanone	10.0	11.3	ug/L	113	SW846 8260B
Chlorobenzene	10.0	10.2	ug/L	102	SW846 8260B
Bromoform	10.0	10.5	ug/L	105	SW846 8260B
Ethylbenzene	10.0	10.0	ug/L	100	SW846 8260B
Styrene	10.0	11.3	ug/L	113	SW846 8260B
1,1,2,2-Tetrachloroethane	10.0	10.5	ug/L	105	SW846 8260B
Allyl chloride	10.0	10.6	ug/L	106	SW846 8260B
Cyclohexanone	100	84.0	ug/L	84	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	10.0	10.4	ug/L	104	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDN561AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A210000-181

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,2-Dibromoethane	10.0	10.5	ug/L	105	SW846 8260B
trans-1,4-Dichloro-2-butene	10.0	10.7	ug/L	107	SW846 8260B
Dichlorodifluoromethane (Freon 12)	10.0	12.2	ug/L	122	SW846 8260B
Vinyl chloride	10.0	10.1	ug/L	101	SW846 8260B
Acetone	10.0	8.83	ug/L	88	SW846 8260B
Methylene chloride	10.0	9.72	ug/L	97	SW846 8260B
Carbon disulfide	10.0	10.5	ug/L	105	SW846 8260B
1,1-Dichloroethane	10.0	10.5	ug/L	105	SW846 8260B
2-Butanone	10.0	10.3	ug/L	103	SW846 8260B
Chloroform	10.0	10.3	ug/L	103	SW846 8260B
cis-1,2-Dichloroethene	10.0	10.3	ug/L	103	SW846 8260B
Propionitrile	50.0	54.6	ug/L	109	SW846 8260B
trans-1,2-Dichloroethene	10.0	10.0	ug/L	100	SW846 8260B
1,1,1-Trichloroethane	10.0	10.3	ug/L	103	SW846 8260B
Carbon tetrachloride	10.0	10.6	ug/L	106	SW846 8260B
1,2-Dichloroethane	10.0	10.3	ug/L	103	SW846 8260B
Benzene	10.0	10.6	ug/L	106	SW846 8260B
Trichloroethene	10.0	10.2	ug/L	102	SW846 8260B
4-Methyl-2-pentanone	10.0	10.8	ug/L	108	SW846 8260B
1,1,2-Trichloroethane	10.0	10.7	ug/L	107	SW846 8260B
Tetrachloroethene	10.0	10.3	ug/L	103	SW846 8260B
Tetrahydrofuran	50.0	57.1	ug/L	114	SW846 8260B
1,4-Dichlorobenzene	10.0	9.66	ug/L	97	SW846 8260B
1-Butanol	100	96.1	ug/L	96	SW846 8260B
Toluene	10.0	10.7	ug/L	107	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(81 - 118)
Dibromofluoromethane	107	(80 - 117)
1,2-Dichloroethane-d4	105	(69 - 123)
4-Bromofluorobenzene	109	(75 - 119)

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8DV1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-010 MC8DV1AG-MSD
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Bromomethane	ND	10.0	12.7	ug/L	127		SW846 8260B
	ND	10.0	15.1	ug/L	151	17	SW846 8260B
	Qualifiers:	T					
Chloroethane	ND	10.0	11.8	ug/L	118		SW846 8260B
	ND	10.0	14.2	ug/L	142	18	SW846 8260B
1,1-Dichloroethene	ND	10.0	12.9	ug/L	129		SW846 8260B
	ND	10.0	15.2	ug/L	152	16	SW846 8260B
	Qualifiers:	T					
1,2-Dichloroethene (total)	ND	20.0	26.7	ug/L	134		SW846 8260B
	ND	20.0	31.5	ug/L	158	16	SW846 8260B
	Qualifiers:	T					
cis-1,3-Dichloropropene	ND	10.0	14.3	ug/L	143		SW846 8260B
	ND	10.0	16.0	ug/L	160	12	SW846 8260B
	Qualifiers:	T					
Chloromethane	ND	10.0	14.0	ug/L	140		SW846 8260B
	ND	10.0	16.6	ug/L	166	17	SW846 8260B
	Qualifiers:	T					
1,2-Dichloropropane	ND	10.0	13.8	ug/L	138		SW846 8260B
	ND	10.0	16.0	ug/L	160	15	SW846 8260B
	Qualifiers:	T					
Bromodichloromethane	ND	10.0	13.4	ug/L	134		SW846 8260B
	ND	10.0	15.6	ug/L	156	15	SW846 8260B
	Qualifiers:	T					
trans-1,3-Dichloropropene	ND	10.0	13.8	ug/L	138		SW846 8260B
	ND	10.0	15.7	ug/L	157	13	SW846 8260B
	Qualifiers:	T					
2-Hexanone	ND	10.0	11.3	ug/L	113		SW846 8260B
	ND	10.0	13.0	ug/L	130	14	SW846 8260B
Chlorobenzene	ND	10.0	13.8	ug/L	138		SW846 8260B
	ND	10.0	15.8	ug/L	158	14	SW846 8260B
	Qualifiers:	T					
Bromoform	ND	10.0	14.5	ug/L	145		SW846 8260B
	Qualifiers:	T					
	ND	10.0	17.0	ug/L	170	16	SW846 8260B
	Qualifiers:	T					
Ethylbenzene	ND	10.0	13.4	ug/L	134		SW846 8260B
	ND	10.0	15.5	ug/L	155	15	SW846 8260B
	Qualifiers:	T					

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8DV1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-010 MC8DV1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Styrene	ND	10.0	14.2	ug/L	142		SW846 8260B
	ND	10.0	16.2	ug/L	162	13	SW846 8260B
	Qualifiers:		T				
1,1,2,2-Tetrachloroethane	ND	10.0	14.4	ug/L	144		SW846 8260B
	ND	10.0	17.2	ug/L	172	17	SW846 8260B
	Qualifiers:		T				
Dibromochloromethane	ND	10.0	13.7	ug/L	137		SW846 8260B
	ND	10.0	15.3	ug/L	153	11	SW846 8260B
	Qualifiers:		T				
Allyl chloride	ND	10.0	11.9	ug/L	119		SW846 8260B
	ND	10.0	14.3	ug/L	143	18	SW846 8260B
Cyclohexanone	ND	100	105	ug/L	105		SW846 8260B
	ND	100	142	ug/L	142	30	SW846 8260B
	Qualifiers:		T				
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	12.8	ug/L	128		SW846 8260B
	ND	10.0	14.9	ug/L	149 T	16	SW846 8260B
1,2-Dibromoethane	ND	10.0	13.9	ug/L	139		SW846 8260B
	ND	10.0	16.0	ug/L	160	14	SW846 8260B
	Qualifiers:		T				
trans-1,4-Dichloro-2-butene	ND	10.0	12.3	ug/L	123		SW846 8260B
	ND	10.0	14.9	ug/L	149	19	SW846 8260B
Dichlorodifluoromethane (Freon 12)	ND	10.0	16.4	ug/L	164		SW846 8260B
	Qualifiers:		T				
	ND	10.0	18.8	ug/L	188	13	SW846 8260B
	Qualifiers:		T				
Diethyl ether	ND	20.0	28.6	ug/L	143		SW846 8260B
	ND	20.0	34.4	ug/L	172	19	SW846 8260B
	Qualifiers:		T				
Ethyl methacrylate	ND	10.0	13.1	ug/L	131		SW846 8260B
	ND	10.0	14.9	ug/L	149	13	SW846 8260B
Methyl methacrylate	ND	10.0	13.8	ug/L	138		SW846 8260B
	ND	10.0	15.5	ug/L	155	12	SW846 8260B
	Qualifiers:		T				
1,1,1,2-Tetrachloroethane	ND	10.0	13.4	ug/L	134		SW846 8260B
	ND	10.0	15.6	ug/L	156	15	SW846 8260B
	Qualifiers:		T				
Trichlorofluoromethane	ND	10.0	13.6	ug/L	136		SW846 8260B
	ND	10.0	15.9	ug/L	159	15	SW846 8260B
	Qualifiers:		T				

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8DV1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-010 MC8DV1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acetonitrile	ND	50.0	47.8	ug/L	96		SW846 8260B
	ND	50.0	60.7	ug/L	121	24	SW846 8260B
Ethyl acetate	ND	20.0	25.0	ug/L	125		SW846 8260B
	ND	20.0	29.2	ug/L	146 T	15	SW846 8260B
Iodomethane	ND	10.0	12.2	ug/L	122		SW846 8260B
	ND	10.0	14.4	ug/L	144	16	SW846 8260B
Vinyl acetate	ND	10.0	12.6	ug/L	126		SW846 8260B
	ND	10.0	15.2	ug/L	152	18	SW846 8260B
	Qualifiers: T						
Acrolein	ND	50.0	104	ug/L	209		SW846 8260B
	Qualifiers: T						
	ND	50.0	121	ug/L	242	15	SW846 8260B
	Qualifiers: T						
Isobutanol	ND	200	241	ug/L	121		SW846 8260B
	ND	200	287	ug/L	144	17	SW846 8260B
Methacrylonitrile	ND	50.0	63.2	ug/L	126		SW846 8260B
	ND	50.0	75.4	ug/L	151	18	SW846 8260B
	Qualifiers: T						
1,4-Dioxane	ND	200	196	ug/L	98		SW846 8260B
	ND	200	266	ug/L	133	30	SW846 8260B
Chloroprene	ND	10.0	12.8	ug/L	128		SW846 8260B
	ND	10.0	15.0	ug/L	150	15	SW846 8260B
Vinyl chloride	ND	10.0	13.6	ug/L	136		SW846 8260B
	ND	10.0	16.2	ug/L	162	18	SW846 8260B
	Qualifiers: T						
Acetone	1.2	10.0	10.3	ug/L	90		SW846 8260B
	1.2	10.0	13.0	ug/L	118	24	SW846 8260B
Methylene chloride	ND	10.0	12.6	ug/L	126		SW846 8260B
	ND	10.0	15.2	ug/L	152	19	SW846 8260B
	Qualifiers: T						
Carbon disulfide	ND	10.0	12.8	ug/L	128		SW846 8260B
	ND	10.0	15.2	ug/L	152	17	SW846 8260B
	Qualifiers: T						
1,1-Dichloroethane	ND	10.0	13.2	ug/L	132		SW846 8260B
	ND	10.0	15.4	ug/L	154	15	SW846 8260B
	Qualifiers: T						
2-Butanone	ND	10.0	13.4	ug/L	134		SW846 8260B
	ND	10.0	16.1	ug/L	161	19	SW846 8260B
	Qualifiers: T						
Chloroform	0.39	10.0	13.3	ug/L	129		SW846 8260B
	0.39	10.0	16.4	ug/L	161	21	SW846 8260B
	Qualifiers: T						

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8DV1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-010 MC8DV1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
cis-1,2-Dichloroethene	ND	10.0	13.6	ug/L	136		SW846 8260B
	ND	10.0	15.9	ug/L	159	15	SW846 8260B
		Qualifiers:	T				
Propionitrile	ND	50.0	62.0	ug/L	124		SW846 8260B
	ND	50.0	78.3	ug/L	157	23	SW846 8260B
		Qualifiers:	T				
trans-1,2-Dichloroethene	ND	10.0	13.1	ug/L	131		SW846 8260B
	ND	10.0	15.6	ug/L	156	18	SW846 8260B
		Qualifiers:	T				
1,1,1-Trichloroethane	ND	10.0	13.0	ug/L	130		SW846 8260B
	ND	10.0	15.4	ug/L	154	17	SW846 8260B
		Qualifiers:	T				
Carbon tetrachloride	ND	10.0	13.3	ug/L	133		SW846 8260B
	ND	10.0	15.2	ug/L	152	13	SW846 8260B
		Qualifiers:	T				
1,2-Dichloroethane	ND	10.0	12.6	ug/L	126		SW846 8260B
	ND	10.0	15.0	ug/L	150	17	SW846 8260B
		Qualifiers:	T				
Benzene	ND	10.0	14.0	ug/L	140		SW846 8260B
	ND	10.0	16.4	ug/L	164	16	SW846 8260B
		Qualifiers:	T				
Trichloroethene	ND	10.0	13.2	ug/L	132		SW846 8260B
	ND	10.0	15.5	ug/L	155	16	SW846 8260B
		Qualifiers:	T				
4-Methyl-2-pentanone	ND	10.0	12.3	ug/L	123		SW846 8260B
	ND	10.0	13.9	ug/L	139	12	SW846 8260B
1,1,2-Trichloroethane	ND	10.0	13.4	ug/L	134		SW846 8260B
	ND	10.0	15.8	ug/L	158	16	SW846 8260B
		Qualifiers:	T				
Tetrachloroethene	0.74	10.0	14.0	ug/L	132		SW846 8260B
	0.74	10.0	16.2	ug/L	155	15	SW846 8260B
		Qualifiers:	T				
Tetrahydrofuran	ND	50.0	71.3	ug/L	143		SW846 8260B
	ND	50.0	83.3	ug/L	167	16	SW846 8260B
		Qualifiers:	T				
1,4-Dichlorobenzene	ND	10.0	13.6	ug/L	136		SW846 8260B
		Qualifiers:	T				
	ND	10.0	16.3	ug/L	163	18	SW846 8260B
		Qualifiers:	T				
1-Butanol	ND	100	103	ug/L	103		SW846 8260B
	ND	100	146	ug/L	146	34	SW846 8260B
Toluene	ND	10.0	13.9	ug/L	139		SW846 8260B
	ND	10.0	16.2	ug/L	162	16	SW846 8260B
		Qualifiers:	T				

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8DV1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-010 MC8DV1AG-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	124 *	(76 - 116)
	111	(76 - 116)
Dibromofluoromethane	124 *	(78 - 116)
	111	(78 - 116)
1,2-Dichloroethane-d4	115	(65 - 126)
	105	(65 - 126)
4-Bromofluorobenzene	126 *	(67 - 122)
	114	(67 - 122)

NOTE(S):

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

Bold print denotes control parameters

T Spike sample recovery is outside control limits.

* Surrogate recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C51AH-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-002 MC8C51AJ-MSD
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
cis-1,3-Dichloropropene	ND	10.0	9.72	ug/L	97		SW846 8260B
	ND	10.0	8.91	ug/L	89	8.8	SW846 8260B
Chloromethane	ND	10.0	10.3	ug/L	103		SW846 8260B
	ND	10.0	10.0	ug/L	100	3.0	SW846 8260B
Bromomethane	ND	10.0	9.62	ug/L	96		SW846 8260B
	ND	10.0	9.26	ug/L	93	3.8	SW846 8260B
Chloroethane	ND	10.0	10.0	ug/L	100		SW846 8260B
	ND	10.0	9.12	ug/L	91	9.4	SW846 8260B
1,1-Dichloroethene	ND	10.0	8.88	ug/L	89		SW846 8260B
	ND	10.0	8.63	ug/L	86	2.8	SW846 8260B
1,2-Dichloroethene (total)	ND	20.0	18.8	ug/L	94		SW846 8260B
	ND	20.0	17.8	ug/L	89	5.2	SW846 8260B
1,2-Dichloropropane	ND	10.0	10.3	ug/L	103		SW846 8260B
	ND	10.0	9.29	ug/L	93	11	SW846 8260B
Bromodichloromethane	ND	10.0	9.78	ug/L	98		SW846 8260B
	ND	10.0	9.10	ug/L	91	7.2	SW846 8260B
trans-1,3-Dichloropropene	ND	10.0	9.80	ug/L	98		SW846 8260B
	ND	10.0	8.85	ug/L	88	10	SW846 8260B
2-Hexanone	ND	10.0	10.1	ug/L	101		SW846 8260B
	ND	10.0	9.04	ug/L	90	11	SW846 8260B
Chlorobenzene	ND	10.0	9.46	ug/L	95		SW846 8260B
	ND	10.0	8.72	ug/L	87	8.1	SW846 8260B
Bromoform	ND	10.0	9.62	ug/L	96		SW846 8260B
	ND	10.0	8.68	ug/L	87	10	SW846 8260B
Ethylbenzene	ND	10.0	9.30	ug/L	93		SW846 8260B
	ND	10.0	8.46	ug/L	85	9.5	SW846 8260B
Styrene	ND	10.0	10.5	ug/L	105		SW846 8260B
	ND	10.0	9.74	ug/L	97	7.1	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	10.0	9.90	ug/L	99		SW846 8260B
	ND	10.0	8.63	ug/L	86	14	SW846 8260B
Dibromochloromethane	ND	10.0	9.66	ug/L	97		SW846 8260B
	ND	10.0	8.97	ug/L	90	7.4	SW846 8260B
Allyl chloride	ND	10.0	9.84	ug/L	98		SW846 8260B
	ND	10.0	9.40	ug/L	94	4.6	SW846 8260B
Cyclohexanone	ND	100	61.6	ug/L	62		SW846 8260B
	ND	100	62.4	ug/L	62	1.2	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C51AH-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-002 MC8C51AJ-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	8.72	ug/L	87		SW846 8260B
	ND	10.0	8.16	ug/L	82	6.6	SW846 8260B
1,2-Dibromoethane	ND	10.0	9.66	ug/L	97		SW846 8260B
	ND	10.0	8.92	ug/L	89	7.9	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	10.0	9.73	ug/L	97		SW846 8260B
	ND	10.0	9.33	ug/L	93	4.2	SW846 8260B
Dichlorodifluoromethane (Freon 12)	ND	10.0	10.6	ug/L	106		SW846 8260B
	ND	10.0	10.6	ug/L	106	0.18	SW846 8260B
Diethyl ether	ND	20.0	20.4	ug/L	102		SW846 8260B
	ND	20.0	18.5	ug/L	93	9.5	SW846 8260B
Ethyl methacrylate	ND	10.0	10.5	ug/L	105		SW846 8260B
	ND	10.0	9.32	ug/L	93	12	SW846 8260B
Methyl methacrylate	ND	10.0	9.86	ug/L	99		SW846 8260B
	ND	10.0	9.11	ug/L	91	7.9	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	10.0	9.44	ug/L	94		SW846 8260B
	ND	10.0	8.83	ug/L	88	6.6	SW846 8260B
Trichlorofluoromethane	ND	10.0	9.04	ug/L	90		SW846 8260B
	ND	10.0	8.48	ug/L	85	6.4	SW846 8260B
Acetonitrile	ND	50.0	51.1	ug/L	102		SW846 8260B
	ND	50.0	50.2	ug/L	100	1.9	SW846 8260B
Ethyl acetate	ND	20.0	20.2	ug/L	101		SW846 8260B
	ND	20.0	18.6	ug/L	93	7.9	SW846 8260B
Iodomethane	ND	10.0	8.97	ug/L	90		SW846 8260B
	ND	10.0	8.43	ug/L	84	6.2	SW846 8260B
Vinyl acetate	ND	10.0	10.9	ug/L	109		SW846 8260B
	ND	10.0	10.4	ug/L	104	4.4	SW846 8260B
Acrolein	ND	50.0	89.8	ug/L	180		SW846 8260B
		Qualifiers:	T				
	ND	50.0	80.8	ug/L	162	11	SW846 8260B
		Qualifiers:	T				
Isobutanol	ND	200	197	ug/L	99		SW846 8260B
	ND	200	188	ug/L	94	4.9	SW846 8260B
Methacrylonitrile	ND	50.0	51.5	ug/L	103		SW846 8260B
	ND	50.0	47.5	ug/L	95	8.0	SW846 8260B
1,4-Dioxane	ND	200	187	ug/L	93		SW846 8260B
	ND	200	206	ug/L	103	9.6	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C51AH-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-002 MC8C51AJ-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Chloroprene	ND	10.0	9.85	ug/L	99		SW846 8260B
	ND	10.0	9.35	ug/L	93	5.3	SW846 8260B
Vinyl chloride	ND	10.0	9.67	ug/L	97		SW846 8260B
	ND	10.0	9.31	ug/L	93	3.8	SW846 8260B
Acetone	ND	10.0	8.99	ug/L	90		SW846 8260B
	ND	10.0	8.59	ug/L	86	4.6	SW846 8260B
Methylene chloride	ND	10.0	8.65	ug/L	86		SW846 8260B
	ND	10.0	8.48	ug/L	85	1.9	SW846 8260B
Carbon disulfide	ND	10.0	9.31	ug/L	93		SW846 8260B
	ND	10.0	8.67	ug/L	87	7.2	SW846 8260B
1,1-Dichloroethane	ND	10.0	9.86	ug/L	99		SW846 8260B
	ND	10.0	9.11	ug/L	91	8.0	SW846 8260B
2-Butanone	ND	10.0	8.71	ug/L	87		SW846 8260B
	ND	10.0	8.13	ug/L	81	6.9	SW846 8260B
Chloroform	0.31	10.0	9.65	ug/L	93		SW846 8260B
	0.31	10.0	9.46	ug/L	92	1.9	SW846 8260B
cis-1,2-Dichloroethene	ND	10.0	9.58	ug/L	96		SW846 8260B
	ND	10.0	9.09	ug/L	91	5.3	SW846 8260B
Propionitrile	ND	50.0	49.5	ug/L	99		SW846 8260B
	ND	50.0	48.5	ug/L	97	2.1	SW846 8260B
trans-1,2-Dichloroethene	ND	10.0	9.21	ug/L	92		SW846 8260B
	ND	10.0	8.75	ug/L	87	5.2	SW846 8260B
1,1,1-Trichloroethane	ND	10.0	9.68	ug/L	97		SW846 8260B
	ND	10.0	8.85	ug/L	89	8.9	SW846 8260B
Carbon tetrachloride	ND	10.0	9.46	ug/L	95		SW846 8260B
	ND	10.0	8.69	ug/L	87	8.6	SW846 8260B
1,2-Dichloroethane	ND	10.0	9.67	ug/L	97		SW846 8260B
	ND	10.0	9.30	ug/L	93	3.8	SW846 8260B
Benzene	ND	10.0	10.0	ug/L	100		SW846 8260B
	ND	10.0	9.24	ug/L	92	8.2	SW846 8260B
Trichloroethene	ND	10.0	9.17	ug/L	92		SW846 8260B
	ND	10.0	8.53	ug/L	85	7.3	SW846 8260B
4-Methyl-2-pentanone	ND	10.0	9.52	ug/L	95		SW846 8260B
	ND	10.0	8.50	ug/L	85	11	SW846 8260B
1,1,2-Trichloroethane	ND	10.0	9.79	ug/L	98		SW846 8260B
	ND	10.0	9.10	ug/L	91	7.2	SW846 8260B
Tetrachloroethene	0.24	10.0	8.94	ug/L	87		SW846 8260B
	0.24	10.0	8.24	ug/L	80	8.2	SW846 8260B
Tetrahydrofuran	ND	50.0	53.1	ug/L	106		SW846 8260B
	ND	50.0	49.1	ug/L	98	7.9	SW846 8260B
1,4-Dichlorobenzene	ND	10.0	9.11	ug/L	91		SW846 8260B
	ND	10.0	8.43	ug/L	84	7.8	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C51AH-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-002 MC8C51AJ-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1-Butanol	**ND**	**100**	**76.0**	**ug/L**	**76**		**SW846 8260B**
	ND	**100**	**80.3**	**ug/L**	**80**	**5.5**	**SW846 8260B**
Toluene	**ND**	**10.0**	**9.90**	**ug/L**	**99**		**SW846 8260B**
	ND	**10.0**	**9.19**	**ug/L**	**92**	**7.4**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	91	(76 - 116)
	83	(76 - 116)
Dibromofluoromethane	96	(78 - 116)
	89	(78 - 116)
1,2-Dichloroethane-d4	96	(65 - 126)
	89	(65 - 126)
4-Bromofluorobenzene	96	(67 - 122)
	86	(67 - 122)

NOTE(S):

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

Bold print denotes control parameters

T Spike sample recovery is outside control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJVL1AN-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A210414-001 MDJVL1AP-MSD
Date Sampled...: 01/18/11 **Date Received..:** 01/20/11
Prep Date.....: 01/21/11 **Analysis Date..:** 01/24/11
Prep Batch #...: 1021181
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
cis-1,3-Dichloropropene	ND	10.0	7.35	ug/L	74		SW846 8260B
	ND	10.0	7.26	ug/L	73	1.2	SW846 8260B
Chloromethane	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.3	ug/L	103	4.8	SW846 8260B
Bromomethane	ND	10.0	7.68	ug/L	77		SW846 8260B
	ND	10.0	7.76	ug/L	78	0.97	SW846 8260B
Chloroethane	ND	10.0	8.98	ug/L	90		SW846 8260B
	ND	10.0	9.06	ug/L	91	0.82	SW846 8260B
1,1-Dichloroethene	ND	10.0	9.75	ug/L	97		SW846 8260B
	ND	10.0	9.77	ug/L	98	0.25	SW846 8260B
1,2-Dichloroethene (total)	ND	20.0	19.7	ug/L	98		SW846 8260B
	ND	20.0	19.4	ug/L	97	1.5	SW846 8260B
1,2-Dichloropropane	ND	10.0	11.4	ug/L	114		SW846 8260B
	ND	10.0	11.0	ug/L	110	3.6	SW846 8260B
Bromodichloromethane	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.3	ug/L	103	4.6	SW846 8260B
trans-1,3-Dichloropropene	ND	10.0	7.04	ug/L	70		SW846 8260B
	ND	10.0	7.11	ug/L	71	0.96	SW846 8260B
2-Hexanone	ND	10.0	12.0	ug/L	120		SW846 8260B
	ND	10.0	11.0	ug/L	110	8.7	SW846 8260B
Chlorobenzene	ND	10.0	9.92	ug/L	99		SW846 8260B
	ND	10.0	9.56	ug/L	96	3.7	SW846 8260B
Bromoform	ND	10.0	10.1	ug/L	101		SW846 8260B
	ND	10.0	9.85	ug/L	99	2.1	SW846 8260B
Ethylbenzene	ND	10.0	9.27	ug/L	93		SW846 8260B
	ND	10.0	9.07	ug/L	91	2.2	SW846 8260B
Styrene	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.5	ug/L	105	3.3	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	10.0	10.5	ug/L	105		SW846 8260B
	ND	10.0	10.5	ug/L	105	0.66	SW846 8260B
Dibromochloromethane	ND	10.0	10.7	ug/L	107		SW846 8260B
	ND	10.0	10.7	ug/L	107	0.09	SW846 8260B
Allyl chloride	ND	10.0	7.22	ug/L	72		SW846 8260B
	ND	10.0	6.98	ug/L	70	3.4	SW846 8260B
Cyclohexanone	ND	100	70.3	ug/L	70		SW846 8260B
	ND	100	78.2	ug/L	78	11	SW846 8260B

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJVL1AN-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A210414-001 MDJVL1AP-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	9.73	ug/L	97		SW846 8260B
	ND	10.0	10.3	ug/L	103	6.0	SW846 8260B
1,2-Dibromoethane	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.5	ug/L	105	3.7	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	10.0	4.43	ug/L	44		SW846 8260B
	ND	10.0	4.66	ug/L	47	5.0	SW846 8260B
Dichlorodifluoromethane (Freon 12)	ND	10.0	10.7	ug/L	107		SW846 8260B
	ND	10.0	11.0	ug/L	110	3.6	SW846 8260B
Diethyl ether	ND	20.0	22.6	ug/L	113		SW846 8260B
	ND	20.0	23.1	ug/L	116	2.3	SW846 8260B
Ethyl methacrylate	ND	10.0	12.4	ug/L	124		SW846 8260B
	ND	10.0	11.7	ug/L	117	6.3	SW846 8260B
Methyl methacrylate	ND	10.0	11.4	ug/L	114		SW846 8260B
	ND	10.0	11.2	ug/L	112	2.1	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	10.0	10.0	ug/L	100		SW846 8260B
	ND	10.0	9.86	ug/L	99	1.9	SW846 8260B
Trichlorofluoromethane	ND	10.0	7.63	ug/L	76		SW846 8260B
	ND	10.0	7.86	ug/L	79	3.0	SW846 8260B
Acetonitrile	ND	50.0	53.6	ug/L	107		SW846 8260B
	ND	50.0	56.4	ug/L	113	5.1	SW846 8260B
Ethyl acetate	ND	20.0	17.4	ug/L	87		SW846 8260B
	ND	20.0	16.5	ug/L	82	5.6	SW846 8260B
Iodomethane	ND	10.0	9.01	ug/L	90		SW846 8260B
	ND	10.0	9.16	ug/L	92	1.6	SW846 8260B
Vinyl acetate	ND	10.0	8.20	ug/L	82		SW846 8260B
	ND	10.0	8.07	ug/L	81	1.7	SW846 8260B
Acrolein	ND	50.0	76.3	ug/L	153		SW846 8260B
		Qualifiers:	T				
	ND	50.0	72.8	ug/L	146	4.6	SW846 8260B
Isobutanol	ND	200	229	ug/L	114		SW846 8260B
	ND	200	215	ug/L	107	6.4	SW846 8260B
Methacrylonitrile	ND	50.0	57.1	ug/L	114		SW846 8260B
	ND	50.0	55.9	ug/L	112	2.2	SW846 8260B
1,4-Dioxane	ND	200	198	ug/L	99		SW846 8260B
	ND	200	238	ug/L	119	18	SW846 8260B
Chloroprene	ND	10.0	10.4	ug/L	104		SW846 8260B
	ND	10.0	10.2	ug/L	102	2.2	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJVL1AN-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A210414-001 MDJVL1AP-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Vinyl chloride	ND	10.0	9.75	ug/L	97		SW846 8260B
	ND	10.0	9.49	ug/L	95	2.7	SW846 8260B
Acetone	ND	10.0	12.4	ug/L	124		SW846 8260B
	ND	10.0	11.4	ug/L	114	8.5	SW846 8260B
Methylene chloride	ND	10.0	9.67	ug/L	97		SW846 8260B
	ND	10.0	9.73	ug/L	97	0.68	SW846 8260B
Carbon disulfide	ND	10.0	9.19	ug/L	92		SW846 8260B
	ND	10.0	8.93	ug/L	89	2.9	SW846 8260B
1,1-Dichloroethane	ND	10.0	10.3	ug/L	103		SW846 8260B
	ND	10.0	10.2	ug/L	102	1.5	SW846 8260B
2-Butanone	ND	10.0	10.4	ug/L	104		SW846 8260B
	ND	10.0	11.0	ug/L	110	5.7	SW846 8260B
Chloroform	ND	10.0	10.4	ug/L	104		SW846 8260B
	ND	10.0	9.83	ug/L	98	6.0	SW846 8260B
cis-1,2-Dichloroethene	ND	10.0	10.2	ug/L	102		SW846 8260B
	ND	10.0	10.1	ug/L	101	0.09	SW846 8260B
Propionitrile	ND	50.0	56.5	ug/L	113		SW846 8260B
	ND	50.0	56.4	ug/L	113	0.03	SW846 8260B
trans-1,2-Dichloroethene	ND	10.0	9.52	ug/L	95		SW846 8260B
	ND	10.0	9.24	ug/L	92	3.1	SW846 8260B
1,1,1-Trichloroethane	ND	10.0	9.76	ug/L	98		SW846 8260B
	ND	10.0	9.56	ug/L	96	2.1	SW846 8260B
Carbon tetrachloride	ND	10.0	9.78	ug/L	98		SW846 8260B
	ND	10.0	9.64	ug/L	96	1.5	SW846 8260B
1,2-Dichloroethane	ND	10.0	10.5	ug/L	105		SW846 8260B
	ND	10.0	10.1	ug/L	101	3.4	SW846 8260B
Benzene	ND	10.0	10.7	ug/L	107		SW846 8260B
	ND	10.0	10.5	ug/L	105	2.1	SW846 8260B
Trichloroethene	ND	10.0	9.40	ug/L	94		SW846 8260B
	ND	10.0	9.38	ug/L	94	0.21	SW846 8260B
4-Methyl-2-pentanone	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.5	ug/L	105	3.1	SW846 8260B
1,1,2-Trichloroethane	ND	10.0	11.0	ug/L	110		SW846 8260B
	ND	10.0	10.5	ug/L	105	4.9	SW846 8260B
Tetrachloroethene	ND	10.0	8.87	ug/L	89		SW846 8260B
	ND	10.0	8.71	ug/L	87	1.9	SW846 8260B
Tetrahydrofuran	ND	50.0	60.7	ug/L	121		SW846 8260B
	ND	50.0	62.2	ug/L	124	2.4	SW846 8260B
1,4-Dichlorobenzene	ND	10.0	8.89	ug/L	89		SW846 8260B
	ND	10.0	8.77	ug/L	88	1.4	SW846 8260B
1-Butanol	ND	100	103	ug/L	103		SW846 8260B
	ND	100	102	ug/L	102	0.78	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJVL1AN-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A210414-001 MDJVL1AP-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Toluene	**0.092**	**10.0**	**10.3**	**ug/L**	**102**		**SW846 8260B**
	0.092	**10.0**	**10.0**	**ug/L**	**99**	**2.6**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	98	(76 - 116)
	94	(76 - 116)
Dibromofluoromethane	102	(78 - 116)
	99	(78 - 116)
1,2-Dichloroethane-d4	100	(65 - 126)
	98	(65 - 126)
4-Bromofluorobenzene	104	(67 - 122)
	100	(67 - 122)

NOTE(S):

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

Bold print denotes control parameters

T Spike sample recovery is outside control limits.

Appendix 6

Additional Documentation Requested By Client

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDEVQ1AA **Matrix.....:** WATER
MB Lot-Sample #: F1A180000-076

Prep Date.....: 01/17/11
Analysis Date..: 01/17/11 **Prep Batch #...:** 1018076
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Bromomethane	ND	2.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroprene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
Cyclohexanone	**6.0 J**	**20**	**ug/L**	**SW846 8260B**
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	2.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	**10 J**	**80**	**ug/L**	**SW846 8260B**
Ethyl acetate	ND	2.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Diethyl ether	ND	1.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Iodomethane	ND	2.0	ug/L	SW846 8260B
Isobutanol	ND	80	ug/L	SW846 8260B
Methacrylonitrile	ND	5.0	ug/L	SW846 8260B
Methyl methacrylate	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Acetonitrile	ND	10	ug/L	SW846 8260B
Acrolein	ND	10	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDEVQ1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Acetone	**0.94 J**	**2.0**	**ug/L**	**SW846 8260B**
Methylene chloride	**0.20 J**	**1.0**	**ug/L**	**SW846 8260B**
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Propionitrile	ND	5.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	10	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1-Butanol	ND	40	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	99	(76 - 116)
Dibromofluoromethane	94	(78 - 116)
1,2-Dichloroethane-d4	91	(65 - 126)
4-Bromofluorobenzene	99	(67 - 122)

NOTE(S):

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

J Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

Method Blank Report

GC/MS Volatiles

Lot-Sample #: F1A180000-076 B **Work Order #:** MDEVQ1AA **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJTH1AA **Matrix.....:** WATER
MB Lot-Sample #: F1A210000-050

Prep Date.....: 01/19/11
Analysis Date..: 01/19/11 **Prep Batch #...:** 1021050
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetonitrile	ND	10	ug/L	SW846 8260B
Acrolein	ND	10	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroprene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
Cyclohexanone	ND	20	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	2.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	80	ug/L	SW846 8260B
Ethyl acetate	ND	2.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Diethyl ether	ND	1.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Iodomethane	ND	2.0	ug/L	SW846 8260B
Isobutanol	ND	80	ug/L	SW846 8260B
Methacrylonitrile	ND	5.0	ug/L	SW846 8260B
Methyl methacrylate	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJTH1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Acetone	ND	2.0	ug/L	SW846 8260B
Methylene chloride	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Propionitrile	ND	5.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	10	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1-Butanol	ND	40	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	111	(76 - 116)
Dibromofluoromethane	91	(78 - 116)
1,2-Dichloroethane-d4	96	(65 - 126)
4-Bromofluorobenzene	108	(67 - 122)

NOTE(S):

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

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDN561AA **Matrix.....:** WATER
MB Lot-Sample #: F1A210000-181

Prep Date.....: 01/21/11
Analysis Date..: 01/24/11 **Prep Batch #...:** 1021181
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetonitrile	ND	10	ug/L	SW846 8260B
Acrolein	ND	10	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Chloroprene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
Allyl chloride	ND	2.0	ug/L	SW846 8260B
Cyclohexanone	ND	20	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Dibromomethane	ND	1.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	2.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	2.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	2.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
1,4-Dioxane	ND	80	ug/L	SW846 8260B
Ethyl acetate	ND	2.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Diethyl ether	ND	1.0	ug/L	SW846 8260B
Ethyl methacrylate	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Iodomethane	ND	2.0	ug/L	SW846 8260B
Isobutanol	ND	80	ug/L	SW846 8260B
Methacrylonitrile	ND	5.0	ug/L	SW846 8260B
Methyl methacrylate	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
Vinyl acetate	ND	2.0	ug/L	SW846 8260B

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDN561AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Vinyl chloride	ND	2.0	ug/L	SW846 8260B
Acetone	ND	2.0	ug/L	SW846 8260B
Methylene chloride	**0.18 J**	**1.0**	**ug/L**	**SW846 8260B**
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Propionitrile	ND	5.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	10	ug/L	SW846 8260B
Xylenes (total)	ND	3.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1-Butanol	ND	40	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	112	(76 - 116)
Dibromofluoromethane	95	(78 - 116)
1,2-Dichloroethane-d4	99	(65 - 126)
4-Bromofluorobenzene	115	(67 - 122)

NOTE(S):

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

J Estimated result. Result is less than RL.

CH2M Hill Plateau Remediation DOE RL

Method Blank Report

GC/MS Volatiles

Lot-Sample #: F1A210000-181 B **Work Order #:** MDN561AA **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDEVQ1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A180000-076
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Cyclohexanone	100	80.1	ug/L	80	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	10.0	8.90	ug/L	89	SW846 8260B
1,2-Dibromoethane	10.0	9.44	ug/L	94	SW846 8260B
trans-1,4-Dichloro-2-butene	10.0	8.86	ug/L	89	SW846 8260B
Dichlorodifluoromethane (Freon 12)	10.0	11.6	ug/L	116	SW846 8260B
Ethyl methacrylate	10.0	9.00	ug/L	90	SW846 8260B
Methyl methacrylate	10.0	9.07	ug/L	91	SW846 8260B
1,1,1,2-Tetrachloroethane	10.0	9.56	ug/L	96	SW846 8260B
Trichlorofluoromethane	10.0	9.88	ug/L	99	SW846 8260B
Diethyl ether	20.0	20.2	ug/L	101	SW846 8260B
Acetonitrile	50.0	34.9	ug/L	70	SW846 8260B
Ethyl acetate	20.0	17.0	ug/L	85	SW846 8260B
Iodomethane	10.0	8.76	ug/L	88	SW846 8260B
Vinyl acetate	10.0	8.76	ug/L	88	SW846 8260B
Acrolein	50.0	71.7 X	ug/L	143	SW846 8260B
Isobutanol	200	159	ug/L	79	SW846 8260B
Methacrylonitrile	50.0	43.6	ug/L	87	SW846 8260B
1,4-Dioxane	200	134	ug/L	67	SW846 8260B
Chloroprene	10.0	9.34	ug/L	93	SW846 8260B
cis-1,3-Dichloropropene	10.0	9.81	ug/L	98	SW846 8260B
Dibromochloromethane	10.0	9.42	ug/L	94	SW846 8260B
Chloromethane	10.0	10.2	ug/L	102	SW846 8260B
Bromomethane	10.0	9.18	ug/L	92	SW846 8260B
Chloroethane	10.0	8.63	ug/L	86	SW846 8260B
1,1-Dichloroethene	10.0	9.38	ug/L	94	SW846 8260B
1,2-Dichloroethene (total)	20.0	19.0	ug/L	95	SW846 8260B
1,2-Dichloropropane	10.0	9.72	ug/L	97	SW846 8260B
Bromodichloromethane	10.0	9.34	ug/L	93	SW846 8260B
trans-1,3-Dichloropropene	10.0	9.55	ug/L	95	SW846 8260B
2-Hexanone	10.0	7.72	ug/L	77	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDEVQ1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A180000-076

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chlorobenzene	10.0	9.70	ug/L	97	SW846 8260B
Bromoform	10.0	10.0	ug/L	100	SW846 8260B
Ethylbenzene	10.0	9.62	ug/L	96	SW846 8260B
Styrene	10.0	9.97	ug/L	100	SW846 8260B
1,1,2,2-Tetrachloroethane	10.0	10.1	ug/L	101	SW846 8260B
Allyl chloride	10.0	8.66	ug/L	87	SW846 8260B
Vinyl chloride	10.0	9.95	ug/L	99	SW846 8260B
Acetone	10.0	7.54	ug/L	75	SW846 8260B
Methylene chloride	10.0	9.10	ug/L	91	SW846 8260B
Carbon disulfide	10.0	9.47	ug/L	95	SW846 8260B
1,1-Dichloroethane	10.0	9.46	ug/L	95	SW846 8260B
2-Butanone	10.0	9.21	ug/L	92	SW846 8260B
Chloroform	10.0	9.24	ug/L	92	SW846 8260B
cis-1,2-Dichloroethene	10.0	9.50	ug/L	95	SW846 8260B
Propionitrile	50.0	43.7	ug/L	87	SW846 8260B
trans-1,2-Dichloroethene	10.0	9.46	ug/L	95	SW846 8260B
1,1,1-Trichloroethane	10.0	9.30	ug/L	93	SW846 8260B
Carbon tetrachloride	10.0	9.60	ug/L	96	SW846 8260B
1,2-Dichloroethane	10.0	8.90	ug/L	89	SW846 8260B
Benzene	10.0	9.91	ug/L	99	SW846 8260B
Trichloroethene	10.0	9.37	ug/L	94	SW846 8260B
4-Methyl-2-pentanone	10.0	8.18	ug/L	82	SW846 8260B
1,1,2-Trichloroethane	10.0	9.32	ug/L	93	SW846 8260B
Tetrachloroethene	10.0	9.54	ug/L	95	SW846 8260B
Tetrahydrofuran	50.0	47.0	ug/L	94	SW846 8260B
1,4-Dichlorobenzene	10.0	9.45	ug/L	95	SW846 8260B
1-Butanol	100	81.4	ug/L	81	SW846 8260B
Toluene	10.0	10.0	ug/L	100	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	93	(81 - 118)
Dibromofluoromethane	89	(80 - 117)
1,2-Dichloroethane-d4	84	(69 - 123)
4-Bromofluorobenzene	93	(75 - 119)

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDEVQ1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A180000-076

NOTE(S):

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

Bold print denotes control parameters

X Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJTH1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A210000-050
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,2-Dichloropropane	10.0	10.4	ug/L	104	SW846 8260B
Bromodichloromethane	10.0	10.3	ug/L	103	SW846 8260B
trans-1,3-Dichloropropene	10.0	9.78	ug/L	98	SW846 8260B
2-Hexanone	10.0	9.86	ug/L	99	SW846 8260B
Chlorobenzene	10.0	9.64	ug/L	96	SW846 8260B
Bromoform	10.0	9.98	ug/L	100	SW846 8260B
Ethylbenzene	10.0	9.50	ug/L	95	SW846 8260B
Styrene	10.0	10.6	ug/L	106	SW846 8260B
1,1,2,2-Tetrachloroethane	10.0	9.35	ug/L	93	SW846 8260B
Allyl chloride	10.0	10.5	ug/L	105	SW846 8260B
Cyclohexanone	100	85.6	ug/L	86	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	10.0	9.36	ug/L	94	SW846 8260B
1,2-Dibromoethane	10.0	9.58	ug/L	96	SW846 8260B
trans-1,4-Dichloro-2-butene	10.0	9.87	ug/L	99	SW846 8260B
Dichlorodifluoromethane (Freon 12)	10.0	11.9	ug/L	119	SW846 8260B
Ethyl methacrylate	10.0	10.4	ug/L	104	SW846 8260B
Methyl methacrylate	10.0	9.63	ug/L	96	SW846 8260B
1,1,1,2-Tetrachloroethane	10.0	9.91	ug/L	99	SW846 8260B
Trichlorofluoromethane	10.0	10.4	ug/L	104	SW846 8260B
Diethyl ether	20.0	21.3	ug/L	106	SW846 8260B
Acetonitrile	50.0	47.7	ug/L	95	SW846 8260B
Ethyl acetate	20.0	19.9	ug/L	99	SW846 8260B
Iodomethane	10.0	9.55	ug/L	96	SW846 8260B
Vinyl acetate	10.0	7.14	ug/L	71	SW846 8260B
Acrolein	50.0	85.2 X	ug/L	170	SW846 8260B
Isobutanol	200	196	ug/L	98	SW846 8260B
Methacrylonitrile	50.0	50.4	ug/L	101	SW846 8260B
1,4-Dioxane	200	168	ug/L	84	SW846 8260B
Chloroprene	10.0	10.8	ug/L	108	SW846 8260B
cis-1,3-Dichloropropene	10.0	10.1	ug/L	101	SW846 8260B
Dibromochloromethane	10.0	10.2	ug/L	102	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJTH1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A210000-050

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Chloromethane	10.0	10.6	ug/L	106	SW846 8260B
Bromomethane	10.0	10.3	ug/L	103	SW846 8260B
Chloroethane	10.0	10.2	ug/L	102	SW846 8260B
1,1-Dichloroethene	10.0	9.48	ug/L	95	SW846 8260B
1,2-Dichloroethene (total)	20.0	19.4	ug/L	97	SW846 8260B
Vinyl chloride	10.0	10.4	ug/L	104	SW846 8260B
Acetone	10.0	9.84	ug/L	98	SW846 8260B
Methylene chloride	10.0	9.36	ug/L	94	SW846 8260B
Carbon disulfide	10.0	9.86	ug/L	99	SW846 8260B
1,1-Dichloroethane	10.0	10.2	ug/L	102	SW846 8260B
2-Butanone	10.0	9.47	ug/L	95	SW846 8260B
Chloroform	10.0	9.94	ug/L	99	SW846 8260B
cis-1,2-Dichloroethene	10.0	9.81	ug/L	98	SW846 8260B
Propionitrile	50.0	48.9	ug/L	98	SW846 8260B
trans-1,2-Dichloroethene	10.0	9.59	ug/L	96	SW846 8260B
1,1,1-Trichloroethane	10.0	10.1	ug/L	101	SW846 8260B
Carbon tetrachloride	10.0	10.1	ug/L	101	SW846 8260B
1,2-Dichloroethane	10.0	10.1	ug/L	101	SW846 8260B
Benzene	10.0	10.2	ug/L	102	SW846 8260B
Trichloroethene	10.0	10.5	ug/L	105	SW846 8260B
4-Methyl-2-pentanone	10.0	10.2	ug/L	102	SW846 8260B
1,1,2-Trichloroethane	10.0	9.78	ug/L	98	SW846 8260B
Tetrachloroethene	10.0	9.67	ug/L	97	SW846 8260B
Tetrahydrofuran	50.0	55.6	ug/L	111	SW846 8260B
1,4-Dichlorobenzene	10.0	9.53	ug/L	95	SW846 8260B
1-Butanol	100	86.4	ug/L	86	SW846 8260B
Toluene	10.0	10.3	ug/L	103	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	95	(81 - 118)
Dibromofluoromethane	98	(80 - 117)
1,2-Dichloroethane-d4	98	(69 - 123)
4-Bromofluorobenzene	102	(75 - 119)

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJTH1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A210000-050

NOTE(S):

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

Bold print denotes control parameters

X Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDN561AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A210000-181
Prep Date.....: 01/21/11 **Analysis Date..:** 01/24/11
Prep Batch #...: 1021181
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Ethyl methacrylate	10.0	11.5	ug/L	115	SW846 8260B
Methyl methacrylate	10.0	10.8	ug/L	108	SW846 8260B
1,1,1,2-Tetrachloroethane	10.0	10.7	ug/L	107	SW846 8260B
Trichlorofluoromethane	10.0	8.99	ug/L	90	SW846 8260B
Diethyl ether	20.0	21.7	ug/L	108	SW846 8260B
Acetonitrile	50.0	57.1	ug/L	114	SW846 8260B
Ethyl acetate	20.0	21.3	ug/L	107	SW846 8260B
Iodomethane	10.0	9.89	ug/L	99	SW846 8260B
Vinyl acetate	10.0	11.2	ug/L	112	SW846 8260B
Acrolein	50.0	103 X	ug/L	205	SW846 8260B
Isobutanol	200	203	ug/L	101	SW846 8260B
Methacrylonitrile	50.0	53.0	ug/L	106	SW846 8260B
1,4-Dioxane	200	226	ug/L	113	SW846 8260B
Chloroprene	10.0	11.2	ug/L	112	SW846 8260B
cis-1,3-Dichloropropene	10.0	11.2	ug/L	112	SW846 8260B
Dibromochloromethane	10.0	10.9	ug/L	109	SW846 8260B
Chloromethane	10.0	11.4	ug/L	114	SW846 8260B
Bromomethane	10.0	9.58	ug/L	96	SW846 8260B
Chloroethane	10.0	9.49	ug/L	95	SW846 8260B
1,1-Dichloroethene	10.0	10.3	ug/L	103	SW846 8260B
1,2-Dichloroethene (total)	20.0	20.3	ug/L	102	SW846 8260B
1,2-Dichloropropane	10.0	11.1	ug/L	111	SW846 8260B
Bromodichloromethane	10.0	10.8	ug/L	108	SW846 8260B
trans-1,3-Dichloropropene	10.0	11.1	ug/L	111	SW846 8260B
2-Hexanone	10.0	11.3	ug/L	113	SW846 8260B
Chlorobenzene	10.0	10.2	ug/L	102	SW846 8260B
Bromoform	10.0	10.5	ug/L	105	SW846 8260B
Ethylbenzene	10.0	10.0	ug/L	100	SW846 8260B
Styrene	10.0	11.3	ug/L	113	SW846 8260B
1,1,2,2-Tetrachloroethane	10.0	10.5	ug/L	105	SW846 8260B
Allyl chloride	10.0	10.6	ug/L	106	SW846 8260B
Cyclohexanone	100	84.0	ug/L	84	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	10.0	10.4	ug/L	104	SW846 8260B

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDN561AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A210000-181

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,2-Dibromoethane	10.0	10.5	ug/L	105	SW846 8260B
trans-1,4-Dichloro-2-butene	10.0	10.7	ug/L	107	SW846 8260B
Dichlorodifluoromethane (Freon 12)	10.0	12.2	ug/L	122	SW846 8260B
Vinyl chloride	10.0	10.1	ug/L	101	SW846 8260B
Acetone	10.0	8.83	ug/L	88	SW846 8260B
Methylene chloride	10.0	9.72	ug/L	97	SW846 8260B
Carbon disulfide	10.0	10.5	ug/L	105	SW846 8260B
1,1-Dichloroethane	10.0	10.5	ug/L	105	SW846 8260B
2-Butanone	10.0	10.3	ug/L	103	SW846 8260B
Chloroform	10.0	10.3	ug/L	103	SW846 8260B
cis-1,2-Dichloroethene	10.0	10.3	ug/L	103	SW846 8260B
Propionitrile	50.0	54.6	ug/L	109	SW846 8260B
trans-1,2-Dichloroethene	10.0	10.0	ug/L	100	SW846 8260B
1,1,1-Trichloroethane	10.0	10.3	ug/L	103	SW846 8260B
Carbon tetrachloride	10.0	10.6	ug/L	106	SW846 8260B
1,2-Dichloroethane	10.0	10.3	ug/L	103	SW846 8260B
Benzene	10.0	10.6	ug/L	106	SW846 8260B
Trichloroethene	10.0	10.2	ug/L	102	SW846 8260B
4-Methyl-2-pentanone	10.0	10.8	ug/L	108	SW846 8260B
1,1,2-Trichloroethane	10.0	10.7	ug/L	107	SW846 8260B
Tetrachloroethene	10.0	10.3	ug/L	103	SW846 8260B
Tetrahydrofuran	50.0	57.1	ug/L	114	SW846 8260B
1,4-Dichlorobenzene	10.0	9.66	ug/L	97	SW846 8260B
1-Butanol	100	96.1	ug/L	96	SW846 8260B
Toluene	10.0	10.7	ug/L	107	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	105	(81 - 118)
Dibromofluoromethane	107	(80 - 117)
1,2-Dichloroethane-d4	105	(69 - 123)
4-Bromofluorobenzene	109	(75 - 119)

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDN561AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A210000-181

NOTE(S):

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

Bold print denotes control parameters

X Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8DV1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-010 MC8DV1AG-MSD
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/17/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1018076
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Bromomethane	ND	10.0	12.7	ug/L	127		SW846 8260B
	ND	10.0	15.1	ug/L	151	17	SW846 8260B
	Qualifiers:		T				
Chloroethane	ND	10.0	11.8	ug/L	118		SW846 8260B
	ND	10.0	14.2	ug/L	142	18	SW846 8260B
1,1-Dichloroethene	ND	10.0	12.9	ug/L	129		SW846 8260B
	ND	10.0	15.2	ug/L	152	16	SW846 8260B
	Qualifiers:		T				
1,2-Dichloroethene (total)	ND	20.0	26.7	ug/L	134		SW846 8260B
	ND	20.0	31.5	ug/L	158	16	SW846 8260B
	Qualifiers:		T				
cis-1,3-Dichloropropene	ND	10.0	14.3	ug/L	143		SW846 8260B
	ND	10.0	16.0	ug/L	160	12	SW846 8260B
	Qualifiers:		T				
Chloromethane	ND	10.0	14.0	ug/L	140		SW846 8260B
	ND	10.0	16.6	ug/L	166	17	SW846 8260B
	Qualifiers:		T				
1,2-Dichloropropane	ND	10.0	13.8	ug/L	138		SW846 8260B
	ND	10.0	16.0	ug/L	160	15	SW846 8260B
	Qualifiers:		T				
Bromodichloromethane	ND	10.0	13.4	ug/L	134		SW846 8260B
	ND	10.0	15.6	ug/L	156	15	SW846 8260B
	Qualifiers:		T				
trans-1,3-Dichloropropene	ND	10.0	13.8	ug/L	138		SW846 8260B
	ND	10.0	15.7	ug/L	157	13	SW846 8260B
	Qualifiers:		T				
2-Hexanone	ND	10.0	11.3	ug/L	113		SW846 8260B
	ND	10.0	13.0	ug/L	130	14	SW846 8260B
Chlorobenzene	ND	10.0	13.8	ug/L	138		SW846 8260B
	ND	10.0	15.8	ug/L	158	14	SW846 8260B
	Qualifiers:		T				
Bromoform	ND	10.0	14.5	ug/L	145		SW846 8260B
	Qualifiers:		T				
	ND	10.0	17.0	ug/L	170	16	SW846 8260B
	Qualifiers:		T				
Ethylbenzene	ND	10.0	13.4	ug/L	134		SW846 8260B
	ND	10.0	15.5	ug/L	155	15	SW846 8260B
	Qualifiers:		T				

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8DV1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-010 MC8DV1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Styrene	ND	10.0	14.2	ug/L	142		SW846 8260B
	ND	10.0	16.2	ug/L	162	13	SW846 8260B
	Qualifiers:	T					
1,1,2,2-Tetrachloroethane	ND	10.0	14.4	ug/L	144		SW846 8260B
	ND	10.0	17.2	ug/L	172	17	SW846 8260B
	Qualifiers:	T					
Dibromochloromethane	ND	10.0	13.7	ug/L	137		SW846 8260B
	ND	10.0	15.3	ug/L	153	11	SW846 8260B
	Qualifiers:	T					
Allyl chloride	ND	10.0	11.9	ug/L	119		SW846 8260B
	ND	10.0	14.3	ug/L	143	18	SW846 8260B
Cyclohexanone	ND	100	105	ug/L	105		SW846 8260B
	ND	100	142	ug/L	142	30	SW846 8260B
	Qualifiers:	T					
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	12.8	ug/L	128		SW846 8260B
	ND	10.0	14.9	ug/L	149 T	16	SW846 8260B
1,2-Dibromoethane	ND	10.0	13.9	ug/L	139		SW846 8260B
	ND	10.0	16.0	ug/L	160	14	SW846 8260B
	Qualifiers:	T					
trans-1,4-Dichloro-2-butene	ND	10.0	12.3	ug/L	123		SW846 8260B
	ND	10.0	14.9	ug/L	149	19	SW846 8260B
Dichlorodifluoromethane (Freon 12)	ND	10.0	16.4	ug/L	164		SW846 8260B
	Qualifiers:	T					
	ND	10.0	18.8	ug/L	188	13	SW846 8260B
	Qualifiers:	T					
Diethyl ether	ND	20.0	28.6	ug/L	143		SW846 8260B
	ND	20.0	34.4	ug/L	172	19	SW846 8260B
	Qualifiers:	T					
Ethyl methacrylate	ND	10.0	13.1	ug/L	131		SW846 8260B
	ND	10.0	14.9	ug/L	149	13	SW846 8260B
Methyl methacrylate	ND	10.0	13.8	ug/L	138		SW846 8260B
	ND	10.0	15.5	ug/L	155	12	SW846 8260B
	Qualifiers:	T					
1,1,1,2-Tetrachloroethane	ND	10.0	13.4	ug/L	134		SW846 8260B
	ND	10.0	15.6	ug/L	156	15	SW846 8260B
	Qualifiers:	T					
Trichlorofluoromethane	ND	10.0	13.6	ug/L	136		SW846 8260B
	ND	10.0	15.9	ug/L	159	15	SW846 8260B
	Qualifiers:	T					

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8DV1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-010 MC8DV1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acetonitrile	ND	50.0	47.8	ug/L	96		SW846 8260B
	ND	50.0	60.7	ug/L	121	24	SW846 8260B
Ethyl acetate	ND	20.0	25.0	ug/L	125		SW846 8260B
	ND	20.0	29.2	ug/L	146 T	15	SW846 8260B
Iodomethane	ND	10.0	12.2	ug/L	122		SW846 8260B
	ND	10.0	14.4	ug/L	144	16	SW846 8260B
Vinyl acetate	ND	10.0	12.6	ug/L	126		SW846 8260B
	ND	10.0	15.2	ug/L	152	18	SW846 8260B
	Qualifiers: T						
Acrolein	ND	50.0	104	ug/L	209		SW846 8260B
	Qualifiers: T						
	ND	50.0	121	ug/L	242	15	SW846 8260B
	Qualifiers: T						
Isobutanol	ND	200	241	ug/L	121		SW846 8260B
	ND	200	287	ug/L	144	17	SW846 8260B
Methacrylonitrile	ND	50.0	63.2	ug/L	126		SW846 8260B
	ND	50.0	75.4	ug/L	151	18	SW846 8260B
	Qualifiers: T						
1,4-Dioxane	ND	200	196	ug/L	98		SW846 8260B
	ND	200	266	ug/L	133	30	SW846 8260B
Chloroprene	ND	10.0	12.8	ug/L	128		SW846 8260B
	ND	10.0	15.0	ug/L	150	15	SW846 8260B
Vinyl chloride	ND	10.0	13.6	ug/L	136		SW846 8260B
	ND	10.0	16.2	ug/L	162	18	SW846 8260B
	Qualifiers: T						
Acetone	1.2	10.0	10.3	ug/L	90		SW846 8260B
	1.2	10.0	13.0	ug/L	118	24	SW846 8260B
Methylene chloride	ND	10.0	12.6	ug/L	126		SW846 8260B
	ND	10.0	15.2	ug/L	152	19	SW846 8260B
	Qualifiers: T						
Carbon disulfide	ND	10.0	12.8	ug/L	128		SW846 8260B
	ND	10.0	15.2	ug/L	152	17	SW846 8260B
	Qualifiers: T						
1,1-Dichloroethane	ND	10.0	13.2	ug/L	132		SW846 8260B
	ND	10.0	15.4	ug/L	154	15	SW846 8260B
	Qualifiers: T						
2-Butanone	ND	10.0	13.4	ug/L	134		SW846 8260B
	ND	10.0	16.1	ug/L	161	19	SW846 8260B
	Qualifiers: T						
Chloroform	0.39	10.0	13.3	ug/L	129		SW846 8260B
	0.39	10.0	16.4	ug/L	161	21	SW846 8260B
	Qualifiers: T						

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8DV1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-010 MC8DV1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
cis-1,2-Dichloroethene	ND	10.0	13.6	ug/L	136		SW846 8260B
	ND	10.0	15.9	ug/L	159	15	SW846 8260B
	Qualifiers:		T				
Propionitrile	ND	50.0	62.0	ug/L	124		SW846 8260B
	ND	50.0	78.3	ug/L	157	23	SW846 8260B
	Qualifiers:		T				
trans-1,2-Dichloroethene	ND	10.0	13.1	ug/L	131		SW846 8260B
	ND	10.0	15.6	ug/L	156	18	SW846 8260B
	Qualifiers:		T				
1,1,1-Trichloroethane	ND	10.0	13.0	ug/L	130		SW846 8260B
	ND	10.0	15.4	ug/L	154	17	SW846 8260B
	Qualifiers:		T				
Carbon tetrachloride	ND	10.0	13.3	ug/L	133		SW846 8260B
	ND	10.0	15.2	ug/L	152	13	SW846 8260B
	Qualifiers:		T				
1,2-Dichloroethane	ND	10.0	12.6	ug/L	126		SW846 8260B
	ND	10.0	15.0	ug/L	150	17	SW846 8260B
	Qualifiers:		T				
Benzene	ND	10.0	14.0	ug/L	140		SW846 8260B
	ND	10.0	16.4	ug/L	164	16	SW846 8260B
	Qualifiers:		T				
Trichloroethene	ND	10.0	13.2	ug/L	132		SW846 8260B
	ND	10.0	15.5	ug/L	155	16	SW846 8260B
	Qualifiers:		T				
4-Methyl-2-pentanone	ND	10.0	12.3	ug/L	123		SW846 8260B
	ND	10.0	13.9	ug/L	139	12	SW846 8260B
1,1,2-Trichloroethane	ND	10.0	13.4	ug/L	134		SW846 8260B
	ND	10.0	15.8	ug/L	158	16	SW846 8260B
	Qualifiers:		T				
Tetrachloroethene	0.74	10.0	14.0	ug/L	132		SW846 8260B
	0.74	10.0	16.2	ug/L	155	15	SW846 8260B
	Qualifiers:		T				
Tetrahydrofuran	ND	50.0	71.3	ug/L	143		SW846 8260B
	ND	50.0	83.3	ug/L	167	16	SW846 8260B
	Qualifiers:		T				
1,4-Dichlorobenzene	ND	10.0	13.6	ug/L	136		SW846 8260B
	Qualifiers:		T				
	ND	10.0	16.3	ug/L	163	18	SW846 8260B
	Qualifiers:		T				
1-Butanol	ND	100	103	ug/L	103		SW846 8260B
	ND	100	146	ug/L	146	34	SW846 8260B
Toluene	ND	10.0	13.9	ug/L	139		SW846 8260B
	ND	10.0	16.2	ug/L	162	16	SW846 8260B
	Qualifiers:		T				

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8DV1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-010 MC8DV1AG-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	124 *	(76 - 116)
	111	(76 - 116)
Dibromofluoromethane	124 *	(78 - 116)
	111	(78 - 116)
1,2-Dichloroethane-d4	115	(65 - 126)
	105	(65 - 126)
4-Bromofluorobenzene	126 *	(67 - 122)
	114	(67 - 122)

NOTE(S):

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

Bold print denotes control parameters

T Spike sample recovery is outside control limits.

* Surrogate recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C51AH-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-002 MC8C51AJ-MSD
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/19/11 **Analysis Date..:** 01/19/11
Prep Batch #...: 1021050
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
cis-1,3-Dichloropropene	ND	10.0	9.72	ug/L	97		SW846 8260B
	ND	10.0	8.91	ug/L	89	8.8	SW846 8260B
Chloromethane	ND	10.0	10.3	ug/L	103		SW846 8260B
	ND	10.0	10.0	ug/L	100	3.0	SW846 8260B
Bromomethane	ND	10.0	9.62	ug/L	96		SW846 8260B
	ND	10.0	9.26	ug/L	93	3.8	SW846 8260B
Chloroethane	ND	10.0	10.0	ug/L	100		SW846 8260B
	ND	10.0	9.12	ug/L	91	9.4	SW846 8260B
1,1-Dichloroethene	ND	10.0	8.88	ug/L	89		SW846 8260B
	ND	10.0	8.63	ug/L	86	2.8	SW846 8260B
1,2-Dichloroethene (total)	ND	20.0	18.8	ug/L	94		SW846 8260B
	ND	20.0	17.8	ug/L	89	5.2	SW846 8260B
1,2-Dichloropropane	ND	10.0	10.3	ug/L	103		SW846 8260B
	ND	10.0	9.29	ug/L	93	11	SW846 8260B
Bromodichloromethane	ND	10.0	9.78	ug/L	98		SW846 8260B
	ND	10.0	9.10	ug/L	91	7.2	SW846 8260B
trans-1,3-Dichloropropene	ND	10.0	9.80	ug/L	98		SW846 8260B
	ND	10.0	8.85	ug/L	88	10	SW846 8260B
2-Hexanone	ND	10.0	10.1	ug/L	101		SW846 8260B
	ND	10.0	9.04	ug/L	90	11	SW846 8260B
Chlorobenzene	ND	10.0	9.46	ug/L	95		SW846 8260B
	ND	10.0	8.72	ug/L	87	8.1	SW846 8260B
Bromoform	ND	10.0	9.62	ug/L	96		SW846 8260B
	ND	10.0	8.68	ug/L	87	10	SW846 8260B
Ethylbenzene	ND	10.0	9.30	ug/L	93		SW846 8260B
	ND	10.0	8.46	ug/L	85	9.5	SW846 8260B
Styrene	ND	10.0	10.5	ug/L	105		SW846 8260B
	ND	10.0	9.74	ug/L	97	7.1	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	10.0	9.90	ug/L	99		SW846 8260B
	ND	10.0	8.63	ug/L	86	14	SW846 8260B
Dibromochloromethane	ND	10.0	9.66	ug/L	97		SW846 8260B
	ND	10.0	8.97	ug/L	90	7.4	SW846 8260B
Allyl chloride	ND	10.0	9.84	ug/L	98		SW846 8260B
	ND	10.0	9.40	ug/L	94	4.6	SW846 8260B
Cyclohexanone	ND	100	61.6	ug/L	62		SW846 8260B
	ND	100	62.4	ug/L	62	1.2	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C51AH-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-002 MC8C51AJ-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	8.72	ug/L	87		SW846 8260B
	ND	10.0	8.16	ug/L	82	6.6	SW846 8260B
1,2-Dibromoethane	ND	10.0	9.66	ug/L	97		SW846 8260B
	ND	10.0	8.92	ug/L	89	7.9	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	10.0	9.73	ug/L	97		SW846 8260B
	ND	10.0	9.33	ug/L	93	4.2	SW846 8260B
Dichlorodifluoromethane (Freon 12)	ND	10.0	10.6	ug/L	106		SW846 8260B
	ND	10.0	10.6	ug/L	106	0.18	SW846 8260B
Diethyl ether	ND	20.0	20.4	ug/L	102		SW846 8260B
	ND	20.0	18.5	ug/L	93	9.5	SW846 8260B
Ethyl methacrylate	ND	10.0	10.5	ug/L	105		SW846 8260B
	ND	10.0	9.32	ug/L	93	12	SW846 8260B
Methyl methacrylate	ND	10.0	9.86	ug/L	99		SW846 8260B
	ND	10.0	9.11	ug/L	91	7.9	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	10.0	9.44	ug/L	94		SW846 8260B
	ND	10.0	8.83	ug/L	88	6.6	SW846 8260B
Trichlorofluoromethane	ND	10.0	9.04	ug/L	90		SW846 8260B
	ND	10.0	8.48	ug/L	85	6.4	SW846 8260B
Acetonitrile	ND	50.0	51.1	ug/L	102		SW846 8260B
	ND	50.0	50.2	ug/L	100	1.9	SW846 8260B
Ethyl acetate	ND	20.0	20.2	ug/L	101		SW846 8260B
	ND	20.0	18.6	ug/L	93	7.9	SW846 8260B
Iodomethane	ND	10.0	8.97	ug/L	90		SW846 8260B
	ND	10.0	8.43	ug/L	84	6.2	SW846 8260B
Vinyl acetate	ND	10.0	10.9	ug/L	109		SW846 8260B
	ND	10.0	10.4	ug/L	104	4.4	SW846 8260B
Acrolein	ND	50.0	89.8	ug/L	180		SW846 8260B
		Qualifiers:	T				
	ND	50.0	80.8	ug/L	162	11	SW846 8260B
		Qualifiers:	T				
Isobutanol	ND	200	197	ug/L	99		SW846 8260B
	ND	200	188	ug/L	94	4.9	SW846 8260B
Methacrylonitrile	ND	50.0	51.5	ug/L	103		SW846 8260B
	ND	50.0	47.5	ug/L	95	8.0	SW846 8260B
1,4-Dioxane	ND	200	187	ug/L	93		SW846 8260B
	ND	200	206	ug/L	103	9.6	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C51AH-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-002 MC8C51AJ-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Chloroprene	ND	10.0	9.85	ug/L	99		SW846 8260B
	ND	10.0	9.35	ug/L	93	5.3	SW846 8260B
Vinyl chloride	ND	10.0	9.67	ug/L	97		SW846 8260B
	ND	10.0	9.31	ug/L	93	3.8	SW846 8260B
Acetone	ND	10.0	8.99	ug/L	90		SW846 8260B
	ND	10.0	8.59	ug/L	86	4.6	SW846 8260B
Methylene chloride	ND	10.0	8.65	ug/L	86		SW846 8260B
	ND	10.0	8.48	ug/L	85	1.9	SW846 8260B
Carbon disulfide	ND	10.0	9.31	ug/L	93		SW846 8260B
	ND	10.0	8.67	ug/L	87	7.2	SW846 8260B
1,1-Dichloroethane	ND	10.0	9.86	ug/L	99		SW846 8260B
	ND	10.0	9.11	ug/L	91	8.0	SW846 8260B
2-Butanone	ND	10.0	8.71	ug/L	87		SW846 8260B
	ND	10.0	8.13	ug/L	81	6.9	SW846 8260B
Chloroform	0.31	10.0	9.65	ug/L	93		SW846 8260B
	0.31	10.0	9.46	ug/L	92	1.9	SW846 8260B
cis-1,2-Dichloroethene	ND	10.0	9.58	ug/L	96		SW846 8260B
	ND	10.0	9.09	ug/L	91	5.3	SW846 8260B
Propionitrile	ND	50.0	49.5	ug/L	99		SW846 8260B
	ND	50.0	48.5	ug/L	97	2.1	SW846 8260B
trans-1,2-Dichloroethene	ND	10.0	9.21	ug/L	92		SW846 8260B
	ND	10.0	8.75	ug/L	87	5.2	SW846 8260B
1,1,1-Trichloroethane	ND	10.0	9.68	ug/L	97		SW846 8260B
	ND	10.0	8.85	ug/L	89	8.9	SW846 8260B
Carbon tetrachloride	ND	10.0	9.46	ug/L	95		SW846 8260B
	ND	10.0	8.69	ug/L	87	8.6	SW846 8260B
1,2-Dichloroethane	ND	10.0	9.67	ug/L	97		SW846 8260B
	ND	10.0	9.30	ug/L	93	3.8	SW846 8260B
Benzene	ND	10.0	10.0	ug/L	100		SW846 8260B
	ND	10.0	9.24	ug/L	92	8.2	SW846 8260B
Trichloroethene	ND	10.0	9.17	ug/L	92		SW846 8260B
	ND	10.0	8.53	ug/L	85	7.3	SW846 8260B
4-Methyl-2-pentanone	ND	10.0	9.52	ug/L	95		SW846 8260B
	ND	10.0	8.50	ug/L	85	11	SW846 8260B
1,1,2-Trichloroethane	ND	10.0	9.79	ug/L	98		SW846 8260B
	ND	10.0	9.10	ug/L	91	7.2	SW846 8260B
Tetrachloroethene	0.24	10.0	8.94	ug/L	87		SW846 8260B
	0.24	10.0	8.24	ug/L	80	8.2	SW846 8260B
Tetrahydrofuran	ND	50.0	53.1	ug/L	106		SW846 8260B
	ND	50.0	49.1	ug/L	98	7.9	SW846 8260B
1,4-Dichlorobenzene	ND	10.0	9.11	ug/L	91		SW846 8260B
	ND	10.0	8.43	ug/L	84	7.8	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C51AH-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-002 MC8C51AJ-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1-Butanol	**ND**	**100**	**76.0**	**ug/L**	**76**		**SW846 8260B**
	ND	**100**	**80.3**	**ug/L**	**80**	**5.5**	**SW846 8260B**
Toluene	**ND**	**10.0**	**9.90**	**ug/L**	**99**		**SW846 8260B**
	ND	**10.0**	**9.19**	**ug/L**	**92**	**7.4**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	91	(76 - 116)
	83	(76 - 116)
Dibromofluoromethane	96	(78 - 116)
	89	(78 - 116)
1,2-Dichloroethane-d4	96	(65 - 126)
	89	(65 - 126)
4-Bromofluorobenzene	96	(67 - 122)
	86	(67 - 122)

NOTE(S):

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

Bold print denotes control parameters

T Spike sample recovery is outside control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJVL1AN-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A210414-001 MDJVL1AP-MSD
Date Sampled...: 01/18/11 **Date Received..:** 01/20/11
Prep Date.....: 01/21/11 **Analysis Date..:** 01/24/11
Prep Batch #...: 1021181
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
cis-1,3-Dichloropropene	ND	10.0	7.35	ug/L	74		SW846 8260B
	ND	10.0	7.26	ug/L	73	1.2	SW846 8260B
Chloromethane	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.3	ug/L	103	4.8	SW846 8260B
Bromomethane	ND	10.0	7.68	ug/L	77		SW846 8260B
	ND	10.0	7.76	ug/L	78	0.97	SW846 8260B
Chloroethane	ND	10.0	8.98	ug/L	90		SW846 8260B
	ND	10.0	9.06	ug/L	91	0.82	SW846 8260B
1,1-Dichloroethene	ND	10.0	9.75	ug/L	97		SW846 8260B
	ND	10.0	9.77	ug/L	98	0.25	SW846 8260B
1,2-Dichloroethene (total)	ND	20.0	19.7	ug/L	98		SW846 8260B
	ND	20.0	19.4	ug/L	97	1.5	SW846 8260B
1,2-Dichloropropane	ND	10.0	11.4	ug/L	114		SW846 8260B
	ND	10.0	11.0	ug/L	110	3.6	SW846 8260B
Bromodichloromethane	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.3	ug/L	103	4.6	SW846 8260B
trans-1,3-Dichloropropene	ND	10.0	7.04	ug/L	70		SW846 8260B
	ND	10.0	7.11	ug/L	71	0.96	SW846 8260B
2-Hexanone	ND	10.0	12.0	ug/L	120		SW846 8260B
	ND	10.0	11.0	ug/L	110	8.7	SW846 8260B
Chlorobenzene	ND	10.0	9.92	ug/L	99		SW846 8260B
	ND	10.0	9.56	ug/L	96	3.7	SW846 8260B
Bromoform	ND	10.0	10.1	ug/L	101		SW846 8260B
	ND	10.0	9.85	ug/L	99	2.1	SW846 8260B
Ethylbenzene	ND	10.0	9.27	ug/L	93		SW846 8260B
	ND	10.0	9.07	ug/L	91	2.2	SW846 8260B
Styrene	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.5	ug/L	105	3.3	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	10.0	10.5	ug/L	105		SW846 8260B
	ND	10.0	10.5	ug/L	105	0.66	SW846 8260B
Dibromochloromethane	ND	10.0	10.7	ug/L	107		SW846 8260B
	ND	10.0	10.7	ug/L	107	0.09	SW846 8260B
Allyl chloride	ND	10.0	7.22	ug/L	72		SW846 8260B
	ND	10.0	6.98	ug/L	70	3.4	SW846 8260B
Cyclohexanone	ND	100	70.3	ug/L	70		SW846 8260B
	ND	100	78.2	ug/L	78	11	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJVL1AN-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A210414-001 MDJVL1AP-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,2-Dibromo-3-chloropropane (DBCP)	ND	10.0	9.73	ug/L	97		SW846 8260B
	ND	10.0	10.3	ug/L	103	6.0	SW846 8260B
1,2-Dibromoethane	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.5	ug/L	105	3.7	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	10.0	4.43	ug/L	44		SW846 8260B
	ND	10.0	4.66	ug/L	47	5.0	SW846 8260B
Dichlorodifluoromethane (Freon 12)	ND	10.0	10.7	ug/L	107		SW846 8260B
	ND	10.0	11.0	ug/L	110	3.6	SW846 8260B
Diethyl ether	ND	20.0	22.6	ug/L	113		SW846 8260B
	ND	20.0	23.1	ug/L	116	2.3	SW846 8260B
Ethyl methacrylate	ND	10.0	12.4	ug/L	124		SW846 8260B
	ND	10.0	11.7	ug/L	117	6.3	SW846 8260B
Methyl methacrylate	ND	10.0	11.4	ug/L	114		SW846 8260B
	ND	10.0	11.2	ug/L	112	2.1	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	10.0	10.0	ug/L	100		SW846 8260B
	ND	10.0	9.86	ug/L	99	1.9	SW846 8260B
Trichlorofluoromethane	ND	10.0	7.63	ug/L	76		SW846 8260B
	ND	10.0	7.86	ug/L	79	3.0	SW846 8260B
Acetonitrile	ND	50.0	53.6	ug/L	107		SW846 8260B
	ND	50.0	56.4	ug/L	113	5.1	SW846 8260B
Ethyl acetate	ND	20.0	17.4	ug/L	87		SW846 8260B
	ND	20.0	16.5	ug/L	82	5.6	SW846 8260B
Iodomethane	ND	10.0	9.01	ug/L	90		SW846 8260B
	ND	10.0	9.16	ug/L	92	1.6	SW846 8260B
Vinyl acetate	ND	10.0	8.20	ug/L	82		SW846 8260B
	ND	10.0	8.07	ug/L	81	1.7	SW846 8260B
Acrolein	ND	50.0	76.3	ug/L	153		SW846 8260B
		Qualifiers:	T				
	ND	50.0	72.8	ug/L	146	4.6	SW846 8260B
Isobutanol	ND	200	229	ug/L	114		SW846 8260B
	ND	200	215	ug/L	107	6.4	SW846 8260B
Methacrylonitrile	ND	50.0	57.1	ug/L	114		SW846 8260B
	ND	50.0	55.9	ug/L	112	2.2	SW846 8260B
1,4-Dioxane	ND	200	198	ug/L	99		SW846 8260B
	ND	200	238	ug/L	119	18	SW846 8260B
Chloroprene	ND	10.0	10.4	ug/L	104		SW846 8260B
	ND	10.0	10.2	ug/L	102	2.2	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJVL1AN-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A210414-001 MDJVL1AP-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Vinyl chloride	ND	10.0	9.75	ug/L	97		SW846 8260B
	ND	10.0	9.49	ug/L	95	2.7	SW846 8260B
Acetone	ND	10.0	12.4	ug/L	124		SW846 8260B
	ND	10.0	11.4	ug/L	114	8.5	SW846 8260B
Methylene chloride	ND	10.0	9.67	ug/L	97		SW846 8260B
	ND	10.0	9.73	ug/L	97	0.68	SW846 8260B
Carbon disulfide	ND	10.0	9.19	ug/L	92		SW846 8260B
	ND	10.0	8.93	ug/L	89	2.9	SW846 8260B
1,1-Dichloroethane	ND	10.0	10.3	ug/L	103		SW846 8260B
	ND	10.0	10.2	ug/L	102	1.5	SW846 8260B
2-Butanone	ND	10.0	10.4	ug/L	104		SW846 8260B
	ND	10.0	11.0	ug/L	110	5.7	SW846 8260B
Chloroform	ND	10.0	10.4	ug/L	104		SW846 8260B
	ND	10.0	9.83	ug/L	98	6.0	SW846 8260B
cis-1,2-Dichloroethene	ND	10.0	10.2	ug/L	102		SW846 8260B
	ND	10.0	10.1	ug/L	101	0.09	SW846 8260B
Propionitrile	ND	50.0	56.5	ug/L	113		SW846 8260B
	ND	50.0	56.4	ug/L	113	0.03	SW846 8260B
trans-1,2-Dichloroethene	ND	10.0	9.52	ug/L	95		SW846 8260B
	ND	10.0	9.24	ug/L	92	3.1	SW846 8260B
1,1,1-Trichloroethane	ND	10.0	9.76	ug/L	98		SW846 8260B
	ND	10.0	9.56	ug/L	96	2.1	SW846 8260B
Carbon tetrachloride	ND	10.0	9.78	ug/L	98		SW846 8260B
	ND	10.0	9.64	ug/L	96	1.5	SW846 8260B
1,2-Dichloroethane	ND	10.0	10.5	ug/L	105		SW846 8260B
	ND	10.0	10.1	ug/L	101	3.4	SW846 8260B
Benzene	ND	10.0	10.7	ug/L	107		SW846 8260B
	ND	10.0	10.5	ug/L	105	2.1	SW846 8260B
Trichloroethene	ND	10.0	9.40	ug/L	94		SW846 8260B
	ND	10.0	9.38	ug/L	94	0.21	SW846 8260B
4-Methyl-2-pentanone	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.5	ug/L	105	3.1	SW846 8260B
1,1,2-Trichloroethane	ND	10.0	11.0	ug/L	110		SW846 8260B
	ND	10.0	10.5	ug/L	105	4.9	SW846 8260B
Tetrachloroethene	ND	10.0	8.87	ug/L	89		SW846 8260B
	ND	10.0	8.71	ug/L	87	1.9	SW846 8260B
Tetrahydrofuran	ND	50.0	60.7	ug/L	121		SW846 8260B
	ND	50.0	62.2	ug/L	124	2.4	SW846 8260B
1,4-Dichlorobenzene	ND	10.0	8.89	ug/L	89		SW846 8260B
	ND	10.0	8.77	ug/L	88	1.4	SW846 8260B
1-Butanol	ND	100	103	ug/L	103		SW846 8260B
	ND	100	102	ug/L	102	0.78	SW846 8260B

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: SL1036 **Work Order #...:** MDJVL1AN-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A210414-001 MDJVL1AP-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Toluene	**0.092**	**10.0**	**10.3**	**ug/L**	**102**		**SW846 8260B**
	0.092	**10.0**	**10.0**	**ug/L**	**99**	**2.6**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Toluene-d8	98	(76 - 116)
	94	(76 - 116)
Dibromofluoromethane	102	(78 - 116)
	99	(78 - 116)
1,2-Dichloroethane-d4	100	(65 - 126)
	98	(65 - 126)
4-Bromofluorobenzene	104	(67 - 122)
	100	(67 - 122)

NOTE(S):

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

Bold print denotes control parameters

T Spike sample recovery is outside control limits.

Date: 14 July 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: CERC11
Subject: Semivolatile Organics - Sample Data Groups (SDGs) SL1036, WSCF111069 and WSCF111207

INTRODUCTION

This memorandum presents the results of data validation for SDG SL1036 prepared by TestAmerica, and SDGs WSCF111069 and WSCF111207 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B29H90	1/09/2011	Water	C	8270C
B29HC0	1/07/2011	Water	C	8270C
B29H66	1/07/2011	Water	C	8270C
B29HK0	1/07/2011	Water	C	8270C
B29H72	1/07/2011	Water	C	8270C
B29H47	1/09/2011	Water	C	8270C
B29H56	1/07/2011	Water	C	8270C
B29HD5	1/07/2011	Water	C	8270C
B29HB0	1/07/2011	Water	C	8270C
B29HK1	1/07/2011	Water	C	8270C
B29H42	1/09/2011	Water	C	8270C
B29H85	1/09/2011	Water	C	8270C
B29HF0	1/07/2011	Water	C	8270C
B29H71	1/07/2011	Water	C	8270C
B29H95	1/09/2011	Water	C	8270C
B29HF5	1/09/2011	Water	C	8270C
B29HJ5	1/07/2011	Water	C	8270C
B29H37	1/09/2011	Water	C	8270C
B29HD0	1/07/2011	Water	C	8270C
B29HJ0	1/07/2011	Water	C	8270C
B29HH5	1/07/2011	Water	C	8270C
B29H61	1/09/2011	Water	C	8270C
B29HC5	1/09/2011	Water	C	8270C
B29HB5	1/07/2011	Water	C	8270C
B29H48	1/09/2011	Water	C	8270C
B29H32	1/10/2011	Water	C	8270C
B29H53	1/07/2011	Water	C	8015, WTPH-G, WTPH-D
B29HB2	1/07/2011	Water	C	8015, WTPH-G, WTPH-D
B29HB7	1/07/2011	Water	C	8015, WTPH-G, WTPH-D
B29H97	1/07/2011	Water	C	8015, WTPH-G, WTPH-D

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B29HF7	1/18/2011	Water	C	8015, WTPH-G, WTPH-D

Data validation was conducted in accordance with the CHPRC validation statement of work and the Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study, DOE/RL-2009-42, Rev. 0 (SAP). 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 OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements for semivolatile organics are extraction within 7 days of sample collection and analysis within 40 days of sample extraction. Sample preservation requires chilling to 4 degrees Celsius. The holding time requirement for method WTPH-D is extraction within 14 days of sample collection and analysis within 40 days of sample extraction. Sample preservation requires chilling to 4 degrees Celsius and acid preservation with hydrochloric acid to pH <2. The holding time requirements for methods WTPH-G and 8015 Alcohols/Glycols are analysis within 14 days from sample collection. Sample preservation requires chilling to 4 degrees Celsius. In addition, WTPH-G requires acid preservation with hydrochloric acid to pH <2.

The samples were extracted and analyzed within the prescribed holding times and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable.

Trip Blanks

All trip blank results were acceptable with the following exception. Bis(2-ethylhexyl phthalate) was detected in trip blank B29H72. According to the VSR sample summary report, sample

B29H71 is associated with trip blank B29H72. The methylene chloride result for sample B29H71 was a non-detect and should not be qualified for the blank infraction.

Field Blanks

No field blanks were submitted for validation.

Equipment Blanks

No equipment blanks were submitted for validation.

- **Accuracy**

Accuracy is evaluated by reviewing surrogate results, matrix spike sample results, and laboratory control sample results. According to the SAP, the matrix spike sample and laboratory control sample accuracy limits are 80% to 120% for methods 8270C and 8015. For methods WTPH-G and WTPH-D, the laboratory control sample accuracy limits are 80% to 120% and the matrix spike sample accuracy limits are ones specified by the DV procedure. The limits for reported analytes not listed in the SAP are specified by the DV procedure. The 8270C surrogate accuracy limits used for data validation were the statistical ones established by the analytical laboratory. The surrogate accuracy limits used for the remaining analyses were the ones specified by the DV procedure (50% to 150%).

Surrogates

All surrogate recoveries were acceptable with the following exceptions.

For SDG SL1036, samples B29HH5, B29HC5 and B29HB5, the 2-fluorobiphenyl and 2,4,6-tribromophenol recoveries were below the lower acceptance limits. The reported sample results associated with the surrogates were non-detects and should be qualified as estimates and flagged "UJ." See the table in Appendix 2 for a listing of all affected sample results.

For SDG SL1036, sample B29H61, the 2-fluorobiphenyl recovery was below the lower acceptance limit. The reported sample results associated with the surrogate were non-detects and should be qualified as estimates and flagged "UJ." See the table in Appendix 2 for a listing of all affected sample results.

It should be noted that per client request DV procedure HNF-20433, Rev. 0 was used for target analyte association to the surrogates.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

All MS/MSD recoveries were acceptable with the following exceptions.

For SDG SL1036, batches 1012097 and 1013085, many MS/MSD recovery infractions occurred and are highlighted in the annotated QC summary forms in Appendix 5. Detected sample results

with associated MS/MSD recoveries above or below the acceptance limits should be qualified as estimates and flagged "J." Non-detected sample results with associated MS/MSD recoveries below the lower acceptance limits should be qualified as estimates and flagged "UJ." See the table in Appendix 2 for a listing of all affected sample results.

For SDG WSCF111207, the MS recovery for 1-propanol and the MSD recovery for ethylene glycol were below the low acceptance limit. The 1-propanol and ethylene glycol results for sample B29HF7 were non-detects and should be qualified as estimates and flagged "UJ."

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable with the following exceptions.

For SDG SL1036, batches 1012097 and 1013085, many LCS recovery infractions occurred and are highlighted in the annotated QC summary forms in Appendix 5. Detected sample results with associated LCS recoveries above or below the acceptance limits should be qualified as estimates and flagged "J." Non-detected sample results with associated LCS recoveries below the lower acceptance limits should be qualified as estimates and flagged "UJ." Exceptions to this are phenol for both batches, and 4-chloroaniline and 4-nitrophenol for batch 1013085 that had LCS recoveries <30%. All associated sample results were non-detects and should be qualified as unusable and flagged "UR." See the table in Appendix 2 for a listing of all affected sample results.

For SDG WSCF111069, the LCS recovery for ethanol was below the lower acceptance limit. The ethanol results for samples B29H53, B29HB2, B29HB7 and B29H97 were non-detects and should be qualified as estimates and flagged "UJ."

For SDG WSCF111207, the LCS recovery for ethanol was below the lower acceptance limit. The ethanol result for sample B29HF7 was a non-detect and should be qualified as an estimate and flagged "UJ."

- **Precision**

Precision is evaluated by reviewing MS/MSD results, field duplicate sample results, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limits are ±20%. The limits for reported analytes not listed in the SAP are specified by the DV procedure. When duplicate RPDs exceed the limits and have associated results <5X the reporting limits with differences <1X the reporting limits no precision infraction occurred.

MS/MSD Samples

All MS/MSD RPD values were acceptable with the following exceptions.

For SDG SL1036, batches 1012097 and 1013085, several MS/MSD RPD infractions occurred and are highlighted in the annotated QC summary forms in Appendix 5. Detected sample results with associated RPD values above the acceptance limits should be qualified as estimates and flagged "J" for detects and "UJ" for non-detects. See the table in Appendix 2 for a listing of all affected sample results.

Field Duplicate Samples

All field duplicate results were acceptable.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs were below the CRDLs.

- **Completeness**

SDGs SL1036, WSCF111069 and WSCF111207 were 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 for method 8270C was 99%. The completion percentage for methods WTPH-G, WTPH-D and 8015 were 100%.

MAJOR DEFICIENCIES

Major deficiencies leading to qualification of phenol, 4-chloroaniline and 4-nitrophenol results as unusable were due to severe LCS recovery infractions. See the table in Appendix 2 for a listing of all affected sample results.

MINOR DEFICIENCIES

Multiple minor deficiencies leading to qualification of sample results as estimates occurred. See the table in Appendix 2 for a listing of all affected sample results.

REFERENCES

GRP-GD-003, Rev. 0, Change 0, *Data Validation for Chemical Analyses*, August 2010.

HNF-20433, Rev. 0, Data Validation Procedure for Chemical Analyses, June 2004.

DOE/RL-2009-42, Rev. 0, *Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study*, December 2010.

Appendix 1

Glossary of Data Reporting Qualifiers

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

- **U** — The constituent was analyzed for, but was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the RL. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J+** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J-** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **N** — The analysis indicates the presence of an analyte that has been tentatively identified.

- **NJ** — The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.

- **NJ+** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation.

- **NJ-** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

Semivolatile Organics Data Qualification Summary			
SDG: SL1036, WSCF111069, WSCF111207	Reviewer: AQA	Project: CERC11	
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
Phenol	**UR**	All	Very low LCS recovery, low MS/MSD recoveries
4-Chloroaniline 4-Nitrophenol	**UR**	B29HH5, B29H61, B29HC5, B29HB5, B29H48, B29H32	Very low LCS recovery, low MS/MSD recoveries
bis(2-Chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene 2-Methylphenol 2,2'-oxybis (1-Chloropropane) Hexachloroethane Nitrobenzene 2-Methylnaphthalene Isophorone 2-Nitrophenol 2,4-Dimethylphenol bis(2-Chloroethoxy)methane 2,4-Dichlorophenol 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 4-Chloro-3-methylphenol Hexachlorocyclopentadiene 2,4,6-Trichlorophenol 2-Chloronaphthalene Dimethyl phthalate Acenaphthylene 3-Nitroaniline Acenaphthene 4-Nitrophenol Dibenzofuran Fluorene 4-Chlorophenyl phenyl ether 4-Nitroaniline Phenanthrene Fluoranthene 3,3'-Dichlorobenzidine	UJ	B29H90, B29HC0, B29H66, B29HK0, B29H56, B29HD5, B29HB0, B29HK1, B29H42, B29H85, B29HF0, B29H71, B29H95, B29HF5, B29HJ5, B29H37, B29HD0, B29HJ0	Low LCS recovery, low MS and/or MSD recovery

2,4,5-Trichlorophenol 2-Nitroaniline 2,6-Dinitrotoluene 2,4-Dinitrotoluene Diethyl phthalate 4-Bromophenyl phenyl ether Hexachlorobenzene Pentachlorophenol Anthracene Carbazole Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-butylphthalate Di-n-octylphthalate Benzo(k)fluoranthene Benzo(a)pyrene Benzo(ghi)perylene Dibenz(a,h)anthracene	UJ	B29H90, B29HC0, B29H66, B29HK0, B29H56, B29HD5, B29HB0, B29HK1, B29H42, B29H85, B29HF0, B29H71, B29H95, B29HF5, B29HJ5, B29H37, B29HD0, B29HJ0	Low MS and/or MSD recovery
Indeno(1,2,3-cd)pyrene	UJ	B29H90, B29HC0, B29H66, B29HK0, B29H56, B29HD5, B29HB0, B29HK1, B29H42, B29H85, B29HF0, B29H71, B29H95, B29HF5, B29HJ5, B29H37, B29HD0, B29HJ0	Low MS recovery, poor MS/MSD precision
bis(2-Chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene 2-Methylphenol 2,2'-oxybis (1-Chloropropane) Hexachloroethane Nitrobenzene 2-Methylnaphthalene Isophorone 2-Nitrophenol 2,4-Dimethylphenol bis(2-Chloroethoxy)methane 2,4-Dichlorophenol 1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 4-Chloro-3-methylphenol Hexachlorocyclopentadiene 2,4,6-Trichlorophenol	UJ	B29H72	Low LCS recovery, low MS and/or MSD recovery

2-Chloronaphthalene Dimethyl phthalate Acenaphthylene 3-Nitroaniline Acenaphthene 4-Nitrophenol Dibenzofuran Fluorene 4-Chlorophenyl phenyl ether 4-Nitroaniline Phenanthrene Fluoranthene 3,3'-Dichlorobenzidine			
2,4,5-Trichlorophenol 2-Nitroaniline 2,6-Dinitrotoluene 2,4-Dinitrotoluene Diethyl phthalate 4-Bromophenyl phenyl ether Hexachlorobenzene Pentachlorophenol Anthracene Carbazole Benzo(a)anthracene Chrysene Di-n-butylphthalate Di-n-octylphthalate Benzo(k)fluoranthene Benzo(a)pyrene Benzo(ghi)perylene Dibenz(a,h)anthracene	UJ	B29H72	Low MS and/or MSD recovery
bis(2-Ethylhexyl)phthalate	J	B29H72	Low MS and/or MSD recovery
Indeno(1,2,3-cd)pyrene	UJ	B29H72	Low MS recovery, poor MS/MSD precision
bis(2-Chloroethyl)ether 2-Chlorophenol 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene 2-Methylphenol 2,2'-oxybis (1-Chloropropane) Hexachloroethane Nitrobenzene 2-Methylnaphthalene Isophorone 2-Nitrophenol 2,4-Dimethylphenol bis(2-Chloroethoxy)methane 2,4-Dichlorophenol	UJ	B29H47	Low LCS recovery, low MS and/or MSD recovery

1,2,4-Trichlorobenzene Naphthalene 4-Chloroaniline Hexachlorobutadiene 4-Chloro-3-methylphenol Hexachlorocyclopentadiene 2,4,6-Trichlorophenol 2-Chloronaphthalene Dimethyl phthalate Acenaphthylene 3-Nitroaniline Acenaphthene 4-Nitrophenol Dibenzofuran Fluorene 4-Chlorophenyl phenyl ether 4-Nitroaniline Phenanthrene Fluoranthene 3,3'-Dichlorobenzidine			
2,4,5-Trichlorophenol 2-Nitroaniline 2,6-Dinitrotoluene 2,4-Dinitrotoluene 4-Bromophenyl phenyl ether Hexachlorobenzene Pentachlorophenol Anthracene Carbazole Benzo(a)anthracene Chrysene Di-n-butylphthalate Di-n-octylphthalate Benzo(k)fluoranthene Benzo(a)pyrene Benzo(ghi)perylene Dibenz(a,h)anthracene	UJ	B29H47	Low MS and/or MSD recovery
bis(2-Ethylhexyl)phthalate Diethyl phthalate	J	B29H47	Low MS and/or MSD recovery
Indeno(1,2,3-cd)pyrene	UJ	B29H47	Low MS recovery, poor MS/MSD precision
bis(2-Chloroethyl)ether 2-Chlorophenol 2-Methylphenol 2,2'-oxybis (1-Chloropropane) N-Nitrosodi-n-propylamine Nitrobenzene 2-Methylnaphthalene Isophorone 2-Nitrophenol	UJ	B29HH5, B29HB5	Low LCS recovery, low MS/MSD recoveries

2,4-Dimethylphenol bis(2-Chloroethoxy)methane Naphthalene 4-Chloro-3-methylphenol Hexachlorocyclopentadiene 2-Nitroaniline Dimethyl phthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethyl phthalate Fluorene 4-Chlorophenyl phenyl ether 4-Nitroaniline 4,6-Dinitro-2-methylphenol N-Nitrosodiphenylamine 4-Bromophenyl phenyl ether Phenanthrene Anthracene Carbazole Fluoranthene Pyrene Butyl benzyl phthalate Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-butylphthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(ghi)perylene Dibenz(a,h)anthracene			
2,4-Dinitrophenol	UJ	B29HH5, B29HB5	Low MS/MSD recoveries
1,4-Dichlorobenzene 1,2-Dichlorobenzene 2,4-Dichlorophenol 1,2,4-Trichlorobenzene Hexachlorobutadiene 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2-Chloronaphthalene Hexachlorobenzene Pentachlorophenol 3,3'-Dichlorobenzidine	UJ	B29HH5, B29HB5	Low LCS recovery, low MS/MSD recoveries, low surrogate recovery

1,3-Dichlorobenzene Hexachloroethane	UJ	B29HH5, B29HB5	Low LCS recovery, low MS/MSD recoveries, poor MS/MSD precision, low surrogate recovery
2,6-dichlorophenol 2,3,4,6-tetrachlorophenol	UJ	B29HH5, B29HB5	Low surrogate recovery
bis(2-Chloroethyl)ether 2-Chlorophenol 2-Methylphenol 2,2'-oxybis (1-Chloropropane) N-Nitrosodi-n-propylamine Nitrobenzene 2-Methylnaphthalene Isophorone 2-Nitrophenol 2,4-Dimethylphenol bis(2-Chloroethoxy)methane Naphthalene 4-Chloro-3-methylphenol Hexachlorocyclopentadiene 2-Nitroaniline Dimethyl phthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethyl phthalate Fluorene 4-Chlorophenyl phenyl ether 4-Nitroaniline 4,6-Dinitro-2-methylphenol N-Nitrosodiphenylamine 4-Bromophenyl phenyl ether Phenanthrene Anthracene Carbazole Fluoranthene Pyrene Butyl benzyl phthalate Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-butylphthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene	UJ	B29H61	Low LCS recovery, low MS/MSD recoveries

Benzo(ghi)perylene Dibenz(a,h)anthracene			
2,4-Dinitrophenol	UJ	B29H61	Low MS/MSD recoveries
1,4-Dichlorobenzene 1,2-Dichlorobenzene 2,4-Dichlorophenol 1,2,4-Trichlorobenzene Hexachlorobutadiene 2-Chloronaphthalene Hexachlorobenzene 3,3'-Dichlorobenzidine	UJ	B29H61	Low LCS recovery, low MS/MSD recoveries, low surrogate recovery
1,3-Dichlorobenzene Hexachloroethane	UJ	B29H61	Low LCS recovery, low MS/MSD recoveries, poor MS/MSD precision, low surrogate recovery
bis(2-Chloroethyl)ether 2-Chlorophenol 2-Methylphenol 2,2'-oxybis (1-Chloropropane) N-Nitrosodi-n-propylamine Nitrobenzene 2-Methylnaphthalene Isophorone 2-Nitrophenol 2,4-Dimethylphenol bis(2-Chloroethoxy)methane Naphthalene 4-Chloro-3-methylphenol Hexachlorocyclopentadiene 2-Nitroaniline Dimethyl phthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethyl phthalate Fluorene 4-Chlorophenyl phenyl ether 4-Nitroaniline 4,6-Dinitro-2-methylphenol N-Nitrosodiphenylamine 4-Bromophenyl phenyl ether Phenanthrene Anthracene Carbazole Fluoranthene Pyrene Butyl benzyl phthalate	UJ	B29HC5	Low LCS recovery, low MS/MSD recoveries

Benzo(a)anthracene Chrysene Di-n-butylphthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(ghi)perylene Dibenz(a,h)anthracene			
bis(2-Ethylhexyl)phthalate	J	B29HC5	Low LCS recovery, low MS/MSD recoveries
2,4-Dinitrophenol	UJ	B29HC5	Low MS/MSD recoveries
1,4-Dichlorobenzene 1,2-Dichlorobenzene 2,4-Dichlorophenol 1,2,4-Trichlorobenzene Hexachlorobutadiene 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2-Chloronaphthalene Hexachlorobenzene Pentachlorophenol 3,3'-Dichlorobenzidine	UJ	B29HC5	Low LCS recovery, low MS/MSD recoveries, low surrogate recovery
1,3-Dichlorobenzene Hexachloroethane	UJ	B29HC5	Low LCS recovery, low MS/MSD recoveries, poor MS/MSD precision, low surrogate recovery
2,6-dichlorophenol 2,3,4,6-tetrachlorophenol	UJ	B29HC5	Low surrogate recovery
bis(2-Chloroethyl)ether 2-Chlorophenol 2-Methylphenol 2,2'-oxybis (1-Chloropropane) N-Nitrosodi-n-propylamine Nitrobenzene 2-Methylnaphthalene Isophorone 2-Nitrophenol 2,4-Dimethylphenol bis(2-Chloroethoxy)methane Naphthalene 4-Chloro-3-methylphenol Hexachlorocyclopentadiene 2-Nitroaniline Dimethyl phthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene	UJ	B29H48	Low LCS recovery, low MS/MSD recoveries

Dibenzofuran 2,4-Dinitrotoluene Diethyl phthalate Fluorene 4-Chlorophenyl phenyl ether 4-Nitroaniline 4,6-Dinitro-2-methylphenol N-Nitrosodiphenylamine 4-Bromophenyl phenyl ether Phenanthrene Anthracene Carbazole Fluoranthene Pyrene Butyl benzyl phthalate Benzo(a)anthracene Chrysene bis(2-Ethylhexyl)phthalate Di-n-butylphthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(ghi)perylene Dibenz(a,h)anthracene 1,4-Dichlorobenzene 1,2-Dichlorobenzene 2,4-Dichlorophenol 1,2,4-Trichlorobenzene Hexachlorobutadiene 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2-Chloronaphthalene Hexachlorobenzene Pentachlorophenol 3,3'-Dichlorobenzidine			
2,4-Dinitrophenol	UJ	B29H48	Low MS/MSD recoveries
1,3-Dichlorobenzene Hexachloroethane	UJ	B29H48	Low LCS recovery, low MS/MSD recoveries, poor MS/MSD precision
bis(2-Chloroethyl)ether 2-Chlorophenol 2-Methylphenol 2,2'-oxybis (1-Chloropropane) N-Nitrosodi-n-propylamine Nitrobenzene 2-Methylnaphthalene Isophorone 2-Nitrophenol	UJ	B29H32	Low LCS recovery, low MS/MSD recoveries

2,4-Dimethylphenol bis(2-Chloroethoxy)methane Naphthalene 4-Chloro-3-methylphenol Hexachlorocyclopentadiene 2-Nitroaniline Dimethyl phthalate Acenaphthylene 2,6-Dinitrotoluene 3-Nitroaniline Acenaphthene Dibenzofuran 2,4-Dinitrotoluene Diethyl phthalate Fluorene 4-Chlorophenyl phenyl ether 4-Nitroaniline 4,6-Dinitro-2-methylphenol N-Nitrosodiphenylamine 4-Bromophenyl phenyl ether Phenanthrene Anthracene Carbazole Fluoranthene Pyrene Butyl benzyl phthalate Benzo(a)anthracene Chrysene Di-n-butylphthalate Di-n-octylphthalate Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(ghi)perylene Dibenz(a,h)anthracene 1,4-Dichlorobenzene 1,2-Dichlorobenzene 2,4-Dichlorophenol 1,2,4-Trichlorobenzene Hexachlorobutadiene 2,4,6-Trichlorophenol 2,4,5-Trichlorophenol 2-Chloronaphthalene Hexachlorobenzene Pentachlorophenol 3,3'-Dichlorobenzidine			
bis(2-Ethylhexyl)phthalate	J	B29H32	Low LCS recovery, low MS/MSD recoveries
2,4-Dinitrophenol	UJ	B29H32	Low MS/MSD recoveries

1,3-Dichlorobenzene Hexachloroethane	UJ	B29H32	Low LCS recovery, low MS/MSD recoveries, poor MS/MSD precision
Ethanol	UJ	B29H53, B29HB2, B29HB7, B29H97, B29HF7	Low LCS recovery
1-Propanol	UJ	B29HF7	Low MS recovery
Ethylene glycol	UJ	B29HF7	Low MSD recovery

Comments: None

Appendix 3

Annotated Laboratory Reports

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H90

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-001 **Work Order #...:** MC8C01AD **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H90

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-001 **Work Order #...:** MC8C01AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H90

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-001 **Work Order #...:** MC8C01AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H90

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-001 **Work Order #...:** MC8C01AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	40	(22 - 84)
Phenol-d5	26	(11 - 71)
Nitrobenzene-d5	69	(35 - 102)
2-Fluorobiphenyl	62	(43 - 95)
2,4,6-Tribromophenol	71	(51 - 110)
Terphenyl-d14	80	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29H90

GC/MS Semivolatiles

Lot-Sample #: F1A110510-001 **Work Order #:** MC8C01AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		36 J	M	3.4415	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-002 **Work Order #...:** MC8C51AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-002 **Work Order #...:** MC8C51AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-002 **Work Order #...:** MC8C51AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-002 **Work Order #...:** MC8C51AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	39	(22 - 84)
Phenol-d5	25	(11 - 71)
Nitrobenzene-d5	73	(35 - 102)
2-Fluorobiphenyl	65	(43 - 95)
2,4,6-Tribromophenol	71	(51 - 110)
Terphenyl-d14	88	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29HC0

GC/MS Semivolatiles

Lot-Sample #: F1A110510-002 **Work Order #:** MC8C51AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		34 J	M	3.4448	ug/L
13-Docosenamide, (z)-	112-84-5	8.8 J	M	19.375	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H66

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-003 **Work Order #...:** MC8C61AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1.15 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	120	ug/L	1.2
N-Nitro-o-toluidine		ND	23	ug/L	1.0
Pyridine		ND	23	ug/L	2.3
N-Nitrosodimethylamine		ND	12	ug/L	2.3
2-Picoline		ND	23	ug/L	2.3
N-Nitrosomethylethylamine		ND	12	ug/L	1.2
Methyl methanesulfonate		ND	12	ug/L	1.2
Methyl parathion		ND	58	ug/L	1.2
N-Nitrosodiethylamine		ND	12	ug/L	1.2
Ethyl methanesulfonate		ND	12	ug/L	1.2
Phenol	UR	ND	12	ug/L	2.3
Pentachloroethane		ND	58	ug/L	1.2
Aniline		ND	12	ug/L	1.2
bis(2-Chloroethyl)-ether	UJ	ND	12	ug/L	1.2
2-Chlorophenol	UJ	ND	12	ug/L	1.2
1,3-Dichlorobenzene	UJ	ND	12	ug/L	1.2
1,4-Dichlorobenzene	UJ	ND	12	ug/L	1.2
Benzyl alcohol		ND	12	ug/L	1.2
Hexachlorophene		ND	120	ug/L	12
1,2-Dichlorobenzene	UJ	ND	12	ug/L	1.2
2-Methylphenol	UJ	ND	12	ug/L	1.2
2,2'-oxybis (1-Chloropropane)	UJ	ND	12	ug/L	1.2
Acetophenone		ND	12	ug/L	1.2
4-Methylphenol		ND	12	ug/L	
N-Nitrosopyrrolidine		ND	12	ug/L	1.2
N-Nitrosomorpholine		ND	12	ug/L	1.2
o-Toluidine		ND	23	ug/L	1.2
N-Nitrosodi-n-propyl-amine		ND	12	ug/L	1.2
Hexachloroethane	UJ	ND	12	ug/L	1.2
2-Methylnaphthalene	UJ	ND	12	ug/L	1.2
Nitrobenzene	UJ	ND	12	ug/L	1.2
N-Nitrosopiperidine		ND	12	ug/L	1.2
Isophorone	UJ	ND	12	ug/L	1.2
2-Nitrophenol	UJ	ND	12	ug/L	1.2
2,4-Dimethylphenol	UJ	ND	12	ug/L	1.2
O,O,O-Triethylphosphoro-thioate		ND	58	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H66

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-003 **Work Order #...:** MC8C61AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	12	ug/L	1.2
alpha,alpha-Dimethylphenethylamine		ND	58	ug/L	22
2,4-Dichlorophenol	UJ	ND	12	ug/L	1.2
1,2,4-Trichloro-benzene	UJ	ND	12	ug/L	1.2
Naphthalene	UJ	ND	12	ug/L	1.2
2,6-Dichlorophenol		ND	12	ug/L	1.2
4-Chloroaniline	UJ	ND	12	ug/L	1.2
Hexachlorobutadiene	UJ	ND	12	ug/L	1.2
p-Phenylene diamine		ND	120	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	12	ug/L	1.2
Safrole		ND	23	ug/L	1.2
1,2,4,5-Tetrachloro-benzene		ND	12	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	58	ug/L	1.2
2,4,6-Trichloro-phenol	UJ	ND	12	ug/L	1.2
2,4,5-Trichloro-phenol	UJ	ND	12	ug/L	1.2
2-Chloronaphthalene	UJ	ND	12	ug/L	1.2
Isosafrole		ND	23	ug/L	1.5
2-Nitroaniline	UJ	ND	58	ug/L	1.2
1,4-Naphthoquinone		ND	58	ug/L	1.2
Dimethyl phthalate	UJ	ND	12	ug/L	1.2
N-Nitrosodi-n-butylamine		ND	12	ug/L	1.2
1,3-Dinitrobenzene		ND	12	ug/L	1.2
Acenaphthylene	UJ	ND	12	ug/L	1.2
2,6-Dinitrotoluene	UJ	ND	12	ug/L	2.5
3-Nitroaniline	UJ	ND	58	ug/L	1.2
Acenaphthene	UJ	ND	12	ug/L	1.2
2,4-Dinitrophenol		ND	58	ug/L	2.3
4-Nitrophenol	UJ	ND	58	ug/L	2.3
Dibenzofuran	UJ	ND	12	ug/L	1.2
Pentachlorobenzene		ND	12	ug/L	1.2
2,4-Dinitrotoluene	UJ	ND	12	ug/L	1.2
1-Naphthylamine		ND	12	ug/L	1.2
2,3,4,6-Tetrachlorophenol		ND	58	ug/L	1.2
2-Naphthylamine		ND	12	ug/L	1.2
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	58	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H66

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-003 **Work Order #...:** MC8C61AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	12	ug/L	1.2
Fluorene	UJ	ND	12	ug/L	1.2
4-Chlorophenyl phenyl ether	UJ	ND	12	ug/L	1.2
4-Nitroaniline	UJ	ND	58	ug/L	1.2
4,6-Dinitro-2-methylphenol		ND	58	ug/L	1.2
N-Nitrosodiphenylamine		ND	12	ug/L	1.2
Azobenzene		ND	12	ug/L	1.2
Tetraethyldithiopyro-phosphate		ND	58	ug/L	1.0
1,3,5-Trinitrobenzene		ND	58	ug/L	1.2
Diallate		ND	23	ug/L	2.0
Phorate		ND	58	ug/L	1.2
4-Bromophenyl phenyl ether	UJ	ND	12	ug/L	1.2
Phenacetin		ND	23	ug/L	1.2
Dimethoate		ND	23	ug/L	1.2
Hexachlorobenzene	UJ	ND	12	ug/L	1.2
Pentachlorophenol	UJ	ND	58	ug/L	1.5
Pentachloronitrobenzene		ND	58	ug/L	1.2
4-Aminobiphenyl		ND	58	ug/L	1.2
Pronamide		ND	23	ug/L	1.2
Disulfoton		ND	58	ug/L	1.2
Phenanthrene	UJ	ND	12	ug/L	1.2
Anthracene	UJ	ND	12	ug/L	1.2
Carbazole	UJ	ND	12	ug/L	1.2
Dinoseb		ND	23	ug/L	2.3
4-Nitroquinoline-1-oxide		ND	120	ug/L	5.8
Parathion		ND	58	ug/L	1.2
Methapyrilene		ND	58	ug/L	1.4
Fluoranthene	UJ	ND	12	ug/L	1.2
Isodrin		ND	12	ug/L	1.2
Pyrene		ND	12	ug/L	1.2
Aramite 1		ND	23	ug/L	
Aramite 2		ND	23	ug/L	
p-Dimethylaminoazobenzene		ND	23	ug/L	1.0
p-Chlorobenzilate		ND	12	ug/L	1.2
Famphur		ND	120	ug/L	2.0
Kepone		ND	120	ug/L	23
3,3'-Dimethylbenzidine		ND	58	ug/L	2.6
Butyl benzyl phthalate		ND	12	ug/L	1.2

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H66

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-003 **Work Order #...:** MC8C61AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	120	ug/L	1.2
Benzo(a)anthracene	UJ	ND	12	ug/L	1.2
3,3'-Dichlorobenzidine	UJ	ND	58	ug/L	1.2
Chrysene	UJ	ND	12	ug/L	1.2
bis(2-Ethylhexyl) phthalate	UJ	ND	12	ug/L	1.2
Di-n-butyl phthalate	UJ	ND	12	ug/L	1.2
Di-n-octyl phthalate	UJ	ND	12	ug/L	1.2
7,12-Dimethylbenz(a)-anthracene		ND	23	ug/L	1.0
Benzo(b)fluoranthene		ND	12	ug/L	1.2
Benzo(k)fluoranthene	UJ	ND	12	ug/L	1.2
Benzo(a)pyrene	UJ	ND	12	ug/L	1.2
3-Methylcholanthrene		ND	23	ug/L	1.2
Indeno(1,2,3-cd)pyrene	UJ	ND	12	ug/L	1.2
Benzo(ghi)perylene	UJ	ND	12	ug/L	1.2
Dibenz(a,h)anthracene	UJ	ND	12	ug/L	1.0
Tributyl phosphate		ND	12	ug/L	1.2

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	49	(22 - 84)
Phenol-d5	33	(11 - 71)
Nitrobenzene-d5	81	(35 - 102)
2-Fluorobiphenyl	70	(43 - 95)
2,4,6-Tribromophenol	75	(51 - 110)
Terphenyl-d14	88	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29H66

GC/MS Semivolatiles

Lot-Sample #: F1A110510-003 **Work Order #:** MC8C61AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		92 J	M	3.4517	ug/L
Unknown		12 J	M	8.1261	ug/L
Unknown		5.4 J	M	10.033	ug/L
Dodecanoic acid	143-07-7	5.2 J	M	10.246	ug/L
Unknown		160 J	M	21.737	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-004 **Work Order #...:** MC8DA1AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-004 **Work Order #...:** MC8DA1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-004 **Work Order #...:** MC8DA1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-004 **Work Order #...:** MC8DA1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	44	(22 - 84)
Phenol-d5	27	(11 - 71)
Nitrobenzene-d5	76	(35 - 102)
2-Fluorobiphenyl	68	(43 - 95)
2,4,6-Tribromophenol	74	(51 - 110)
Terphenyl-d14	84	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29HK0

GC/MS Semivolatiles

Lot-Sample #: F1A110510-004 **Work Order #:** MC8DA1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		37 J	M	3.4453	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H72

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-005 **Work Order #...:** MC8DC1AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H72

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-005 **Work Order #...:** MC8DC1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H72

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-005 **Work Order #...:** MC8DC1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H72

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-005 **Work Order #...:** MC8DC1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	J	**1.2 J**	**10**	**ug/L**	**1.0**
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	44	(22 - 84)
Phenol-d5	28	(11 - 71)
Nitrobenzene-d5	78	(35 - 102)
2-Fluorobiphenyl	69	(43 - 95)
2,4,6-Tribromophenol	75	(51 - 110)
Terphenyl-d14	86	(43 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

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CH2M Hill Plateau Remediation DOE RL

B29H72

GC/MS Semivolatiles

Lot-Sample #: F1A110510-005 **Work Order #:** MC8DC1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		37 J	M	3.4421	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H47

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-006 **Work Order #...:** MC8DE1AD **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H47

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-006 **Work Order #...:** MC8DE1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H47

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-006 **Work Order #...:** MC8DE1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	J	**2.2 J**	**10**	**ug/L**	**1.0**
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H47

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-006 **Work Order #...:** MC8DE1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	J	**1.2 J**	**10**	**ug/L**	**1.0**
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	47	(22 - 84)
Phenol-d5	29	(11 - 71)
Nitrobenzene-d5	85	(35 - 102)
2-Fluorobiphenyl	75	(43 - 95)
2,4,6-Tribromophenol	76	(51 - 110)
Terphenyl-d14	92	(43 - 107)

NOTE(S):

J Estimated result. Result is less than RL.

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CH2M Hill Plateau Remediation DOE RL

B29H47

GC/MS Semivolatiles

Lot-Sample #: F1A110510-006 **Work Order #:** MC8DE1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		48 J	M	3.4555	ug/L
Unknown		6.3 J	M	19.385	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H56

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-007 **Work Order #...:** MC8DH1AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H56

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-007 **Work Order #...:** MC8DH1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H56

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-007 **Work Order #...:** MC8DH1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H56

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-007 **Work Order #...:** MC8DH1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	42	(22 - 84)
Phenol-d5	27	(11 - 71)
Nitrobenzene-d5	69	(35 - 102)
2-Fluorobiphenyl	64	(43 - 95)
2,4,6-Tribromophenol	72	(51 - 110)
Terphenyl-d14	89	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29H56

GC/MS Semivolatiles

Lot-Sample #: F1A110510-007 **Work Order #:** MC8DH1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		8.0 J	M	2.8113	ug/L
Unknown aldol condensate		14 J	M	3.4257	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-008 **Work Order #...:** MC8DJ1AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-008 **Work Order #...:** MC8DJ1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-008 **Work Order #...:** MC8DJ1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-008 **Work Order #...:** MC8DJ1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	26	(22 - 84)
Phenol-d5	20	(11 - 71)
Nitrobenzene-d5	45	(35 - 102)
2-Fluorobiphenyl	54	(43 - 95)
2,4,6-Tribromophenol	71	(51 - 110)
Terphenyl-d14	83	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29HD5

GC/MS Semivolatiles

Lot-Sample #: F1A110510-008 **Work Order #:** MC8DJ1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		13 J	M	2.8201	ug/L
Unknown aldol condensate		7.0 J	M	3.4398	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-009 **Work Order #...:** MC8DR1AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-009 **Work Order #...:** MC8DR1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-009 **Work Order #...:** MC8DR1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-009 **Work Order #...:** MC8DR1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	44	(22 - 84)
Phenol-d5	28	(11 - 71)
Nitrobenzene-d5	78	(35 - 102)
2-Fluorobiphenyl	67	(43 - 95)
2,4,6-Tribromophenol	73	(51 - 110)
Terphenyl-d14	89	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29HB0

GC/MS Semivolatiles

Lot-Sample #: F1A110510-009 **Work Order #:** MC8DR1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		16 J	M	3.4471	ug/L
Unknown amide		7.4 J	M	19.388	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK1

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-010 **Work Order #...:** MC8DV1AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK1

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-010 **Work Order #...:** MC8DV1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK1

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-010 **Work Order #...:** MC8DV1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK1

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-010 **Work Order #...:** MC8DV1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	29	(22 - 84)
Phenol-d5	20	(11 - 71)
Nitrobenzene-d5	50	(35 - 102)
2-Fluorobiphenyl	43	(43 - 95)
2,4,6-Tribromophenol	65	(51 - 110)
Terphenyl-d14	81	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29HK1

GC/MS Semivolatiles

Lot-Sample #: F1A110510-010 **Work Order #:** MC8DV1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		7.0 J	M	3.4293	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H42

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-011 **Work Order #...:** MC8DW1AD **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H42

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-011 **Work Order #...:** MC8DW1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H42

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-011 **Work Order #...:** MC8DW1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H42

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-011 **Work Order #...:** MC8DW1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	37	(22 - 84)
Phenol-d5	26	(11 - 71)
Nitrobenzene-d5	59	(35 - 102)
2-Fluorobiphenyl	57	(43 - 95)
2,4,6-Tribromophenol	74	(51 - 110)
Terphenyl-d14	87	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29H42

GC/MS Semivolatiles

Lot-Sample #: F1A110510-011 **Work Order #:** MC8DW1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		11 J	M	4.2281	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H85

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-012 **Work Order #...:** MC8DX1AE **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H85

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-012 **Work Order #...:** MC8DX1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H85

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-012 **Work Order #...:** MC8DX1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H85

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-012 **Work Order #...:** MC8DX1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	44	(22 - 84)
Phenol-d5	28	(11 - 71)
Nitrobenzene-d5	70	(35 - 102)
2-Fluorobiphenyl	61	(43 - 95)
2,4,6-Tribromophenol	73	(51 - 110)
Terphenyl-d14	84	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29H85

GC/MS Semivolatiles

Lot-Sample #: F1A110510-012 **Work Order #:** MC8DX1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
2,4(1H,3h)-pyrimidinedione, 5-	314-40-9	18 J	M	14.985	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-013 **Work Order #...:** MC8D01AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-013 **Work Order #...:** MC8D01AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-013 **Work Order #...:** MC8D01AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-013 **Work Order #...:** MC8D01AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	40	(22 - 84)
Phenol-d5	27	(11 - 71)
Nitrobenzene-d5	62	(35 - 102)
2-Fluorobiphenyl	51	(43 - 95)
2,4,6-Tribromophenol	73	(51 - 110)
Terphenyl-d14	83	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29HF0

GC/MS Semivolatiles

Lot-Sample #: F1A110510-013 **Work Order #:** MC8D01AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		18 J	M	3.6293	ug/L
Unknown aldol condensate		14 J	M	4.2437	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H71

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-014 **Work Order #...:** MC8D21AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H71

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-014 **Work Order #...:** MC8D21AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H71

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-014 **Work Order #...:** MC8D21AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H71

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-014 **Work Order #...:** MC8D21AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	50	(22 - 84)
Phenol-d5	33	(11 - 71)
Nitrobenzene-d5	79	(35 - 102)
2-Fluorobiphenyl	65	(43 - 95)
2,4,6-Tribromophenol	83	(51 - 110)
Terphenyl-d14	91	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29H71

GC/MS Semivolatiles

Lot-Sample #: F1A110510-014 **Work Order #:** MC8D21AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
2,4(1H,3h)-pyrimidinedione, 5-	314-40-9	5.9 J	M	14.96	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H95

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-015 **Work Order #...:** MC8EC1AD **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H95

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-015 **Work Order #...:** MC8EC1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H95

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-015 **Work Order #...:** MC8EC1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H95

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-015 **Work Order #...:** MC8EC1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	41	(22 - 84)
Phenol-d5	28	(11 - 71)
Nitrobenzene-d5	64	(35 - 102)
2-Fluorobiphenyl	58	(43 - 95)
2,4,6-Tribromophenol	72	(51 - 110)
Terphenyl-d14	82	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29H95

GC/MS Semivolatiles

Lot-Sample #: F1A110510-015 **Work Order #:** MC8EC1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT	RETENTION TIME	UNITS
None				ug/L

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-016 **Work Order #...:** MC8EE1AD **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-016 **Work Order #...:** MC8EE1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-016 **Work Order #...:** MC8EE1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-016 **Work Order #...:** MC8EE1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	40	(22 - 84)
Phenol-d5	27	(11 - 71)
Nitrobenzene-d5	67	(35 - 102)
2-Fluorobiphenyl	55	(43 - 95)
2,4,6-Tribromophenol	76	(51 - 110)
Terphenyl-d14	87	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29HF5

GC/MS Semivolatiles

Lot-Sample #: F1A110510-016 **Work Order #:** MC8EE1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		18 J	M	4.2477	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-017 **Work Order #...:** MC8EF1AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-017 **Work Order #...:** MC8EF1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-017 **Work Order #...:** MC8EF1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-017 **Work Order #...:** MC8EF1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	38	(22 - 84)
Phenol-d5	26	(11 - 71)
Nitrobenzene-d5	71	(35 - 102)
2-Fluorobiphenyl	61	(43 - 95)
2,4,6-Tribromophenol	67	(51 - 110)
Terphenyl-d14	80	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29HJ5

GC/MS Semivolatiles

Lot-Sample #: F1A110510-017 **Work Order #:** MC8EF1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		97 J	M	4.2522	ug/L
Unknown organic acid		13 J	M	14.135	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H37

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-018 **Work Order #...:** MC8EG1AD **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H37

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-018 **Work Order #...:** MC8EG1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H37

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-018 **Work Order #...:** MC8EG1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H37

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-018 **Work Order #...:** MC8EG1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	42	(22 - 84)
Phenol-d5	29	(11 - 71)
Nitrobenzene-d5	79	(35 - 102)
2-Fluorobiphenyl	69	(43 - 95)
2,4,6-Tribromophenol	75	(51 - 110)
Terphenyl-d14	89	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29H37

GC/MS Semivolatiles

Lot-Sample #: F1A110510-018 **Work Order #:** MC8EG1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		120 J	M	4.2528	ug/L
Unknown organic acid		24 J	M	14.135	ug/L
Unknown		8.9 J	M	16.213	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-019 **Work Order #...:** MC8EH1AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-019 **Work Order #...:** MC8EH1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-019 **Work Order #...:** MC8EH1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-019 **Work Order #...:** MC8EH1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	40	(22 - 84)
Phenol-d5	27	(11 - 71)
Nitrobenzene-d5	70	(35 - 102)
2-Fluorobiphenyl	60	(43 - 95)
2,4,6-Tribromophenol	72	(51 - 110)
Terphenyl-d14	85	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29HD0

GC/MS Semivolatiles

Lot-Sample #: F1A110510-019 **Work Order #:** MC8EH1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		150 J	M	4.2473	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-020 **Work Order #...:** MC8EJ1AE **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1012097
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine		ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-020 **Work Order #...:** MC8EJ1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UJ	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND	10	ug/L	1.0
2,4-Dinitrophenol		ND	50	ug/L	2.0
4-Nitrophenol	UJ	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-020 **Work Order #...:** MC8EJ1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol		ND	50	ug/L	1.0
N-Nitrosodiphenylamine		ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene		ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate		ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ0

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-020 **Work Order #...:** MC8EJ1AE **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene		ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	36	(22 - 84)
Phenol-d5	25	(11 - 71)
Nitrobenzene-d5	64	(35 - 102)
2-Fluorobiphenyl	49	(43 - 95)
2,4,6-Tribromophenol	69	(51 - 110)
Terphenyl-d14	82	(43 - 107)

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CH2M Hill Plateau Remediation DOE RL

B29HJ0

GC/MS Semivolatiles

Lot-Sample #: F1A110510-020 **Work Order #:** MC8EJ1AE **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown aldol condensate		54 J	M	4.2528	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HH5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-021 **Work Order #...:** MC8EL1AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 02/14/11
Prep Batch #...: 1013085
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine	UJ	ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HH5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-021 **Work Order #...:** MC8EL1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol	UJ	ND	10	ug/L	1.0
4-Chloroaniline	UR	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND T	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND T	10	ug/L	1.0
2,4-Dinitrophenol	UJ	ND	50	ug/L	2.0
4-Nitrophenol	UR	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol	UJ	ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HH5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-021 **Work Order #...:** MC8EL1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol	UJ	ND	50	ug/L	1.0
N-Nitrosodiphenylamine	UJ	ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene	UJ	ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate	UJ	ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HH5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-021 **Work Order #...:** MC8EL1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	32	(22 - 84)
Phenol-d5	21	(11 - 71)
Nitrobenzene-d5	49	(35 - 102)
2-Fluorobiphenyl	39 *	(43 - 95)
2,4,6-Tribromophenol	50 *	(51 - 110)
Terphenyl-d14	62	(43 - 107)

NOTE(S):

* Surrogate recovery is outside stated control limits.

T Spike sample recovery is outside control limits.

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CH2M Hill Plateau Remediation DOE RL

B29HH5

GC/MS Semivolatiles

Lot-Sample #: F1A110510-021 **Work Order #:** MC8EL1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		18 J	M	3.6296	ug/L
Unknown aldol condensate		21 J	M	4.2386	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H61

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-022 **Work Order #...:** MC8EM1AD **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 02/14/11
Prep Batch #...: 1013085
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine	UJ	ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H61

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-022 **Work Order #...:** MC8EM1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UR	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND T	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol		ND	10	ug/L	1.0
2,4,5-Trichloro-phenol		ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND T	10	ug/L	1.0
2,4-Dinitrophenol	UJ	ND	50	ug/L	2.0
4-Nitrophenol	UR	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H61

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-022 **Work Order #...:** MC8EM1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol	UJ	ND	50	ug/L	1.0
N-Nitrosodiphenylamine	UJ	ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol		ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene	UJ	ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate	UJ	ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H61

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-022 **Work Order #...:** MC8EM1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	28	(22 - 84)
Phenol-d5	19	(11 - 71)
Nitrobenzene-d5	45	(35 - 102)
2-Fluorobiphenyl	36 *	(43 - 95)
2,4,6-Tribromophenol	51	(51 - 110)
Terphenyl-d14	59	(43 - 107)

NOTE(S):

* Surrogate recovery is outside stated control limits.

T Spike sample recovery is outside control limits.

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CH2M Hill Plateau Remediation DOE RL

B29H61

GC/MS Semivolatiles

Lot-Sample #: F1A110510-022 **Work Order #:** MC8EM1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		41 J	M	3.6433	ug/L
Unknown aldol condensate		59 J	M	4.2737	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-023 **Work Order #...:** MC8EN1AD **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 02/14/11
Prep Batch #...: 1013085
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine	UJ	ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-023 **Work Order #...:** MC8EN1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol	UJ	ND	10	ug/L	1.0
4-Chloroaniline	UR	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND T	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND T	10	ug/L	1.0
2,4-Dinitrophenol	UJ	ND	50	ug/L	2.0
4-Nitrophenol	UR	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol	UJ	ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-023 **Work Order #...:** MC8EN1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol	UJ	ND	50	ug/L	1.0
N-Nitrosodiphenylamine	UJ	ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene	UJ	ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate	UJ	ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-023 **Work Order #...:** MC8EN1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	**J**	**2.9 J**	**10**	**ug/L**	**1.0**
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	30	(22 - 84)
Phenol-d5	20	(11 - 71)
Nitrobenzene-d5	48	(35 - 102)
2-Fluorobiphenyl	39 *	(43 - 95)
2,4,6-Tribromophenol	48 *	(51 - 110)
Terphenyl-d14	57	(43 - 107)

NOTE(S):

* Surrogate recovery is outside stated control limits.

T Spike sample recovery is outside control limits.

J Estimated result. Result is less than RL.

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CH2M Hill Plateau Remediation DOE RL

B29HC5

GC/MS Semivolatiles

Lot-Sample #: F1A110510-023 **Work Order #:** MC8EN1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		160 J	M	3.6248	ug/L
Unknown aldol condensate		29 J	M	4.2551	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-024 **Work Order #...:** MC8EP1AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 02/14/11
Prep Batch #...: 1013085
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine	UJ	ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-024 **Work Order #...:** MC8EP1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol	UJ	ND	10	ug/L	1.0
4-Chloroaniline	UR	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND T	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND T	10	ug/L	1.0
2,4-Dinitrophenol	UJ	ND	50	ug/L	2.0
4-Nitrophenol	UR	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol	UJ	ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-024 **Work Order #...:** MC8EP1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol	UJ	ND	50	ug/L	1.0
N-Nitrosodiphenylamine	UJ	ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene	UJ	ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate	UJ	ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB5

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-024 **Work Order #...:** MC8EP1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	27	(22 - 84)
Phenol-d5	18	(11 - 71)
Nitrobenzene-d5	44	(35 - 102)
2-Fluorobiphenyl	40 *	(43 - 95)
2,4,6-Tribromophenol	48 *	(51 - 110)
Terphenyl-d14	56	(43 - 107)

NOTE(S):

* Surrogate recovery is outside stated control limits.

T Spike sample recovery is outside control limits.

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CH2M Hill Plateau Remediation DOE RL

B29HB5

GC/MS Semivolatiles

Lot-Sample #: F1A110510-024 **Work Order #:** MC8EP1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		33 J	M	3.619	ug/L
Unknown aldol condensate		23 J	M	4.244	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H48

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-025 **Work Order #...:** MC8EQ1AD **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1013085
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine	UJ	ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H48

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-025 **Work Order #...:** MC8EQ1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UR	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND T	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND T	10	ug/L	1.0
2,4-Dinitrophenol	UJ	ND	50	ug/L	2.0
4-Nitrophenol	UR	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H48

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-025 **Work Order #...:** MC8EQ1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol	UJ	ND	50	ug/L	1.0
N-Nitrosodiphenylamine	UJ	ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene	UJ	ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate	UJ	ND	10	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H48

GC/MS Semivolatiles

Lot-Sample #...: F1A110510-025 **Work Order #...:** MC8EQ1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	UJ	ND	10	ug/L	1.0
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	48	(22 - 84)
Phenol-d5	33	(11 - 71)
Nitrobenzene-d5	75	(35 - 102)
2-Fluorobiphenyl	61	(43 - 95)
2,4,6-Tribromophenol	75	(51 - 110)
Terphenyl-d14	88	(43 - 107)

NOTE(S):

T Spike sample recovery is outside control limits.

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CH2M Hill Plateau Remediation DOE RL

B29H48

GC/MS Semivolatiles

Lot-Sample #: F1A110510-025 **Work Order #:** MC8EQ1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		55 J	M	3.6033	ug/L
Unknown aldol condensate		39 J	M	4.2283	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H32

GC/MS Semivolatiles

Lot-Sample #...: F1A120486-001 **Work Order #...:** MC9HM1AD **Matrix.....:** WATER
Date Sampled...: 01/10/11 **Date Received..:** 01/12/11
Prep Date.....: 01/13/11 **Analysis Date..:** 02/15/11
Prep Batch #...: 1013085
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Hexachloropropene		ND	100	ug/L	1.0
N-Nitro-o-toluidine		ND	20	ug/L	1.0
Pyridine		ND	20	ug/L	2.0
N-Nitrosodimethylamine		ND	10	ug/L	2.0
2-Picoline		ND	20	ug/L	2.0
N-Nitrosomethylethylamine		ND	10	ug/L	1.0
Methyl methanesulfonate		ND	10	ug/L	1.0
Methyl parathion		ND	50	ug/L	1.0
N-Nitrosodiethylamine		ND	10	ug/L	1.0
Ethyl methanesulfonate		ND	10	ug/L	1.0
Phenol	UR	ND	10	ug/L	2.0
Pentachloroethane		ND	50	ug/L	1.0
Aniline		ND	10	ug/L	1.0
bis(2-Chloroethyl)-ether	UJ	ND	10	ug/L	1.0
2-Chlorophenol	UJ	ND	10	ug/L	1.0
1,3-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
1,4-Dichlorobenzene	UJ	ND	10	ug/L	1.0
Benzyl alcohol		ND	10	ug/L	1.0
Hexachlorophene		ND	100	ug/L	10
1,2-Dichlorobenzene	UJ	ND T	10	ug/L	1.0
2-Methylphenol	UJ	ND	10	ug/L	1.0
2,2'-oxybis (1-Chloropropane)	UJ	ND	10	ug/L	1.0
Acetophenone		ND	10	ug/L	1.0
4-Methylphenol		ND	10	ug/L	
N-Nitrosopyrrolidine		ND	10	ug/L	1.0
N-Nitrosomorpholine		ND	10	ug/L	1.0
o-Toluidine		ND	20	ug/L	1.0
N-Nitrosodi-n-propyl-amine	UJ	ND	10	ug/L	1.0
Hexachloroethane	UJ	ND	10	ug/L	1.0
2-Methylnaphthalene	UJ	ND	10	ug/L	1.0
Nitrobenzene	UJ	ND	10	ug/L	1.0
N-Nitrosopiperidine		ND	10	ug/L	1.0
Isophorone	UJ	ND	10	ug/L	1.0
2-Nitrophenol	UJ	ND	10	ug/L	1.0
2,4-Dimethylphenol	UJ	ND	10	ug/L	1.0
O,O,O-Triethylphosphoro-thioate		ND	50	ug/L	1.0

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CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H32

GC/MS Semivolatiles

Lot-Sample #...: F1A120486-001 **Work Order #...:** MC9HM1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
bis(2-Chloroethoxy) methane	UJ	ND	10	ug/L	1.0
alpha,alpha-Dimethylphenethylamine		ND	50	ug/L	22
2,4-Dichlorophenol	UJ	ND	10	ug/L	1.0
1,2,4-Trichloro-benzene	UJ	ND	10	ug/L	1.0
Naphthalene	UJ	ND	10	ug/L	1.0
2,6-Dichlorophenol		ND	10	ug/L	1.0
4-Chloroaniline	UR	ND	10	ug/L	1.0
Hexachlorobutadiene	UJ	ND T	10	ug/L	1.0
p-Phenylene diamine		ND	100	ug/L	1.0
4-Chloro-3-methylphenol	UJ	ND	10	ug/L	1.0
Safrole		ND	20	ug/L	1.0
1,2,4,5-Tetrachloro-benzene		ND	10	ug/L	1.0
Hexachlorocyclopenta-diene	UJ	ND	50	ug/L	1.0
2,4,6-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2,4,5-Trichloro-phenol	UJ	ND	10	ug/L	1.0
2-Chloronaphthalene	UJ	ND	10	ug/L	1.0
Isosafrole		ND	20	ug/L	1.3
2-Nitroaniline	UJ	ND	50	ug/L	1.0
1,4-Naphthoquinone		ND	50	ug/L	1.0
Dimethyl phthalate	UJ	ND	10	ug/L	1.0
N-Nitrosodi-n-butylamine		ND	10	ug/L	1.0
1,3-Dinitrobenzene		ND	10	ug/L	1.0
Acenaphthylene	UJ	ND	10	ug/L	1.0
2,6-Dinitrotoluene	UJ	ND	10	ug/L	2.2
3-Nitroaniline	UJ	ND	50	ug/L	1.0
Acenaphthene	UJ	ND T	10	ug/L	1.0
2,4-Dinitrophenol	UJ	ND	50	ug/L	2.0
4-Nitrophenol	UR	ND	50	ug/L	2.0
Dibenzofuran	UJ	ND	10	ug/L	1.0
Pentachlorobenzene		ND	10	ug/L	1.0
2,4-Dinitrotoluene	UJ	ND	10	ug/L	1.0
1-Naphthylamine		ND	10	ug/L	1.0
2,3,4,6-Tetrachlorophenol		ND	50	ug/L	1.0
2-Naphthylamine		ND	10	ug/L	1.0
O,O-Diethyl-O-(2-pyrazinyl) phosphorothioate		ND	50	ug/L	1.0

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(Continued on next page)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H32

GC/MS Semivolatiles

Lot-Sample #...: F1A120486-001 **Work Order #...:** MC9HM1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Diethyl phthalate	UJ	ND	10	ug/L	1.0
Fluorene	UJ	ND	10	ug/L	1.0
4-Chlorophenyl phenyl ether	UJ	ND	10	ug/L	1.0
4-Nitroaniline	UJ	ND	50	ug/L	1.0
4,6-Dinitro-2-methylphenol	UJ	ND	50	ug/L	1.0
N-Nitrosodiphenylamine	UJ	ND	10	ug/L	1.0
Azobenzene		ND	10	ug/L	1.0
Tetraethyldithiopyro-phosphate		ND	50	ug/L	1.0
1,3,5-Trinitrobenzene		ND	50	ug/L	1.0
Diallate		ND	20	ug/L	2.0
Phorate		ND	50	ug/L	1.0
4-Bromophenyl phenyl ether	UJ	ND	10	ug/L	1.0
Phenacetin		ND	20	ug/L	1.0
Dimethoate		ND	20	ug/L	1.0
Hexachlorobenzene	UJ	ND	10	ug/L	1.0
Pentachlorophenol	UJ	ND	50	ug/L	1.3
Pentachloronitrobenzene		ND	50	ug/L	1.0
4-Aminobiphenyl		ND	50	ug/L	1.0
Pronamide		ND	20	ug/L	1.0
Disulfoton		ND	50	ug/L	1.0
Phenanthrene	UJ	ND	10	ug/L	1.0
Anthracene	UJ	ND	10	ug/L	1.0
Carbazole	UJ	ND	10	ug/L	1.0
Dinoseb		ND	20	ug/L	2.0
4-Nitroquinoline-1-oxide		ND	100	ug/L	5.0
Parathion		ND	50	ug/L	1.0
Methapyrilene		ND	50	ug/L	1.3
Fluoranthene	UJ	ND	10	ug/L	1.0
Isodrin		ND	10	ug/L	1.0
Pyrene	UJ	ND	10	ug/L	1.0
Aramite 1		ND	20	ug/L	
Aramite 2		ND	20	ug/L	
p-Dimethylaminoazobenzene		ND	20	ug/L	1.0
p-Chlorobenzilate		ND	10	ug/L	1.0
Famphur		ND	100	ug/L	1.7
Kepone		ND	100	ug/L	20
3,3'-Dimethylbenzidine		ND	50	ug/L	2.6
Butyl benzyl phthalate	UJ	ND	10	ug/L	1.0

(Continued on next page)

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H32

GC/MS Semivolatiles

Lot-Sample #...: F1A120486-001 **Work Order #...:** MC9HM1AD **Matrix.....:** WATER

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
2-Acetylaminofluorene		ND	100	ug/L	1.0
Benzo(a)anthracene	UJ	ND	10	ug/L	1.0
3,3'-Dichlorobenzidine	UJ	ND	50	ug/L	1.0
Chrysene	UJ	ND	10	ug/L	1.0
bis(2-Ethylhexyl) phthalate	J	**11**	**10**	**ug/L**	**1.0**
Di-n-butyl phthalate	UJ	ND	10	ug/L	1.0
Di-n-octyl phthalate	UJ	ND	10	ug/L	1.0
7,12-Dimethylbenz(a)-anthracene		ND	20	ug/L	1.0
Benzo(b)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(k)fluoranthene	UJ	ND	10	ug/L	1.0
Benzo(a)pyrene	UJ	ND	10	ug/L	1.0
3-Methylcholanthrene		ND	20	ug/L	1.0
Indeno(1,2,3-cd)pyrene	UJ	ND	10	ug/L	1.0
Benzo(ghi)perylene	UJ	ND	10	ug/L	1.0
Dibenz(a,h)anthracene	UJ	ND	10	ug/L	1.0
Tributyl phosphate		ND	10	ug/L	1.0

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	44	(22 - 84)
Phenol-d5	28	(11 - 71)
Nitrobenzene-d5	72	(35 - 102)
2-Fluorobiphenyl	63	(43 - 95)
2,4,6-Tribromophenol	73	(51 - 110)
Terphenyl-d14	89	(43 - 107)

NOTE(S):

T Spike sample recovery is outside control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

B29H32

GC/MS Semivolatiles

Lot-Sample #: F1A120486-001 **Work Order #:** MC9HM1AD **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		120 J	M	3.6129	ug/L
Unknown aldol condensate		48 J	M	4.2433	ug/L
Unknown		5.7 J	M	6.6686	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111069

Sample # 111069009
SAF# X11-016
Sample ID B29H53

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Prep for Water										**01/10/11**
TPHDWA										
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	01/11/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111069

Sample # 111069010
SAF# X11-016
Sample ID B29HB2

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Prep for Water										**01/10/11**
TPHDWA										
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	01/11/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111069

Sample # 111069011
SAF# X11-016
Sample ID B29HB7

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Prep for Water										**01/11/11**
TPHDWA										
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	01/14/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111069

Sample # 111069012
SAF# X11-016
Sample ID B29H97

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Prep for Water										**01/11/11**
TPHDWA										
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	01/14/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

Sample # 111069009
SAF# X11-016
Sample ID B29H53

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8015 Prep										**01/14/11**
SW-846 8015B										
Ethanol	64-17-5	LA-523-494	U	<2000	UJ	ug/L	1	2000	5000	01/14/11
1-Propanol	71-23-8	LA-523-494	U	<2000		ug/L	1	2000	5000	01/14/11
Ethylene glycol	107-21-1	LA-523-494	U	<2000		ug/L	1	2000	5000	01/14/11
TPHG Prep										**01/12/11**
TPHG										
Gasoline	TPHGASOLIN	LA-523-443	U	<50		ug/L	1	50	200	01/13/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

Sample # 111069010
SAF# X11-016
Sample ID B29HB2

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8015 Prep										**01/14/11**
SW-846 8015B										
Ethanol	64-17-5	LA-523-494	U	<2000	UJ	ug/L	1	2000	5000	01/14/11
1-Propanol	71-23-8	LA-523-494	U	<2000		ug/L	1	2000	5000	01/14/11
Ethylene glycol	107-21-1	LA-523-494	U	<2000		ug/L	1	2000	5000	01/14/11
TPHG Prep										**01/12/11**
TPHG										
Gasoline	TPHGASOLIN	LA-523-443	U	<50		ug/L	1	50	200	01/13/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

Sample # 111069011
SAF# X11-016
Sample ID B29HB7

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8015 Prep										**01/14/11**
SW-846 8015B										
Ethanol	64-17-5	LA-523-494	U	<2000	UJ	ug/L	1	2000	5000	01/14/11
1-Propanol	71-23-8	LA-523-494	U	<2000		ug/L	1	2000	5000	01/14/11
Ethylene glycol	107-21-1	LA-523-494	U	<2000		ug/L	1	2000	5000	01/14/11
TPHG Prep										**01/13/11**
TPHG										
Gasoline	TPHGASOLIN	LA-523-443	U	<50		ug/L	1	50	200	01/13/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

Sample # 111069012
SAF# X11-016
Sample ID B29H97

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8015 Prep										**01/14/11**
SW-846 8015B										
Ethanol	64-17-5	LA-523-494	U	<2000	UJ	ug/L	1	2000	5000	01/14/11
1-Propanol	71-23-8	LA-523-494	U	<2000		ug/L	1	2000	5000	01/14/11
Ethylene glycol	107-21-1	LA-523-494	U	<2000		ug/L	1	2000	5000	01/14/11
TPHG Prep										**01/13/11**
TPHG										
Gasoline	TPHGASOLIN	LA-523-443	U	<50		ug/L	1	50	200	01/13/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111207

Sample # 111207003
SAF# X11-016
Sample ID B29HF7

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Prep for Water										**01/20/11**
TPHDWA										
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	01/20/11
SPE										**02/01/11**
PCBs										
Aroclor-1016	12674-11-2	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1221	11104-28-2	LA-523-427	U	<0.2		ug/L	1	0.2	0.4	02/02/11
Aroclor-1232	11141-16-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1242	53469-21-9	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1248	12672-29-6	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1254	11097-69-1	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1260	11096-82-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1262	37324-23-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1268	11100-14-4	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED111207 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111207

Sample # 111207003
SAF# X11-016
Sample ID B29HF7

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8015 Prep										**01/31/11**
SW-846 8015B										
Ethanol	64-17-5	LA-523-494	U	<2000 UJ		ug/L	1	2000	5000	01/31/11
1-Propanol	71-23-8	LA-523-494	U	<2000 UJ		ug/L	1	2000	5000	01/31/11
Ethylene glycol	107-21-1	LA-523-494	U	<2000 UJ		ug/L	1	2000	5000	01/31/11
TPHG Prep										**01/31/11**
TPHG										
Gasoline	TPHGASOLIN	LA-523-443	U	<50		ug/L	1	50	200	01/31/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED111207 -

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
MS B3-60
Richland, Washington 99352
February 22, 2011
Attention: Mike Neely

TestAmerica Laboratories, Inc.

SDG	: SL1036
Number of Samples	: 26 samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: January 12, 2011

II. Introduction

Between January 11, 2011 and January 12, 2011, 26 water samples were received by TestAmerica - St. Louis for chemical analysis. The samples were received within temperature criteria. See the COC and CUR forms for documentation of any variations on receipt conditions and temperature. Upon receipt, the samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

One container for both SVOA 8270 and Pesticides 8081 was received broken. Sufficient sample volume from other containers was received to perform both analyses. Issue Resolution Form 11-303 accepted the proposed resolution to proceed with analysis.

The following SAFs are associated with this SDG: X11-016

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with a LCS/LCS duplicate.

Deviation from Request: None

IV. Definitions

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate
MS-	Matrix Spike
MSD-	Matrix Spike Duplicate

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

The following data qualifiers may be applicable to the results in this report, as appropriate.

- **B** – For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** – For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **J** – For organic analyses, the sample is estimated and less than the RL.
- **C** – For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **D** – For all analyses, the sample result was obtained from the analysis of a dilution.
- **N** – For inorganics and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** – For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.

Volatiles

Batch: 1021050

The LCS recovery for Acrolein is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (11): B29H42

The MS/MSD recoveries for Acrolein are outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. This analyte has been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (11): B29H42

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THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

Batch: 1018076

The surrogate recoveries are outside the upper QC limits, indicating a potential positive bias. There were no target analytes associated with these surrogates detected above the reporting limit in the samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (16): B29HF5
F1A110510 (20): B29HJ0

Sample surrogate recoveries are outside established QC limits. Samples were reprepared and reanalyzed outside hold time. The reanalysis yielded acceptable and similar results. Issue Resolution Form 11-317 accepted the proposed resolution to report the original analysis performed within hold time.
Affected Samples:
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (22): B29H61

The sample was analyzed outside of the 12 hour clock but within the hold time. The sample was re-analyzed 3 days outside the hold time with all QC recovering within limits. Both the original sample analysis and the final analysis had comparable results. Issue Resolution Form 11-317 accepted the proposed resolution to report the original analysis performed within hold time.
Affected Samples:
F1A110510 (25): B29H48

Cyclohexanone, 1,4-Dioxane, Acetone and Methylene chloride were detected in the method blank above the method detection limit but below the reporting limit. Acetone has been qualified accordingly with a "B" flag in the associated samples.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5

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F1A110510 (25): B29H48

The ICV and LCS recoveries for Acrolein are outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48

The MS recoveries for Dichlorodifluoromethane, Acrolein, Bromoform, Bromobenzene and 1,4-Dichlorobenzene are outside the upper QC limits, indicating a potential positive bias for these analytes. These analytes were not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The MSD recoveries for several compounds are outside the upper QC limits. This is the result of a low internal standard response in the MSD (between 32%D - 35%D). Although the IS %D in the MSD is within the lower QC limits, the affect on the spike recoveries are inversely higher. Even with the higher, out of QC control recoveries in the MSD, there were only 9 RPD values outside the QC limits. Method performance is demonstrated by the remaining acceptable MS and LCS recoveries. These analytes have been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5

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CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

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F1A110510 (24): B29HB5
F1A110510 (25): B29H48

Batch: 1021181

Methylene chloride was detected in the method blank above the method detection limit but below the reporting limit. This analyte was not detected in the associated samples.
Affected Samples:
F1A120486 (1): B29H32

The CCV recoveries are outside the upper QC limits (greater than 20% D) for Vinyl acetate and Ethyl methacrylate indicating a potential high bias for these analytes in the samples associated with this CCV. These analytes were not detected above the reporting limit in the associated samples. The RRF for 1,1,2,2-Tetrachloroethane is less than the method detection limit of 0.300 but greater than the QC limit 0.100. The RRF will be monitored and maintenance will be performed before the next calibration to try to rectify this problem.
Affected Samples:
F1A120486 (1): B29H32

The LCS recovery for Acrolein is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A120486 (1): B29H32

The MS recovery for Acrolein is outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. This analyte has been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A120486 (1): B29H32

Semivolatiles

Batch: 1012097

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

The MS/MSD RPD for Indeno (1,2,3-cd) pyrene is not within method acceptance criteria. MS/MSD recoveries are within QC limits demonstrating good extraction performance in the sample matrix.
Affected Samples:

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February 22, 2011
SDG: SL1036

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F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

Due to the large number of compounds that may be analyzed by this method, it is expected that some compounds will fail to meet the criterion. If compounds fail to meet these criteria, the associated concentrations may still be determined. Hexachlorophene is outside the lower QC limits in the CCV. This compound is a poor responding compound.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1

Batch: 1013085

Three liters is the method suggested volume for sample, MS and MSD. Lab practice is to retain volume in case a QC failure requires a re-extraction. A reduced volume was used for the MS/MSD in order to retain volume.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5

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February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

The CCV recovery was outside the upper QC limits (greater than 20% RSD) for Famphur indicating a potential high bias for this analyte in the samples associated with this CCV. This analyte was not detected above the reporting limit in the associated samples.
Affected Samples:
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

Samples exhibited poor surrogate recovery. Laboratory QC practices, based on CLP methodology, allow for one acid surrogate and/or one base surrogate recovery excursion without necessitating re-extraction/re-analysis. Sample extraction efficiency and compliance is demonstrated by the remaining acceptable surrogate recoveries.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5

The MS/MSD recoveries are outside the established QC limits for 4 analytes. The RPD values are not within method acceptance criteria for 2 analytes. Matrix interference is not physically evident in the sample but interference may still exist. Method performance is demonstrated by acceptable LCS recoveries. These analytes have been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

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February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

Pesticides

Batch: 1013083

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly. The dilution factor was used to elevate the MDL and RL. No dilution was performed on the sample.
Affected Samples:
F1A110510 (5): B29H72

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

The LCS recovery for delta-BHC is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

The MS and MSD recoveries for 4,4'-DDT and Endrin aldehyde are outside the upper QC limits, indicating a potential positive bias for these analytes. These analytes were not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The RPD for Endrin aldehyde is also outside QC limits. These analytes have been qualified accordingly with an "N" flag in the associated samples.

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February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

Batch: 1013084

The LCS recovery for delta-BHC is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

PAHs

Batch: 1012098

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

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CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

The MS/MSD recoveries for Chrysene are outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The RPD for the target analytes Chrysene and Pyrene are not within method acceptance criteria. This analyte has been qualified accordingly with an "N" flag in the associated samples.
Affected Samples:
F1A110510 (3): B29H66
F1A110510 (5): B29H72
F1A110510 (8): B29HD5
F1A110510 (12): B29H85
F1A110510 (14): B29H71
F1A110510 (20): B29HJ0

Two analytes detected in the associated samples were given the "S" qualifier. The "S" was used to designate positive analyte detection on the primary column that appeared questionable during spectral confirmation.
Affected Samples:
F1A110510 (3): B29H66
F1A110510 (14): B29H71

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

Reviewed and approved:

Michael Franks
St. Louis Project Manager

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-303

Date: January 12, 2011 SAF Nos. X11-016

SDG: SL1036 LOGIN No.: **F1A110510** TEST: SVOA , Pesticides

Sample No.(s) : **B29HH5**

Submitted By: Mike Franks
Phone No. 314-298-8566
Fax No. 314-298-8757

Submitted To: Sara Champoux
Phone No. 509-373-5290
Fax No. 509-373-1788

ISSUE	PROPOSED RESOLUTION
One container for both SVOA 8270 and Pesticides 8081 was received broken. There is still sufficient sample volume from the other containers received to perform both analyses	1) Proceed with analysis and note in the case narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 1/12/11
Signature and Date

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-317

Date: January 30, 2011 SAF Nos. X11-016

SDG: SL1036 LOGIN No.: **F1A110510** TEST: Volatiles

Sample No.(s) : **B29HF0, B29H71. B29H95, B29H61, B29H48**

Submitted By: Mike Franks
Phone No. 314-298-8566
Fax No. 314-298-8757

Submitted To: Sara Champoux
Phone No. 509-373-5290
Fax No. 509-373-1788

ISSUE	PROPOSED RESOLUTION
Please see below for details regarding issues with volatiles analysis for the samples listed above.	1) Report results from the out of hold re-analysis for all samples. 2) Report results from the initial in hold analysis for all samples.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution (2): report results from the initial in-hold analysis for all samples.

J. G. Douglas 1/31/2011
Signature and Date

-Sample F1A110510-013 (B29HF0) had three surrogates outside the upper QC limit, indicating a high bias. Except for Chloroform at 5.8 ppb, the associated target compounds were less than the reporting limit.
-Sample F1A110510-014 (B29H71) had two surrogates outside the lower QC limit, indicating a low bias. Except for Chloroform at 8.4 ppb, the associated client target compounds were less than the reporting limit.
-Sample F1A110510-015 (B29H95) had three surrogates outside the upper QC limit, indicating a high bias. Except for Chloroform at 2.8 ppb, the associated client target compounds were less than the reporting limit.
All 3 samples were re-analyzed outside sample hold time (1-3 days), but had surrogate recoveries within the QC limits. All 3 samples had similar result for Chloroform.
-Sample F1A110510-013 (B29HF0) reports Chloroform at 3.4 ppb, F1A110510-014 (B29H71) reports Chloroform at 5.9 ppb and F1A110510-015 (B29H95) reports Chloroform at 1.6 ppb.

-Sample F1A110510-022 (B29H61) had low surrogate recoveries and all results are ND (below the MDL) The samples was re-analyzed outside hold time with all surrogate recoveries within QC limits and all results ND (below MDL).

-Sample FIA110510-025 (B29H48): the first analysis was outside the 12 hour clock on 01/17/11, it was re-analyzed on 01/21/11 and the auto sampler jammed. The sample was re-analyzed on

01/24/11 all surrogate recoveries are within QC limits and analyzed within the 12 hour clock but its 3 days out of the holding time.

50 lbs

CHPRC CWR 86 SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-3

Page 1 of 1

Collector: MS McCoy ~~CHPRC~~	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 32 194	Ice Chest No.: 6WS-107
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0664 2539
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H32	N	W	01/10/11	1200	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H32	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H32	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H32	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Date/Time	Received By	Date/Time
MS McCoy CHPRC (Print) (Sign)	1330 JAN 10 2011	SSU-1 (Print) (Sign)	1330 JAN 10 2011
SSU-	JAN 11 2011 0700	L.D. Wall CHPRC	JAN 11 2011 0700
L.D. Wall CHPRC	JAN 11 2011 1400	FEDEX	
Fed Ex		NICHOLAS OWENS	1/12/11 0915

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

SDG# SL1036

SL1036 CUL82

CHPRC

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-72

Page 1 of 1

Collector: JOSH ARTZER, CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 38 / 10	Ice Chest No.: GWS-188
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 7169
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: ~~7943 0384 7169~~ N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time (7 D-1) Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H90	N	W	01-9-11	1150	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H90	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H90	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H90	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
JOSH ARTZER CHPRC	1250 JAN 09 2011	SSU #1	1250 JAN 09 2011
SSU- 1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	1430 JAN 10 2011	FEDEX	
FEDEX		NICHOLAS Davis	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

TestAmerica St. Louis

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-104

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: GWS-188
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 7169
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0384 7169~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HC0	N	W	1/7/11	1254	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HC0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HC0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HC0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			JAN 07 2011 1540	SSU-1			JAN 07 2011 1540
SSU-1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1430	FEDEX			
FEDEX				NICHOLAS OWENS		1/11/11	1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-40

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Collector FM Hall CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 381 9	**Ice Chest No.** GWS-252
Shipped To (Lab) TestAmerica St. Louis	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.**
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H66	N	W	JAN 07 2011	0845	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H66	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H66	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H66	N	W			2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H66	N	W	JAN 07 2011	0845	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC			1300 JAN 07 2011				1300 JAN 07 2011
SSIL 1			0800 1/10/11 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				NICHOLAS DUFFUS			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-184

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64 lbs

Collector J.S. Artzer CHRPC	Contact/Requester Karen Waters-Husted	Telephone No. 376-4650
SAF No. X11-016	Sampling Origin Hanford Site	Purchase Order/Charge Code 300104ES20
Project Title NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33/96	Ice Chest No. GWS-252
Shipped To (Lab) TestAmerica St. Louis	Method of Shipment Commercial Carrier	Bill of Lading/Air Bill No. 7966 3878 9580
Protocol CERCLA	Priority: 30 Days PRIORITY	Offsite Property No. N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HK0	N	W	01/07/11	1224	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HK0	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HK0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HK0	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1407 JAN 07 2011	SSU-1			1407 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FEDEX				NICHOLAS OWENS			1/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-49

Page 1 of 1

Collector CA Snyder CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 3716	**Ice Chest No.** GWS-222-4
Shipped To (Lab) TestAmerica St. Louis	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.** 7966 3883 2849
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** ~~7966 3883 2849~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H72	N	W	1/7/11	0730	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H72	N	W	|	|	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H72	N	W	|	|	1x20-mL P	Activity Scan	6 Months	None
B29H72	N	W	|	|	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H72	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1430 JAN 10 2011	FEDEX			
FEDEX				NICHOLAS OWENS		1/11/11	1008

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

64

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-16

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 3919	Ice Chest No.: GWS-222-4
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 2849
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 2849~~ MA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H47	N	W	1-9-11	1100	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H47	N	W	|	|	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H47	N	W	|	|	1x20-mL P	Activity Scan	6 Months	None
B29H47	N	W	|	|	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1230 JAN 09 2011	SSU- 1			1230 JAN 09 2011
SSU- 1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1430	FEDEX			
FedEx				NICHOLAS OWENS			1/11/11 1008

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-24

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: GUS-063
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0383 5945
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0383 5945~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** j-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H56	N	W	1/7/11	0945	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H56	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H56	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H56	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			JAN 07 2011 1540	SSU- 1			JAN 07 2011 1540
SSU- 1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1430	FEDEX			
FedEx				Nicholas Owens			1/11/11 1000

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-128 (64/160)

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 371 6	Ice Chest No.: GWS-063
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 79430383 5945
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0383 5945~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HD5	N	W	1/7/11	1012	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HD5	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HD5	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HD5	N	W			2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29HD5	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Date/Time	Received By	Date/Time
CA Snyder CHPRC (Print / Sign)	1300 JAN 07 2011	SSU- 1 (Print / Sign)	1300 JAN 07 2011
SSU- 1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	1430 JAN 10 2011	FEDEX	
FedEx		NICHOLAS OWENS	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-88

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 391 8	Ice Chest No.: GWS-196
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 8856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3881 8856~~ HA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB0	N	W	1/7/11	1109	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HB0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HB0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HB0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1470 JAN 10 2011	FEDEX			
FEDEX				Nicholas Owens			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-185

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Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 / 196	Ice Chest No.: GWS-196
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 8856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3881 8856~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HK1	N	W	01/07/11	1224	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HK1	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HK1	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HK1	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer, CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0920 JAN 10 2011	RT Sickle, CHPRC	0920 JAN 10 2011
RT Sickle, CHPRC	JAN 10 2011 1430	FEDEX	
FedEx		NICHOLAS OWENS	1/11/11 1000

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-11 (0010)

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39 / 9	Ice Chest No.: GWS-238
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3884 6856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3884 6856~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H42	N	W	1-9-11	0930	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H42	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H42	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H42	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
CA Snyder CHPRC	1230 JAN 09 2011	SSU- 1	1230 JAN 09 2011
SSU- 1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	0920 JAN 10 2011	FEDEX	
FedEx		Brian Daniels B-1	1/11/11 1000

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-64

Page 1 of 1

Collector: SE Hamaker CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 32 / 93	Ice Chest No.: GWS-238
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3884 6856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3884 6856~~ N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H85	N	W	01/09/11	0854	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H85	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H85	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H85	N	W			2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H85	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
SE Hamaker CHPRC			1400 JAN 09 2011	SSU #1			1400 JAN 09 2011
SSU-1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1430 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-136

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 3716	Ice Chest No.: GWS-029
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3880 2776
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF0	N	W	1/7/11	1210	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HF0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HF0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HF0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) | Disposed By | Date/Time

A-6004-842 (REV 2)

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-48

Page 1 of 1

Collector: CA Snyder, CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 37 / 6	Ice Chest No.: GWS-029
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3880 2776
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H71	N	W	1/7/11	0913	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H71	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H71	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29H71	N	W	/	/	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H71	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to ~~pH <2 Cool~4C~~

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-80

Page 1 of 1

Collector: JOSH ARTZER CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 38 / 10	Ice Chest No.: GWS-115
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 1296
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: ~~7943 0384 1296~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1904 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H95	N	W	01-9-11	1010	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H95	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H95	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H95	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
JOSH ARTZER CHPRC			JAN 09 2011 1250	SSU #1			JAN 09 2011 1250
SSU-1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1430	FEDEX			
FedEx				Brian Daniels			1/11/11 1030

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-144

Page 1 of 1

Collector: JOSH ARTZER CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 38 / 10	Ice Chest No.: GWS-115
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 1296
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0384 1296~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF5	N	W	01-9-11	0904	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HF5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HF5	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HF5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
JOSH ARTZER CHPRC	1250 JAN 09 2011	SSU#1	1250 JAN 09 2011
SSU-1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	1430 JAN 10 2011	FEDEX	
FedEx		Brian Daniels	1/11/10 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-176

Page 1 of 1

74 lbs

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 / 196	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HJ5	N	W	01/07/11	1041	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HJ5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HJ5	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HJ5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer, CHRPC			1407 JAN 07 2011	SSU-1			1407 JAN 07 2011
SSU-1			0800 JAN 10 2011	S. Hamaker, CHPRC			0800 JAN 10 2011
S. Hamaker, CHPRC			1400 JAN 10 2011	FEDEX			
Fedex				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-7

Page 1 of 1

Collector: D. R. Williamson CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 37 / 7	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H37	N	W	1-9-11	1016	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H37	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H37	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29H37	N	W	/	/	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D. R. Williamson CHPRC			JAN 09 2011 / 1130	SSU #1		1/9/11	JAN 09 2011 / 1130
SSU #1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels		B-1	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-120

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 37/6	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HD0	N	W	1/7/11	1113	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HD0	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HD0	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HD0	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU-1			1300 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FEDEX				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-168

Page 1 of 1

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 196	Ice Chest No.: GWS-192
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3879 6538
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HJ0	N	W	01/07/11	0918	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HJ0	N	W	↓	↓	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer, CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0800 JAN 10 2011	SE Hamaker, CHPRC	0800 JAN 10 2011
SE Hamaker, CHPRC	1400 JAN 10 2011	FEDEX	
FedEx		Brian Daniels	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-160

Page 1 of 1

66lbs

Collector: FM Hall CHPRC F. HALL	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 381 9	Ice Chest No.: GWS-192
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3879 6538
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HH5	N	W	JAN 07 2011	1157	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HH5	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HH5	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HH5	N	W	JAN 07 2011	1157	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC			JAN 07 2011 1300				JAN 07 2011 1300
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
Fedex				Brian Daniels			1/11/11 1000

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

SDG# SL1036

CHPRC SL036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-32

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6/105

Collector: SE Hamaker	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: CHPRC X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 32 / 93	Ice Chest No.: GWS-16
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3882 5571
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: ~~7966 3882 5571~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H61	N	W	01/09/11	1255	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H61	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H61	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H61	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
SE Hamaker CHPRC	Scott Hamaker	1400 JAN 09 2011	SSU #1		1400 JAN 09 2011
SSU-1		0920 JAN 10 2011	RT Sickle CHPRC		0920 JAN 10 2011
RT Sickle CHPRC		1430 JAN 10 2011	FEDEX		
FedEx			Brian Daniels		1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-112

Page 1 of 1

Collector: SE Hamaker CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 32 193	Ice Chest No.: GWS-110
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3882 5571
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: NA ~~7966 3882 5571~~

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HC5	N	W	01/09/11	1043	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HC5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HC5	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HC5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
SE Hamaker CHPRC	1400 JAN 09 2011	SSU #2	1400 JAN 09 2011
SSU- 1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	1430 JAN 10 2011	FEDEX	
Fedex		Brian Daniels B-1	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-96

Page 1 of 1

Collector: Halse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: GWS-500
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 9670
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 9670~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB5	N	W	1/7/11	1048	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HB5	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HB5	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29HB5	N	W	✓	✓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Halse	KS Halse		1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			1-10-11 0920	R.T. Sickle			1-10-11 0920
R.T. Sickle			1-10-11 1430	Fed Ex			
Fed Ex				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-17

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39/9	Ice Chest No.: GWS-500
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 9670
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 9670~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H48	N	W	1-9-11	1100	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H48	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H48	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H48	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1230 JAN 09 2011	SSU-1			JAN 09 2011 1230
SSU-1			1-10-11 0920	R.T. Sickle			1-10-11 0920
R.T. Sickle			1-10-11 1430	FedEx			
FedEx				Brian Daniels			1/11/10 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

Attachment 2
Narrative
WSCF111069

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. Also attached are IRF's 11-315 dealing with missed hold time for anions, 11-321dealing with Potassium LCS failure and 11-322 dealing with the missed hold time for Silicon and Phosphorus. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-315 was created due to anions were analyzed after the 48 hour holding time expired.

- Fluoride - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.

Cyanide – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Batch QC 175434
- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-321 was created due to LCS failure of Potassium. The data is reported as is.
- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-322 was created due to Silicon and Phosphorus were analyzed after the 28 day holding time expired.
    - Potassium – LCS recovery was outside established limits.
    - Sodium and Silicon – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.
    - Calcium, Magnesium and Silicon – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
- Batch QC 175435
    - Sodium – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.
    - Calcium, Magnesium, Potassium, Silicon and Sodium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
    - All other applicable QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

TPHG-WA – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gross Alpha / Gross Beta:
  - Batch QC 174188
  - Gross Alpha - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable QC controls are within the established limits.

- Isotopic Plutonium analysis:
  - Plutonium-239/240 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Uranium-234 - The Blank is greater than two times the MDC. Sample results above the MDC were "B" Flagged.
  - Uranium-235 - The Blank is less than two times the MDC. "B" Flag not required.
  - Uranium-234 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
  - Uranium-235 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Uranium-238 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Strontium-89/90:
    - All applicable QC controls are within the established limits.
- Tritium:
  - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Technetium-99:
    - All applicable QC controls are within the established limits.

Narrative

Attachment 2
Narrative
WSCF111069

We 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 data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-321

Date: 2/7/2011 SAF No(s): X11-009, X11-016 and I11-001

SDG (s): 111346, 111040, 111060, 111063 and 111069 TEST: ICP-AES 6010

DUE DATE: 2/7/2011

LOGIN No(s): 111346006 through 111346011
111040002 and 111040003
111060007
111063004, 111063005, 111063007 through 111063012
111069005 through 111069007

Sample No(s): B28XF5, B28XF9, B28XH0, B28XF6, B28WV0 and B28WV1
B282H8 and B282H9
B29H63
B29HJ6, B29HJ7, B29HH6, B29HH7, B29HJ2, B29HK3, B29HJ1 and B29HK2
B29H52, B29HB1 and B29HB6

Submitted By: M. Avila
Phone No.: 373-1613
Fax No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
The Potassium LCS percent recovery was out of limits: Potassium LCS = 123.0% (limits– 80-120%) All other QC passed; the MS and MSD were at 108.3% and 112.3% recovery, respectively.	Accept the data as-is and note in the narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 2/7/11
Signature and Date

6

Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-315

Date: 1/24/2011 SAF No. F10-208 SDGs: 111065, 111069
TEST: Anions_IC_300.0 **DUE DATE: 2/21/11**

LOGIN No.: 111065001 – 111065002
111069001 - 111069004

Sample No.(s): B29LN7, B29LP0, B29N08, B28N18, B29N17, B29N19

Submitted By: H. Medley
Phone No.: 372-1488
Fax. No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
The above samples were received late in the day on Friday 1/7/11 to be analyzed on the same day. The samples were analyzed at the next possible opportunity, which was Sunday 1/9/11. The samples missed the 48 hour regulatory hold time.	Accept analytical results (accept as-is) and note in narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 1/25/201

Signature and Date

7

Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-322

Date: 2/8/20111 SAF No. X11-016

SDG: 111069, 111074, 111077, 111078 & 111081 TEST: ICP-6010 **DUE DATE: 2/7/2011 and 2/8/2011**

TEST: ICP-6010

LOGIN No.: 111069008 through 111069012
111074002 and 111074003
111077005 through 111077010
111078004 through 111078009
111081004

Sample No.(s): B29H96, B29H53, B29HB2, B29HB7 and B29H97
B29H33 and B29H34
B29H43, B29H49, B29H38, B29H44, B29H50 and B29H39
B29H86, B29H91, B29HF1, B29H87, B29H92 and B29HF2
B29H57

Submitted By: M. Avila
Phone No.:
Fax. No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
These samples were collected on: 111069 1/7/11 111074 1/9/11 111077 1/9/11 111078 1/9/11 111081 1/9/11 These samples were not analyzed until February 8th, 2011. These were analyzed outside the 28-day regulatory holding time for Silicon and Phosphorus.	Accept results as-is and document in the narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution
Sara Champoux 2/8/2011
Signature and Date

8

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-210 Page 1 of 1

Collector: Herke	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

111069

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N08	N	W	1/7/11	0945	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Herke			1520 JAN 07 2011	Victor			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-200 Page 1 of 1

Collector: Halse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104CS20
Project Title: NDURA. DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N18	2 N	W	1/7/11	1048	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Halse			510 JAN 07 2011				1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-201 Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 35/8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N17 3	N	W	1/7/11	1149	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	TB Hulse		1520 JAN 07 2011	VICTOR Bing			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-199 Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Hunsted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter *		Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N19	4	N W	1/7/11	1254	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool-4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1520 JAN 07 2011	V. Lara			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-26 Page 1 of 2

Collector: Hulke	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104E520
Project Title: NDCRA DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter *		Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H52 5	Y	W	1/7/11	0945	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H52	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H52	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H53 9	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29H53	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H53	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29H53	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29H53	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29H53	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29H53	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29H53	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29H53	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulke			1500 JAN 07 2011				1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# X11-016-26 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-4650		

Sample No.	Lab ID	*		Date	Time	No/Type Container	Sample Analysis	Preservative	
B29H53	N	W	[illegible]	11/2/11	0945	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29H53	N	W				3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29H53	N	W				4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hurke	[illegible]	[illegible]	1520 JAN 07 2011	Victor Bias		[illegible]	1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-98 Page 1 of 2

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB1 6	Y	W	1/6/11	1048	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB1	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB1	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB2 10	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HB2	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HB2	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HB2	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HB2	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HB2	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HB2	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1520 JAN 07 2011				1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-98
		Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-1650		

Sample No.	Lab ID	*		Date	Time	No/Type Container	Sample Analysis	Preservative	
B29HB2	N	W		1/7/11	1048	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29HB2	N	W				3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29HB2	N	W				4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hube	KB Dhalia		1520 JAN 07 2011		VICTOR Silva		1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-106 Page 1 of 2

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB6 7	Y	W	1/7/11	1256	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB6	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB6	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB7 11	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HB7	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HB7	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HB7	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HB7	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HB7	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HB7	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	Hulse	1520	JAN 07 2011	K Breazal	K Breazal	1520	JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Sample Receipt

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-106
		Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-1650		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative	
B29HB7	N	W	1/7/11	1257	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29HB7	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29HB7	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	[illegible]		1520 JAN 07 2011	Victor Binkley			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-90 Page 1 of 2

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H96 8	Y	W	1/7/11	1419	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H96	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H96	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H97 12	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29H97	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H97	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29H97	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29H97	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29H97	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29H97	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29H97	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29H97	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	[illegible]	[illegible]	1520 JAN 07 2011	[illegible]	[illegible]	[illegible]	1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-90 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-4650		

Sample No	Lab ID	*	Date	Time	No/Type Container	Sample Analysis		Preservative
B29H97	N	W	1/3/11	1149	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29H97	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29H97	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
[illegible]	[illegible]		1520 JAN 07 2011	[illegible]			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Attachment 2
Narrative, Rev. 1
WSCF111207

P&D Correction – Case Narrative Replaces the Prior Submittal in its Entirety
Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4. Additionally, a copy of the completed P&D # WSCFX111207 is included with this case narrative.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Attachment 2
Narrative, Rev. 1
WSCF111207

- Nitrate – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.

- All other applicable QC controls are within the established limits.

Cyanide – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Sodium – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.

- Magnesium, Potassium, Sodium and Calcium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.

- All other applicable QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

PCB – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Attachment 2
Narrative, Rev. 1
WSCF111207

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):
Tracers and surrogates are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- All other applicable QC controls are within the established limits.

TPHG-WA – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gross Alpha / Gross Beta:
  - All applicable QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - All applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Uranium-238 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Uranium-235 and Uranium-238 - The Blank is less than two times the MDC. "B" Flag not required.
    - All other applicable QC controls are within the established limits.
- Strontium-89/90:
  - All applicable QC controls are within the established limits.
- Tritium:

- All applicable QC controls are within the established limits.

- Technetium-99:
  - All applicable QC controls are within the established limits.

We 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 data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

Attachment 2
Narrative, Rev. 1
WSCF111207

3/14/2011

Problem and Discrepancy Report

WSCF

SDG WSCF111207

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1. The data package has the following issues:

a) All of the electronic results are missing.

Resolution: *Provide missing results.*

Lab Response: **The electronic results have been provided.**

Please correct the issues and resubmit the electronic data packages.

5

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-192 Page 1 of 1

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA_DECEMBER_2010	Logbook No: HNF-N-506 3719	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

001 111207

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N26	N	W	01/18/11	1003	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011		VICTOR SIMS		1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-154

Page 1 of 2

Collector: J.S. Artzer CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NUURA DECEMBER 2010	Logbook No: HNF-N-506 3719	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF6 ~~007~~ 002	Y	W	01/18/11	1003	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HF6	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HF6	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HF7 COR	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HF7	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HF7	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HF7	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HF7	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HF7	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HF7	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011				1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-154 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters Husted	376-4650		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative	
B29HF7	N	W	01/18/11	1003	1x1-L G/P	UISO_IE_PRECIP_AEA List-1 (3)	6 Months	HNO3 to pH <2
B29HF7	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29HF7	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C
B29HF7	N	W			4x1-L aG	PCBs - 8082	1 yr/1 yr	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011	Victor Bins			1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Appendix 5

Data Validation Supporting Documentation

Appendix A - Chemical Data Validation Checklist

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: CERC11			DATA PACKAGE: VSR11-049		
VALIDATOR: Carl Schloesslin		LAB: TestAmerica		DATE: 7-14-2011	
			SDG: SL1036		
ANALYSES PERFORMED					
SW-846 8260		SW-846 8260 (TCLP)	SW-846 8270 X		SW-846 8270 (TCLP)

SAMPLES/MATRIX Water samples

SDG SL1036: B29H90, B29HC0, B29H66, B29HK0, B29H72, B29H47, B29H56, B29HD5, B29HB0, B29HK1, B29H42, B29H85, B29HF0, B29H71, B29H95, B29HF5, B29HJ5, B29H37, B29HD0, B29HJ0, B29HH5, B29H61, B29HC5, B29HB5, B29H48, B29H32

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments: None

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:

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:

Trip Blank B29H72 Hit: bis(2-ethylhexyl phthalate) 1.2 ug/L

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:

8270C LCS and MS/MSD recovery infractions: see attached annotated QC summary forms

8270C Surrogate recovery infractions:
Sample B29HH5 (-021): 2-fluorobiphenyl 39%, 2,4,6-tribromophenol 50%
Sample B29H61 (-022): 2-fluorobiphenyl 36%
Sample B29HC5 (-023): 2-fluorobiphenyl 39%, 2,4,6-tribromophenol 48%
Sample B29HB5 (-024): 2-fluorobiphenyl 40%, 2,4,6-tribromophenol 48%

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:

MS/MSD RPD infractions: see attached annotated QC summary forms

6. SYSTEM PERFORMANCE (Levels D and E)

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

Internal 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: None

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: None

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:

Comments (attach additional sheets as necessary): None

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 Work Order #...: MC80P1AC Matrix.....: WATER
LCS Lot-Sample#: F1A120000-097
Prep Date.....: 01/12/11 Analysis Date..: 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Phenol	100	27.5	ug/L	27	SW846 8270C
bis(2-Chloroethyl)-ether	100	72.2	ug/L	72	SW846 8270C
2-Chlorophenol	100	63.6	ug/L	64	SW846 8270C
1,3-Dichlorobenzene	100	56.9	ug/L	57	SW846 8270C
1,4-Dichlorobenzene	100	57.0	ug/L	57	SW846 8270C
1,2-Dichlorobenzene	100	58.1	ug/L	58	SW846 8270C
2-Methylphenol	100	58.1	ug/L	58	SW846 8270C
2,2'-oxybis (1-Chloropropane)	100	70.2	ug/L	70	SW846 8270C
N-Nitrosodi-n-propyl-amine	100	82.1	ug/L	82	SW846 8270C
Hexachloroethane	100	57.3	ug/L	57	SW846 8270C
Nitrobenzene	100	74.9	ug/L	75	SW846 8270C
2-Methylnaphthalene	100	61.2	ug/L	61	SW846 8270C
Isophorone	100	76.3	ug/L	76	SW846 8270C
2-Nitrophenol	100	77.7	ug/L	78	SW846 8270C
2,4-Dimethylphenol	100	71.6	ug/L	72	SW846 8270C
bis(2-Chloroethoxy) methane	100	78.2	ug/L	78	SW846 8270C
2,4-Dichlorophenol	100	74.5	ug/L	74	SW846 8270C
1,2,4-Trichloro-benzene	100	61.1	ug/L	61	SW846 8270C
Naphthalene	100	60.5	ug/L	61	SW846 8270C
4-Chloroaniline	100	46.0	ug/L	46	SW846 8270C
Hexachlorobutadiene	100	62.5	ug/L	62	SW846 8270C
4-Chloro-3-methylphenol	100	71.8	ug/L	72	SW846 8270C
Hexachlorocyclopenta-diene	100	57.8	ug/L	58	SW846 8270C
2,4,6-Trichloro-phenol	100	77.8	ug/L	78	SW846 8270C
2,4,5-Trichloro-phenol	100	80.5	ug/L	80	SW846 8270C
2-Chloronaphthalene	100	67.7	ug/L	68	SW846 8270C

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 Work Order #...: MC80P1AC Matrix.....: WATER
LCS Lot-Sample#: F1A120000-097

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2-Nitroaniline	100	82.4	ug/L	82	SW846 8270C
Dimethyl phthalate	100	79.0	ug/L	79	SW846 8270C
Acenaphthylene	100	77.9	ug/L	78	SW846 8270C
2,6-Dinitrotoluene	100	80.6	ug/L	81	SW846 8270C
3-Nitroaniline	100	42.5	ug/L	42	SW846 8270C
Acenaphthene	100	69.4	ug/L	69	SW846 8270C
2,4-Dinitrophenol	100	90.4	ug/L	90	SW846 8270C
4-Nitrophenol	100	29.9	ug/L	30	SW846 8270C
Dibenzofuran	100	73.7	ug/L	74	SW846 8270C
2,4-Dinitrotoluene	100	80.8	ug/L	81	SW846 8270C
Diethyl phthalate	100	79.8	ug/L	80	SW846 8270C
Fluorene	100	76.0	ug/L	76	SW846 8270C
4-Chlorophenyl phenyl ether	100	72.5	ug/L	72	SW846 8270C
4-Nitroaniline	100	73.5	ug/L	73	SW846 8270C
4,6-Dinitro-2-methylphenol	100	96.1	ug/L	96	SW846 8270C
N-Nitrosodiphenylamine	100	98.5	ug/L	98	SW846 8270C
4-Bromophenyl phenyl ether	100	80.7	ug/L	81	SW846 8270C
Hexachlorobenzene	100	81.3	ug/L	81	SW846 8270C
Pentachlorophenol	100	85.9	ug/L	86	SW846 8270C
Phenanthrene	100	78.9	ug/L	79	SW846 8270C
Anthracene	100	81.3	ug/L	81	SW846 8270C
Carbazole	100	79.8	ug/L	80	SW846 8270C
Fluoranthene	100	78.5	ug/L	79	SW846 8270C
Pyrene	100	89.5	ug/L	89	SW846 8270C
Butyl benzyl phthalate	100	87.9	ug/L	88	SW846 8270C
Benzo(a)anthracene	100	86.4	ug/L	86	SW846 8270C
3,3'-Dichlorobenzidine	100	51.1	ug/L	51	SW846 8270C
Chrysene	100	81.2	ug/L	81	SW846 8270C
bis(2-Ethylhexyl) phthalate	100	83.4	ug/L	83	SW846 8270C
Di-n-butyl phthalate	100	80.1	ug/L	80	SW846 8270C
Di-n-octyl phthalate	100	80.0	ug/L	80	SW846 8270C
Benzo(b)fluoranthene	100	88.5	ug/L	88	SW846 8270C
Benzo(k)fluoranthene	100	90.0	ug/L	90	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC80P1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A120000-097

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzo(a)pyrene	**100**	**82.6**	**ug/L**	**83**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**100**	**86.8**	**ug/L**	**87**	**SW846 8270C**
Benzo(ghi)perylene	**100**	**87.4**	**ug/L**	**87**	**SW846 8270C**
Dibenz(a,h)anthracene	**100**	**85.8**	**ug/L**	**86**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	44	(27 - 68)
Phenol-d5	29	(20 - 45)
Nitrobenzene-d5	78	(40 - 101)
2-Fluorobiphenyl	70	(37 - 95)
2,4,6-Tribromophenol	82	(52 - 110)
Terphenyl-d14	94	(47 - 105)

NOTE(S):

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

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 Work Order #...: MC9401AC Matrix.....: WATER
LCS Lot-Sample#: F1A130000-085
Prep Date.....: 01/13/11 Analysis Date..: 02/14/11
Prep Batch #...: 1013085
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Phenol	100	23.0	ug/L	23	SW846 8270C
bis(2-Chloroethyl)-ether	100	52.4	ug/L	52	SW846 8270C
2-Chlorophenol	100	53.2	ug/L	53	SW846 8270C
1,3-Dichlorobenzene	100	36.7	ug/L	37	SW846 8270C
1,4-Dichlorobenzene	100	38.2	ug/L	38	SW846 8270C
1,2-Dichlorobenzene	100	39.1	ug/L	39	SW846 8270C
2-Methylphenol	100	48.8	ug/L	49	SW846 8270C
2,2'-oxybis (1-Chloropropane)	100	50.0	ug/L	50	SW846 8270C
N-Nitrosodi-n-propyl-amine	100	65.1	ug/L	65	SW846 8270C
Hexachloroethane	100	36.7	ug/L	37	SW846 8270C
Nitrobenzene	100	47.6	ug/L	48	SW846 8270C
2-Methylnaphthalene	100	39.2	ug/L	39	SW846 8270C
Isophorone	100	55.6	ug/L	56	SW846 8270C
2-Nitrophenol	100	50.9	ug/L	51	SW846 8270C
2,4-Dimethylphenol	100	49.4	ug/L	49	SW846 8270C
bis(2-Chloroethoxy) methane	100	53.5	ug/L	53	SW846 8270C
2,4-Dichlorophenol	100	54.6	ug/L	55	SW846 8270C
1,2,4-Trichloro-benzene	100	37.4	ug/L	37	SW846 8270C
Naphthalene	100	38.8	ug/L	39	SW846 8270C
4-Chloroaniline	100	25.1	ug/L	25	SW846 8270C
Hexachlorobutadiene	100	35.5	ug/L	36	SW846 8270C
4-Chloro-3-methylphenol	100	56.0	ug/L	56	SW846 8270C
Hexachlorocyclopenta-diene	100	32.6	ug/L	33	SW846 8270C
2,4,6-Trichloro-phenol	100	58.2	ug/L	58	SW846 8270C
2,4,5-Trichloro-phenol	100	60.4	ug/L	60	SW846 8270C
2-Chloronaphthalene	100	44.3	ug/L	44	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC9401AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A130000-085

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2-Nitroaniline	100	58.9	ug/L	59	SW846 8270C
Dimethyl phthalate	100	60.5	ug/L	60	SW846 8270C
Acenaphthylene	100	50.6	ug/L	51	SW846 8270C
2,6-Dinitrotoluene	100	62.0	ug/L	62	SW846 8270C
3-Nitroaniline	100	32.3	ug/L	32	SW846 8270C
Acenaphthene	100	46.1	ug/L	46	SW846 8270C
2,4-Dinitrophenol	100	83.6	ug/L	84	SW846 8270C
4-Nitrophenol	100	23.3	ug/L	23	SW846 8270C
Dibenzofuran	100	50.8	ug/L	51	SW846 8270C
2,4-Dinitrotoluene	100	63.3	ug/L	63	SW846 8270C
Diethyl phthalate	100	62.2	ug/L	62	SW846 8270C
Fluorene	100	54.6	ug/L	55	SW846 8270C
4-Chlorophenyl phenyl ether	100	54.3	ug/L	54	SW846 8270C
4-Nitroaniline	100	57.9	ug/L	58	SW846 8270C
4,6-Dinitro-2-methylphenol	100	71.5	ug/L	72	SW846 8270C
N-Nitrosodiphenylamine	100	77.0	ug/L	77	SW846 8270C
4-Bromophenyl phenyl ether	100	57.9	ug/L	58	SW846 8270C
Hexachlorobenzene	100	60.8	ug/L	61	SW846 8270C
Pentachlorophenol	100	71.7	ug/L	72	SW846 8270C
Phenanthrene	100	61.6	ug/L	62	SW846 8270C
Anthracene	100	62.0	ug/L	62	SW846 8270C
Carbazole	100	63.0	ug/L	63	SW846 8270C
Fluoranthene	100	64.7	ug/L	65	SW846 8270C
Pyrene	100	61.3	ug/L	61	SW846 8270C
Butyl benzyl phthalate	100	65.7	ug/L	66	SW846 8270C
Benzo(a)anthracene	100	64.5	ug/L	64	SW846 8270C
3,3'-Dichlorobenzidine	100	41.9	ug/L	42	SW846 8270C
Chrysene	100	64.2	ug/L	64	SW846 8270C
bis(2-Ethylhexyl) phthalate	100	62.9	ug/L	63	SW846 8270C
Di-n-butyl phthalate	100	62.8	ug/L	63	SW846 8270C
Di-n-octyl phthalate	100	64.3	ug/L	64	SW846 8270C
Benzo(b)fluoranthene	100	63.5	ug/L	64	SW846 8270C
Benzo(k)fluoranthene	100	62.4	ug/L	62	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC9401AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A130000-085

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzo(a)pyrene	**100**	**62.6**	**ug/L**	**63**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**100**	**59.8**	**ug/L**	**60**	**SW846 8270C**
Benzo(ghi)perylene	**100**	**67.7**	**ug/L**	**68**	**SW846 8270C**
Dibenz(a,h)anthracene	**100**	**66.8**	**ug/L**	**67**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	34	(27 - 68)
Phenol-d5	23	(20 - 45)
Nitrobenzene-d5	50	(40 - 101)
2-Fluorobiphenyl	49	(37 - 95)
2,4,6-Tribromophenol	64	(52 - 110)
Terphenyl-d14	70	(47 - 105)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C01AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-001 MC8C01AG-MSD
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Phenol	ND	95.2	28.5	ug/L	30		SW846 8270C
	ND	95.2	25.5	ug/L	27	11	SW846 8270C
bis(2-Chloroethyl)-ether	ND	95.2	70.3	ug/L	74		SW846 8270C
	ND	95.2	70.9	ug/L	74	0.75	SW846 8270C
2-Chlorophenol	ND	95.2	66.2	ug/L	70		SW846 8270C
	ND	95.2	65.9	ug/L	69	0.51	SW846 8270C
1,3-Dichlorobenzene	ND	95.2	60.6	ug/L	64		SW846 8270C
	ND	95.2	58.1	ug/L	61	4.3	SW846 8270C
1,4-Dichlorobenzene	ND	95.2	61.3	ug/L	64		SW846 8270C
	ND	95.2	57.9	ug/L	61	5.7	SW846 8270C
1,2-Dichlorobenzene	ND	95.2	61.8	ug/L	65		SW846 8270C
	ND	95.2	59.4	ug/L	62	4.0	SW846 8270C
2-Methylphenol	ND	95.2	61.6	ug/L	65		SW846 8270C
	ND	95.2	59.6	ug/L	63	3.2	SW846 8270C
2,2'-oxybis (1-Chloropropane)	ND	95.2	69.1	ug/L	73		SW846 8270C
	ND	95.2	69.9	ug/L	73	1.1	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	95.2	80.3	ug/L	84		SW846 8270C
	ND	95.2	80.6	ug/L	85	0.34	SW846 8270C
Hexachloroethane	ND	95.2	60.7	ug/L	64		SW846 8270C
	ND	95.2	59.0	ug/L	62	2.9	SW846 8270C
Nitrobenzene	ND	95.2	71.0	ug/L	75		SW846 8270C
	ND	95.2	71.2	ug/L	75	0.29	SW846 8270C
2-Methylnaphthalene	ND	95.2	64.8	ug/L	68		SW846 8270C
	ND	95.2	59.4	ug/L	62	8.7	SW846 8270C
Isophorone	ND	95.2	71.5	ug/L	75		SW846 8270C
	ND	95.2	71.4	ug/L	75	0.12	SW846 8270C
2-Nitrophenol	ND	95.2	74.8	ug/L	79		SW846 8270C
	ND	95.2	74.5	ug/L	78	0.37	SW846 8270C
2,4-Dimethylphenol	ND	95.2	73.0	ug/L	77		SW846 8270C
	ND	95.2	71.4	ug/L	75	2.1	SW846 8270C
bis(2-Chloroethoxy) methane	ND	95.2	73.7	ug/L	77		SW846 8270C
	ND	95.2	73.6	ug/L	77	0.05	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C01AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-001 MC8C01AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,4-Dichlorophenol	ND	95.2	72.7	ug/L	76		SW846 8270C
	ND	95.2	69.8	ug/L	73	4.1	SW846 8270C
1,2,4-Trichloro-benzene	ND	95.2	65.0	ug/L	68		SW846 8270C
	ND	95.2	60.7	ug/L	64	6.9	SW846 8270C
Naphthalene	ND	95.2	62.7	ug/L	66		SW846 8270C
	ND	95.2	59.2	ug/L	62	5.7	SW846 8270C
4-Chloroaniline	ND	95.2	36.8	ug/L	39		SW846 8270C
	ND	95.2	32.6	ug/L	34	12	SW846 8270C
Hexachlorobutadiene	ND	95.2	66.6	ug/L	70		SW846 8270C
	ND	95.2	62.3	ug/L	65	6.7	SW846 8270C
4-Chloro-3-methylphenol	ND	95.2	72.4	ug/L	76		SW846 8270C
	ND	95.2	67.8	ug/L	71	6.7	SW846 8270C
Hexachlorocyclopenta-diene	ND	95.2	67.4	ug/L	71		SW846 8270C
	ND	95.2	62.8	ug/L	66	7.1	SW846 8270C
2,4,6-Trichloro-phenol	ND	95.2	77.4	ug/L	81		SW846 8270C
	ND	95.2	69.6	ug/L	73	11	SW846 8270C
2,4,5-Trichloro-phenol	ND	95.2	81.2	ug/L	85		SW846 8270C
	ND	95.2	71.4	ug/L	75	13	SW846 8270C
2-Chloronaphthalene	ND	95.2	72.8	ug/L	77		SW846 8270C
	ND	95.2	64.6	ug/L	68	12	SW846 8270C
2-Nitroaniline	ND	95.2	77.9	ug/L	82		SW846 8270C
	ND	95.2	71.2	ug/L	75	9.0	SW846 8270C
Dimethyl phthalate	ND	95.2	78.1	ug/L	82		SW846 8270C
	ND	95.2	68.8	ug/L	72	13	SW846 8270C
Acenaphthylene	ND	95.2	79.9	ug/L	84		SW846 8270C
	ND	95.2	72.2	ug/L	76	10	SW846 8270C
2,6-Dinitrotoluene	ND	95.2	79.8	ug/L	84		SW846 8270C
	ND	95.2	70.7	ug/L	74	12	SW846 8270C
3-Nitroaniline	ND	95.2	36.2	ug/L	38		SW846 8270C
	ND	95.2	29.6	ug/L	31	20	SW846 8270C
Acenaphthene	ND	95.2	71.8	ug/L	75		SW846 8270C
	ND	95.2	65.0	ug/L	68	10	SW846 8270C
2,4-Dinitrophenol	ND	95.2	94.6	ug/L	99		SW846 8270C
	ND	95.2	79.9	ug/L	84	17	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C01AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-001 MC8C01AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
4-Nitrophenol	ND	95.2	28.6	ug/L	30		SW846 8270C
	ND	95.2	25.6	ug/L	27	11	SW846 8270C
Dibenzofuran	ND	95.2	74.5	ug/L	78		SW846 8270C
	ND	95.2	66.8	ug/L	70	11	SW846 8270C
2,4-Dinitrotoluene	ND	95.2	79.4	ug/L	83		SW846 8270C
	ND	95.2	69.4	ug/L	73	14	SW846 8270C
Diethyl phthalate	ND	95.2	78.5	ug/L	82		SW846 8270C
	ND	95.2	69.0	ug/L	72	13	SW846 8270C
Fluorene	ND	95.2	75.7	ug/L	80		SW846 8270C
	ND	95.2	68.4	ug/L	72	10	SW846 8270C
4-Chlorophenyl phenyl ether	ND	95.2	74.5	ug/L	78		SW846 8270C
	ND	95.2	65.9	ug/L	69	12	SW846 8270C
4-Nitroaniline	ND	95.2	72.5	ug/L	76		SW846 8270C
	ND	95.2	62.1	ug/L	65	16	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	95.2	96.6	ug/L	101		SW846 8270C
	ND	95.2	83.0	ug/L	87	15	SW846 8270C
N-Nitrosodiphenylamine	ND	95.2	96.9	ug/L	102		SW846 8270C
	ND	95.2	86.4	ug/L	91	11	SW846 8270C
4-Bromophenyl phenyl ether	ND	95.2	80.5	ug/L	85		SW846 8270C
	ND	95.2	71.4	ug/L	75	12	SW846 8270C
Hexachlorobenzene	ND	95.2	80.9	ug/L	85		SW846 8270C
	ND	95.2	72.2	ug/L	76	11	SW846 8270C
Pentachlorophenol	ND	95.2	84.5	ug/L	89		SW846 8270C
	ND	95.2	72.4	ug/L	76	15	SW846 8270C
Phenanthrene	ND	95.2	78.0	ug/L	82		SW846 8270C
	ND	95.2	69.2	ug/L	73	12	SW846 8270C
Anthracene	ND	95.2	79.7	ug/L	84		SW846 8270C
	ND	95.2	71.2	ug/L	75	11	SW846 8270C
Carbazole	ND	95.2	77.9	ug/L	82		SW846 8270C
	ND	95.2	68.9	ug/L	72	12	SW846 8270C
Fluoranthene	ND	95.2	76.7	ug/L	81		SW846 8270C
	ND	95.2	68.2	ug/L	72	12	SW846 8270C
Pyrene	ND	95.2	86.8	ug/L	91		SW846 8270C
	ND	95.2	77.9	ug/L	82	11	SW846 8270C
Butyl benzyl phthalate	ND	95.2	84.4	ug/L	89		SW846 8270C
	ND	95.2	77.7	ug/L	82	8.3	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C01AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-001 MC8C01AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(a)anthracene	ND	95.2	83.2	ug/L	87		SW846 8270C
	ND	95.2	74.6	ug/L	78	11	SW846 8270C
3,3'-Dichlorobenzidine	ND	95.2	43.9	ug/L	46		SW846 8270C
	ND	95.2	37.8	ug/L	40	15	SW846 8270C
Chrysene	ND	95.2	79.0	ug/L	83		SW846 8270C
	ND	95.2	71.6	ug/L	75	9.8	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	95.2	79.8	ug/L	84		SW846 8270C
	ND	95.2	74.8	ug/L	79	6.5	SW846 8270C
Di-n-butyl phthalate	ND	95.2	78.0	ug/L	82		SW846 8270C
	ND	95.2	69.9	ug/L	73	11	SW846 8270C
Di-n-octyl phthalate	ND	95.2	77.0	ug/L	81		SW846 8270C
	ND	95.2	72.6	ug/L	76	5.9	SW846 8270C
Benzo(b)fluoranthene	ND	95.2	90.0	ug/L	95		SW846 8270C
	ND	95.2	81.6	ug/L	86	9.9	SW846 8270C
Benzo(k)fluoranthene	ND	95.2	82.8	ug/L	87		SW846 8270C
	ND	95.2	75.5	ug/L	79	9.2	SW846 8270C
Benzo(a)pyrene	ND	95.2	81.6	ug/L	86		SW846 8270C
	ND	95.2	73.6	ug/L	77	10	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	95.2	85.9	ug/L	90		SW846 8270C
	ND	95.2	69.3	ug/L	73	21	SW846 8270C
Benzo(ghi)perylene	ND	95.2	84.8	ug/L	89		SW846 8270C
	ND	95.2	70.4	ug/L	74	19	SW846 8270C
Dibenz(a,h)anthracene	ND	95.2	83.1	ug/L	87		SW846 8270C
	ND	95.2	69.1	ug/L	73	18	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	47	(22 - 84)
	46	(22 - 84)
Phenol-d5	29	(11 - 71)
	28	(11 - 71)
Nitrobenzene-d5	80	(35 - 102)
	77	(35 - 102)
2-Fluorobiphenyl	81	(43 - 95)
	69	(43 - 95)
2,4,6-Tribromophenol	87	(51 - 110)
	74	(51 - 110)
Terphenyl-d14	97	(43 - 107)
	85	(43 - 107)

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C01AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-001 MC8C01AG-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EL1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-021 MC8EL1AG-MSD
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 02/14/11
Prep Batch #...: 1013085
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Phenol	ND	193	66.5	ug/L	35		SW846 8270C
	ND	187	59.9	ug/L	32	10	SW846 8270C
bis(2-Chloroethyl)-ether	ND	193	100	ug/L	52		SW846 8270C
	ND	187	89.6	ug/L	48	11	SW846 8270C
2-Chlorophenol	ND	193	105	ug/L	55		SW846 8270C
	ND	187	94.4	ug/L	50	11	SW846 8270C
1,3-Dichlorobenzene	ND	193	52.0	ug/L	27 T		SW846 8270C
	ND	187	64.5	ug/L	34	21	SW846 8270C
1,4-Dichlorobenzene	ND	193	54.4	ug/L	28		SW846 8270C
	ND	187	66.5	ug/L	36	20	SW846 8270C
1,2-Dichlorobenzene	ND	193	57.3	ug/L	30 T		SW846 8270C
	ND	187	68.4	ug/L	37	18	SW846 8270C
2-Methylphenol	ND	193	103	ug/L	54		SW846 8270C
	ND	187	94.3	ug/L	50	9.0	SW846 8270C
2,2'-oxybis (1-Chloropropane)	ND	193	94.6	ug/L	49		SW846 8270C
	ND	187	86.8	ug/L	46	8.6	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	193	123	ug/L	64		SW846 8270C
	ND	187	110	ug/L	59	11	SW846 8270C
Hexachloroethane	ND	193	51.6	ug/L	27		SW846 8270C
	ND	187	66.4	ug/L	36	25	SW846 8270C
Nitrobenzene	ND	193	86.9	ug/L	45		SW846 8270C
	ND	187	80.5	ug/L	43	7.6	SW846 8270C
2-Methylnaphthalene	ND	193	77.2	ug/L	40		SW846 8270C
	ND	187	68.0	ug/L	36	13	SW846 8270C
Isophorone	ND	193	101	ug/L	52		SW846 8270C
	ND	187	92.3	ug/L	49	8.9	SW846 8270C
2-Nitrophenol	ND	193	95.0	ug/L	49		SW846 8270C
	ND	187	87.0	ug/L	47	8.8	SW846 8270C
2,4-Dimethylphenol	ND	193	96.0	ug/L	50		SW846 8270C
	ND	187	89.7	ug/L	48	6.7	SW846 8270C
bis(2-Chloroethoxy) methane	ND	193	97.4	ug/L	51		SW846 8270C
	ND	187	88.6	ug/L	47	9.5	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EL1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-021 MC8EL1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,4-Dichlorophenol	ND	193	97.4	ug/L	51		SW846 8270C
	ND	187	90.4	ug/L	48	7.3	SW846 8270C
1,2,4-Trichloro-benzene	ND	193	64.0	ug/L	33		SW846 8270C
	ND	187	65.1	ug/L	35	1.6	SW846 8270C
Naphthalene	ND	193	67.1	ug/L	35		SW846 8270C
	ND	187	65.3	ug/L	35	2.6	SW846 8270C
4-Chloroaniline	ND	193	41.7	ug/L	22		SW846 8270C
	ND	187	49.3	ug/L	26	17	SW846 8270C
Hexachlorobutadiene	ND	193	58.3	ug/L	30 T		SW846 8270C
	ND	187	65.8	ug/L	35	12	SW846 8270C
4-Chloro-3-methylphenol	ND	193	101	ug/L	52		SW846 8270C
	ND	187	95.1	ug/L	51	6.1	SW846 8270C
Hexachlorocyclopenta-diene	ND	193	56.0	ug/L	29		SW846 8270C
	ND	187	46.1	ug/L	25	19	SW846 8270C
2,4,6-Trichloro-phenol	ND	193	106	ug/L	55		SW846 8270C
	ND	187	99.1	ug/L	53	6.9	SW846 8270C
2,4,5-Trichloro-phenol	ND	193	110	ug/L	57		SW846 8270C
	ND	187	103	ug/L	55	6.2	SW846 8270C
2-Chloronaphthalene	ND	193	94.9	ug/L	49		SW846 8270C
	ND	187	80.2	ug/L	43	17	SW846 8270C
2-Nitroaniline	ND	193	104	ug/L	54		SW846 8270C
	ND	187	98.2	ug/L	53	5.8	SW846 8270C
Dimethyl phthalate	ND	193	109	ug/L	56		SW846 8270C
	ND	187	101	ug/L	54	7.1	SW846 8270C
Acenaphthylene	ND	193	103	ug/L	53		SW846 8270C
	ND	187	88.6	ug/L	47	15	SW846 8270C
2,6-Dinitrotoluene	ND	193	113	ug/L	58		SW846 8270C
	ND	187	105	ug/L	56	7.1	SW846 8270C
3-Nitroaniline	ND	193	58.3	ug/L	30		SW846 8270C
	ND	187	64.1	ug/L	34	9.4	SW846 8270C
Acenaphthene	ND	193	95.9	ug/L	50		SW846 8270C
	ND	187	81.4	ug/L	44 T	16	SW846 8270C
2,4-Dinitrophenol	ND	193	130	ug/L	68		SW846 8270C
	ND	187	137	ug/L	73	5.1	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EL1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-021 MC8EL1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
4-Nitrophenol	ND	193	66.1	ug/L	34		SW846 8270C
	ND	187	61.7	ug/L	33	7.0	SW846 8270C
Dibenzofuran	ND	193	102	ug/L	53		SW846 8270C
	ND	187	88.6	ug/L	47	14	SW846 8270C
2,4-Dinitrotoluene	ND	193	114	ug/L	59		SW846 8270C
	ND	187	107	ug/L	57	6.3	SW846 8270C
Diethyl phthalate	ND	193	118	ug/L	61		SW846 8270C
	ND	187	118	ug/L	63	0.42	SW846 8270C
Fluorene	ND	193	105	ug/L	55		SW846 8270C
	ND	187	94.6	ug/L	51	11	SW846 8270C
4-Chlorophenyl phenyl ether	ND	193	106	ug/L	55		SW846 8270C
	ND	187	94.6	ug/L	51	11	SW846 8270C
4-Nitroaniline	ND	193	106	ug/L	55		SW846 8270C
	ND	187	101	ug/L	54	5.2	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	193	122	ug/L	63		SW846 8270C
	ND	187	119	ug/L	64	2.3	SW846 8270C
N-Nitrosodiphenylamine	ND	193	137	ug/L	71		SW846 8270C
	ND	187	125	ug/L	67	9.2	SW846 8270C
4-Bromophenyl phenyl ether	ND	193	108	ug/L	56		SW846 8270C
	ND	187	98.2	ug/L	53	9.1	SW846 8270C
Hexachlorobenzene	ND	193	110	ug/L	57		SW846 8270C
	ND	187	102	ug/L	54	7.4	SW846 8270C
Pentachlorophenol	ND	193	131	ug/L	68		SW846 8270C
	ND	187	125	ug/L	67	4.8	SW846 8270C
Phenanthrene	ND	193	110	ug/L	57		SW846 8270C
	ND	187	102	ug/L	55	7.7	SW846 8270C
Anthracene	ND	193	113	ug/L	58		SW846 8270C
	ND	187	104	ug/L	56	7.9	SW846 8270C
Carbazole	ND	193	113	ug/L	59		SW846 8270C
	ND	187	106	ug/L	57	7.0	SW846 8270C
Fluoranthene	ND	193	116	ug/L	60		SW846 8270C
	ND	187	106	ug/L	57	9.0	SW846 8270C
Pyrene	ND	193	110	ug/L	57		SW846 8270C
	ND	187	104	ug/L	55	5.7	SW846 8270C
Butyl benzyl phthalate	ND	193	119	ug/L	62		SW846 8270C
	ND	187	111	ug/L	59	6.6	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EL1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-021 MC8EL1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(a)anthracene	ND	193	115	ug/L	60		SW846 8270C
	ND	187	107	ug/L	57	7.7	SW846 8270C
3,3'-Dichlorobenzidine	ND	193	52.2	ug/L	27		SW846 8270C
	ND	187	63.5	ug/L	34	20	SW846 8270C
Chrysene	ND	193	114	ug/L	59		SW846 8270C
	ND	187	105	ug/L	56	8.1	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	193	112	ug/L	58		SW846 8270C
	ND	187	104	ug/L	56	6.8	SW846 8270C
Di-n-butyl phthalate	ND	193	111	ug/L	58		SW846 8270C
	ND	187	103	ug/L	55	7.4	SW846 8270C
Di-n-octyl phthalate	ND	193	114	ug/L	59		SW846 8270C
	ND	187	105	ug/L	56	9.0	SW846 8270C
Benzo(b)fluoranthene	ND	193	110	ug/L	57		SW846 8270C
	ND	187	103	ug/L	55	7.2	SW846 8270C
Benzo(k)fluoranthene	ND	193	117	ug/L	61		SW846 8270C
	ND	187	106	ug/L	57	9.9	SW846 8270C
Benzo(a)pyrene	ND	193	111	ug/L	58		SW846 8270C
	ND	187	102	ug/L	54	8.8	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	193	111	ug/L	58		SW846 8270C
	ND	187	108	ug/L	58	3.0	SW846 8270C
Benzo(ghi)perylene	ND	193	119	ug/L	62		SW846 8270C
	ND	187	116	ug/L	62	2.8	SW846 8270C
Dibenz(a,h)anthracene	ND	193	118	ug/L	61		SW846 8270C
	ND	187	115	ug/L	61	2.7	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	45	(22 - 84)
	41	(22 - 84)
Phenol-d5	34	(11 - 71)
	31	(11 - 71)
Nitrobenzene-d5	47	(35 - 102)
	45	(35 - 102)
2-Fluorobiphenyl	49	(43 - 95)
	41 *	(43 - 95)
2,4,6-Tribromophenol	59	(51 - 110)
	58	(51 - 110)
Terphenyl-d14	65	(43 - 107)
	63	(43 - 107)

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VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: CERC11			DATA PACKAGE: VSR11-049		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 7-14-2011	
			SDG: WSCF111069, WSCF111207		
ANALYSES PERFORMED					
8015 X	8021	8141	8151	8315	
		WTPH-HCID	WTPH-G X	WTPH-D X	

SAMPLES/MATRIX: Water samples

SDG WSCF111069: B29H53, B29HB2, B29HB7, B29H97

SDG WSCF111207: B29HF7

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments: None

2. INSTRUMENT TUNING AND CALIBRATION (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

Comments:

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: None

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 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:

WSCF111069 ethanol LCS %R = 74%

WSCF111207 ethanol LCS %R = 78%, 1-propanol MS %R = 77%, ethylene glycol MSD %R = 77%

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: None

6. HOLDING TIMES (all levels)

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

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

Comments: None

7. COMPOUND IDENTIFICATION, 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: None

8. SAMPLE CLEANUP (Levels D and E)

Fluorisil ® (or other absorbent) cleanup performed? ..... Yes No N/A

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

Check recoveries acceptable?..... Yes No N/A

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

Check 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

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC80P1AA **Matrix.....:** WATER
MB Lot-Sample #: F1A120000-097

Prep Date.....: 01/12/11
Analysis Date..: 01/17/11 **Prep Batch #...:** 1012097
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Hexachloropropene	ND	100	ug/L	SW846 8270C
N-Nitro-o-toluidine	ND	20	ug/L	SW846 8270C
Pyridine	ND	20	ug/L	SW846 8270C
N-Nitrosodimethylamine	ND	10	ug/L	SW846 8270C
2-Picoline	ND	20	ug/L	SW846 8270C
N-Nitrosomethylethylamine	ND	10	ug/L	SW846 8270C
Methyl methanesulfonate	ND	10	ug/L	SW846 8270C
Methyl parathion	ND	50	ug/L	SW846 8270C
N-Nitrosodiethylamine	ND	10	ug/L	SW846 8270C
Ethyl methanesulfonate	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pentachloroethane	ND	50	ug/L	SW846 8270C
Aniline	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C
Benzyl alcohol	ND	10	ug/L	SW846 8270C
Hexachlorophene	ND	100	ug/L	SW846 8270C
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
N-Nitrosopyrrolidine	ND	10	ug/L	SW846 8270C
N-Nitrosomorpholine	ND	10	ug/L	SW846 8270C
o-Toluidine	ND	20	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
N-Nitrosopiperidine	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
O,O,O-Triethylphosphoro-thioate	ND	50	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC80P1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
alpha,alpha-Dimethylphene	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
1,2,4-Trichloro-benzene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2,6-Dichlorophenol	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
p-Phenylene diamine	ND	100	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
Safrole	ND	20	ug/L	SW846 8270C
1,2,4,5-Tetrachloro-benzene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
Isosafrole	ND	20	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
1,4-Naphthoquinone	ND	50	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-butylamine	ND	10	ug/L	SW846 8270C
1,3-Dinitrobenzene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
Acenaphthene	ND	10	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Pentachlorobenzene	ND	10	ug/L	SW846 8270C
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
1-Naphthylamine	ND	10	ug/L	SW846 8270C
2,3,4,6-Tetrachlorophenol	ND	50	ug/L	SW846 8270C
2-Naphthylamine	ND	10	ug/L	SW846 8270C
O,O-Diethyl-O-(2-pyraziny	ND	50	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC80P1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
Azobenzene	ND	10	ug/L	SW846 8270C
Tetraethyldithiopyro-phosphate	ND	50	ug/L	SW846 8270C
1,3,5-Trinitrobenzene	ND	50	ug/L	SW846 8270C
Diallate	ND	20	ug/L	SW846 8270C
Phorate	ND	50	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Phenacetin	ND	20	ug/L	SW846 8270C
Dimethoate	ND	20	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	50	ug/L	SW846 8270C
Pentachloronitrobenzene	ND	50	ug/L	SW846 8270C
4-Aminobiphenyl	ND	50	ug/L	SW846 8270C
Pronamide	ND	20	ug/L	SW846 8270C
Disulfoton	ND	50	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Dinoseb	ND	20	ug/L	SW846 8270C
4-Nitroquinoline-1-oxide	ND	100	ug/L	SW846 8270C
Parathion	ND	50	ug/L	SW846 8270C
Methapyrilene	ND	50	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Isodrin	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Aramite 1	ND	20	ug/L	SW846 8270C
Aramite 2	ND	20	ug/L	SW846 8270C
p-Dimethylaminoazobenzene	ND	20	ug/L	SW846 8270C
p-Chlorobenzilate	ND	10	ug/L	SW846 8270C
Famphur	ND	100	ug/L	SW846 8270C
Kepone	ND	100	ug/L	SW846 8270C
3,3'-Dimethylbenzidine	ND	50	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
2-Acetylaminofluorene	ND	100	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	20	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC80P1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
3-Methylcholanthrene	ND	20	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Tributyl phosphate	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	47	(22 - 84)
Phenol-d5	31	(11 - 71)
Nitrobenzene-d5	79	(35 - 102)
2-Fluorobiphenyl	66	(43 - 95)
2,4,6-Tribromophenol	69	(51 - 110)
Terphenyl-d14	91	(43 - 107)

NOTE(S):

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

CH2M Hill Plateau Remediation DOE RL

Method Blank Report

GC/MS Semivolatiles

Lot-Sample #: F1A120000-097 B **Work Order #:** MC80P1AA **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown Aldol Condensate		35 J	M	3.437	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC9401AA **Matrix.....:** WATER
MB Lot-Sample #: F1A130000-085

Prep Date.....: 01/13/11
Analysis Date..: 02/14/11 **Prep Batch #...:** 1013085
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Hexachloropropene	ND	100	ug/L	SW846 8270C
N-Nitro-o-toluidine	ND	20	ug/L	SW846 8270C
Pyridine	ND	20	ug/L	SW846 8270C
N-Nitrosodimethylamine	ND	10	ug/L	SW846 8270C
2-Picoline	ND	20	ug/L	SW846 8270C
N-Nitrosomethylethylamine	ND	10	ug/L	SW846 8270C
Methyl methanesulfonate	ND	10	ug/L	SW846 8270C
Methyl parathion	ND	50	ug/L	SW846 8270C
N-Nitrosodiethylamine	ND	10	ug/L	SW846 8270C
Ethyl methanesulfonate	ND	10	ug/L	SW846 8270C
Phenol	ND	10	ug/L	SW846 8270C
Pentachloroethane	ND	50	ug/L	SW846 8270C
Aniline	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C
Benzyl alcohol	ND	10	ug/L	SW846 8270C
Hexachlorophene	ND	100	ug/L	SW846 8270C
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
2,2'-oxybis (1-Chloropropane)	ND	10	ug/L	SW846 8270C
Acetophenone	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
N-Nitrosopyrrolidine	ND	10	ug/L	SW846 8270C
N-Nitrosomorpholine	ND	10	ug/L	SW846 8270C
o-Toluidine	ND	20	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
N-Nitrosopiperidine	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
O,O,O-Triethylphosphoro-thioate	ND	50	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC9401AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
alpha,alpha-Dimethylphene	ND	50	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
1,2,4-Trichloro-benzene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
2,6-Dichlorophenol	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
p-Phenylene diamine	ND	100	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
Safrole	ND	20	ug/L	SW846 8270C
1,2,4,5-Tetrachloro-benzene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
Isosafrole	ND	20	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
1,4-Naphthoquinone	ND	50	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-butylamine	ND	10	ug/L	SW846 8270C
1,3-Dinitrobenzene	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
Acenaphthene	ND	10	ug/L	SW846 8270C
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
Pentachlorobenzene	ND	10	ug/L	SW846 8270C
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
1-Naphthylamine	ND	10	ug/L	SW846 8270C
2,3,4,6-Tetrachlorophenol	ND	50	ug/L	SW846 8270C
2-Naphthylamine	ND	10	ug/L	SW846 8270C
O,O-Diethyl-O-(2-pyraziny	ND	50	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC9401AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
Azobenzene	ND	10	ug/L	SW846 8270C
Tetraethyldithiopyro-phosphate	ND	50	ug/L	SW846 8270C
1,3,5-Trinitrobenzene	ND	50	ug/L	SW846 8270C
Diallate	ND	20	ug/L	SW846 8270C
Phorate	ND	50	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Phenacetin	ND	20	ug/L	SW846 8270C
Dimethoate	ND	20	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	50	ug/L	SW846 8270C
Pentachloronitrobenzene	ND	50	ug/L	SW846 8270C
4-Aminobiphenyl	ND	50	ug/L	SW846 8270C
Pronamide	ND	20	ug/L	SW846 8270C
Disulfoton	ND	50	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Dinoseb	ND	20	ug/L	SW846 8270C
4-Nitroquinoline-1-oxide	ND	100	ug/L	SW846 8270C
Parathion	ND	50	ug/L	SW846 8270C
Methapyrilene	ND	50	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Isodrin	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Aramite 1	ND	20	ug/L	SW846 8270C
Aramite 2	ND	20	ug/L	SW846 8270C
p-Dimethylaminoazobenzene	ND	20	ug/L	SW846 8270C
p-Chlorobenzilate	ND	10	ug/L	SW846 8270C
Famphur	ND	100	ug/L	SW846 8270C
Kepone	ND	100	ug/L	SW846 8270C
3,3'-Dimethylbenzidine	ND	50	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
2-Acetylaminofluorene	ND	100	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
7,12-Dimethylbenz(a)-anthracene	ND	20	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC9401AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
3-Methylcholanthrene	ND	20	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Tributyl phosphate	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	34	(22 - 84)
Phenol-d5	23	(11 - 71)
Nitrobenzene-d5	52	(35 - 102)
2-Fluorobiphenyl	45	(43 - 95)
2,4,6-Tribromophenol	54	(51 - 110)
Terphenyl-d14	64	(43 - 107)

NOTE(S):

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

CH2M Hill Plateau Remediation DOE RL

Method Blank Report

GC/MS Semivolatiles

Lot-Sample #: F1A130000-085 B **Work Order #:** MC9401AA **Matrix:** WATER

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED RESULT		RETENTION TIME	UNITS
Unknown		100 J	M	3.617	ug/L
Unknown Aldol Condensate		45 J	M	4.252	ug/L

NOTE(S):

M: Result was measured against nearest internal standard assuming a response factor of 1.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC80P1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A120000-097
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Phenol	100	27.5	ug/L	27	SW846 8270C
bis(2-Chloroethyl)-ether	100	72.2	ug/L	72	SW846 8270C
2-Chlorophenol	100	63.6	ug/L	64	SW846 8270C
1,3-Dichlorobenzene	100	56.9	ug/L	57	SW846 8270C
1,4-Dichlorobenzene	100	57.0	ug/L	57	SW846 8270C
1,2-Dichlorobenzene	100	58.1	ug/L	58	SW846 8270C
2-Methylphenol	100	58.1	ug/L	58	SW846 8270C
2,2'-oxybis (1-Chloropropane)	100	70.2	ug/L	70	SW846 8270C
N-Nitrosodi-n-propyl-amine	100	82.1	ug/L	82	SW846 8270C
Hexachloroethane	100	57.3	ug/L	57	SW846 8270C
Nitrobenzene	100	74.9	ug/L	75	SW846 8270C
2-Methylnaphthalene	100	61.2	ug/L	61	SW846 8270C
Isophorone	100	76.3	ug/L	76	SW846 8270C
2-Nitrophenol	100	77.7	ug/L	78	SW846 8270C
2,4-Dimethylphenol	100	71.6	ug/L	72	SW846 8270C
bis(2-Chloroethoxy) methane	100	78.2	ug/L	78	SW846 8270C
2,4-Dichlorophenol	100	74.5	ug/L	74	SW846 8270C
1,2,4-Trichloro-benzene	100	61.1	ug/L	61	SW846 8270C
Naphthalene	100	60.5	ug/L	61	SW846 8270C
4-Chloroaniline	100	46.0	ug/L	46	SW846 8270C
Hexachlorobutadiene	100	62.5	ug/L	62	SW846 8270C
4-Chloro-3-methylphenol	100	71.8	ug/L	72	SW846 8270C
Hexachlorocyclopenta-diene	100	57.8	ug/L	58	SW846 8270C
2,4,6-Trichloro-phenol	100	77.8	ug/L	78	SW846 8270C
2,4,5-Trichloro-phenol	100	80.5	ug/L	80	SW846 8270C
2-Chloronaphthalene	100	67.7	ug/L	68	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC80P1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A120000-097

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2-Nitroaniline	100	82.4	ug/L	82	SW846 8270C
Dimethyl phthalate	100	79.0	ug/L	79	SW846 8270C
Acenaphthylene	100	77.9	ug/L	78	SW846 8270C
2,6-Dinitrotoluene	100	80.6	ug/L	81	SW846 8270C
3-Nitroaniline	100	42.5	ug/L	42	SW846 8270C
Acenaphthene	100	69.4	ug/L	69	SW846 8270C
2,4-Dinitrophenol	100	90.4	ug/L	90	SW846 8270C
4-Nitrophenol	100	29.9	ug/L	30	SW846 8270C
Dibenzofuran	100	73.7	ug/L	74	SW846 8270C
2,4-Dinitrotoluene	100	80.8	ug/L	81	SW846 8270C
Diethyl phthalate	100	79.8	ug/L	80	SW846 8270C
Fluorene	100	76.0	ug/L	76	SW846 8270C
4-Chlorophenyl phenyl ether	100	72.5	ug/L	72	SW846 8270C
4-Nitroaniline	100	73.5	ug/L	73	SW846 8270C
4,6-Dinitro-2-methylphenol	100	96.1	ug/L	96	SW846 8270C
N-Nitrosodiphenylamine	100	98.5	ug/L	98	SW846 8270C
4-Bromophenyl phenyl ether	100	80.7	ug/L	81	SW846 8270C
Hexachlorobenzene	100	81.3	ug/L	81	SW846 8270C
Pentachlorophenol	100	85.9	ug/L	86	SW846 8270C
Phenanthrene	100	78.9	ug/L	79	SW846 8270C
Anthracene	100	81.3	ug/L	81	SW846 8270C
Carbazole	100	79.8	ug/L	80	SW846 8270C
Fluoranthene	100	78.5	ug/L	79	SW846 8270C
Pyrene	100	89.5	ug/L	89	SW846 8270C
Butyl benzyl phthalate	100	87.9	ug/L	88	SW846 8270C
Benzo(a)anthracene	100	86.4	ug/L	86	SW846 8270C
3,3'-Dichlorobenzidine	100	51.1	ug/L	51	SW846 8270C
Chrysene	100	81.2	ug/L	81	SW846 8270C
bis(2-Ethylhexyl) phthalate	100	83.4	ug/L	83	SW846 8270C
Di-n-butyl phthalate	100	80.1	ug/L	80	SW846 8270C
Di-n-octyl phthalate	100	80.0	ug/L	80	SW846 8270C
Benzo(b)fluoranthene	100	88.5	ug/L	88	SW846 8270C
Benzo(k)fluoranthene	100	90.0	ug/L	90	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC80P1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A120000-097

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzo(a)pyrene	**100**	**82.6**	**ug/L**	**83**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**100**	**86.8**	**ug/L**	**87**	**SW846 8270C**
Benzo(ghi)perylene	**100**	**87.4**	**ug/L**	**87**	**SW846 8270C**
Dibenz(a,h)anthracene	**100**	**85.8**	**ug/L**	**86**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	44	(27 - 68)
Phenol-d5	29	(20 - 45)
Nitrobenzene-d5	78	(40 - 101)
2-Fluorobiphenyl	70	(37 - 95)
2,4,6-Tribromophenol	82	(52 - 110)
Terphenyl-d14	94	(47 - 105)

NOTE(S):

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

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC9401AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A130000-085
Prep Date.....: 01/13/11 **Analysis Date..:** 02/14/11
Prep Batch #...: 1013085
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Phenol	100	23.0	ug/L	23	SW846 8270C
bis(2-Chloroethyl)-ether	100	52.4	ug/L	52	SW846 8270C
2-Chlorophenol	100	53.2	ug/L	53	SW846 8270C
1,3-Dichlorobenzene	100	36.7	ug/L	37	SW846 8270C
1,4-Dichlorobenzene	100	38.2	ug/L	38	SW846 8270C
1,2-Dichlorobenzene	100	39.1	ug/L	39	SW846 8270C
2-Methylphenol	100	48.8	ug/L	49	SW846 8270C
2,2'-oxybis (1-Chloropropane)	100	50.0	ug/L	50	SW846 8270C
N-Nitrosodi-n-propyl-amine	100	65.1	ug/L	65	SW846 8270C
Hexachloroethane	100	36.7	ug/L	37	SW846 8270C
Nitrobenzene	100	47.6	ug/L	48	SW846 8270C
2-Methylnaphthalene	100	39.2	ug/L	39	SW846 8270C
Isophorone	100	55.6	ug/L	56	SW846 8270C
2-Nitrophenol	100	50.9	ug/L	51	SW846 8270C
2,4-Dimethylphenol	100	49.4	ug/L	49	SW846 8270C
bis(2-Chloroethoxy) methane	100	53.5	ug/L	53	SW846 8270C
2,4-Dichlorophenol	100	54.6	ug/L	55	SW846 8270C
1,2,4-Trichloro-benzene	100	37.4	ug/L	37	SW846 8270C
Naphthalene	100	38.8	ug/L	39	SW846 8270C
4-Chloroaniline	100	25.1	ug/L	25	SW846 8270C
Hexachlorobutadiene	100	35.5	ug/L	36	SW846 8270C
4-Chloro-3-methylphenol	100	56.0	ug/L	56	SW846 8270C
Hexachlorocyclopenta-diene	100	32.6	ug/L	33	SW846 8270C
2,4,6-Trichloro-phenol	100	58.2	ug/L	58	SW846 8270C
2,4,5-Trichloro-phenol	100	60.4	ug/L	60	SW846 8270C
2-Chloronaphthalene	100	44.3	ug/L	44	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC9401AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A130000-085

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2-Nitroaniline	100	58.9	ug/L	59	SW846 8270C
Dimethyl phthalate	100	60.5	ug/L	60	SW846 8270C
Acenaphthylene	100	50.6	ug/L	51	SW846 8270C
2,6-Dinitrotoluene	100	62.0	ug/L	62	SW846 8270C
3-Nitroaniline	100	32.3	ug/L	32	SW846 8270C
Acenaphthene	100	46.1	ug/L	46	SW846 8270C
2,4-Dinitrophenol	100	83.6	ug/L	84	SW846 8270C
4-Nitrophenol	100	23.3	ug/L	23	SW846 8270C
Dibenzofuran	100	50.8	ug/L	51	SW846 8270C
2,4-Dinitrotoluene	100	63.3	ug/L	63	SW846 8270C
Diethyl phthalate	100	62.2	ug/L	62	SW846 8270C
Fluorene	100	54.6	ug/L	55	SW846 8270C
4-Chlorophenyl phenyl ether	100	54.3	ug/L	54	SW846 8270C
4-Nitroaniline	100	57.9	ug/L	58	SW846 8270C
4,6-Dinitro-2-methylphenol	100	71.5	ug/L	72	SW846 8270C
N-Nitrosodiphenylamine	100	77.0	ug/L	77	SW846 8270C
4-Bromophenyl phenyl ether	100	57.9	ug/L	58	SW846 8270C
Hexachlorobenzene	100	60.8	ug/L	61	SW846 8270C
Pentachlorophenol	100	71.7	ug/L	72	SW846 8270C
Phenanthrene	100	61.6	ug/L	62	SW846 8270C
Anthracene	100	62.0	ug/L	62	SW846 8270C
Carbazole	100	63.0	ug/L	63	SW846 8270C
Fluoranthene	100	64.7	ug/L	65	SW846 8270C
Pyrene	100	61.3	ug/L	61	SW846 8270C
Butyl benzyl phthalate	100	65.7	ug/L	66	SW846 8270C
Benzo(a)anthracene	100	64.5	ug/L	64	SW846 8270C
3,3'-Dichlorobenzidine	100	41.9	ug/L	42	SW846 8270C
Chrysene	100	64.2	ug/L	64	SW846 8270C
bis(2-Ethylhexyl) phthalate	100	62.9	ug/L	63	SW846 8270C
Di-n-butyl phthalate	100	62.8	ug/L	63	SW846 8270C
Di-n-octyl phthalate	100	64.3	ug/L	64	SW846 8270C
Benzo(b)fluoranthene	100	63.5	ug/L	64	SW846 8270C
Benzo(k)fluoranthene	100	62.4	ug/L	62	SW846 8270C

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LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC9401AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A130000-085

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Benzo(a)pyrene	**100**	**62.6**	**ug/L**	**63**	**SW846 8270C**
Indeno(1,2,3-cd)pyrene	**100**	**59.8**	**ug/L**	**60**	**SW846 8270C**
Benzo(ghi)perylene	**100**	**67.7**	**ug/L**	**68**	**SW846 8270C**
Dibenz(a,h)anthracene	**100**	**66.8**	**ug/L**	**67**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	34	(27 - 68)
Phenol-d5	23	(20 - 45)
Nitrobenzene-d5	50	(40 - 101)
2-Fluorobiphenyl	49	(37 - 95)
2,4,6-Tribromophenol	64	(52 - 110)
Terphenyl-d14	70	(47 - 105)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C01AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-001 MC8C01AG-MSD
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/17/11
Prep Batch #...: 1012097
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Phenol	ND	95.2	28.5	ug/L	30		SW846 8270C
	ND	95.2	25.5	ug/L	27	11	SW846 8270C
bis(2-Chloroethyl)-ether	ND	95.2	70.3	ug/L	74		SW846 8270C
	ND	95.2	70.9	ug/L	74	0.75	SW846 8270C
2-Chlorophenol	ND	95.2	66.2	ug/L	70		SW846 8270C
	ND	95.2	65.9	ug/L	69	0.51	SW846 8270C
1,3-Dichlorobenzene	ND	95.2	60.6	ug/L	64		SW846 8270C
	ND	95.2	58.1	ug/L	61	4.3	SW846 8270C
1,4-Dichlorobenzene	ND	95.2	61.3	ug/L	64		SW846 8270C
	ND	95.2	57.9	ug/L	61	5.7	SW846 8270C
1,2-Dichlorobenzene	ND	95.2	61.8	ug/L	65		SW846 8270C
	ND	95.2	59.4	ug/L	62	4.0	SW846 8270C
2-Methylphenol	ND	95.2	61.6	ug/L	65		SW846 8270C
	ND	95.2	59.6	ug/L	63	3.2	SW846 8270C
2,2'-oxybis (1-Chloropropane)	ND	95.2	69.1	ug/L	73		SW846 8270C
	ND	95.2	69.9	ug/L	73	1.1	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	95.2	80.3	ug/L	84		SW846 8270C
	ND	95.2	80.6	ug/L	85	0.34	SW846 8270C
Hexachloroethane	ND	95.2	60.7	ug/L	64		SW846 8270C
	ND	95.2	59.0	ug/L	62	2.9	SW846 8270C
Nitrobenzene	ND	95.2	71.0	ug/L	75		SW846 8270C
	ND	95.2	71.2	ug/L	75	0.29	SW846 8270C
2-Methylnaphthalene	ND	95.2	64.8	ug/L	68		SW846 8270C
	ND	95.2	59.4	ug/L	62	8.7	SW846 8270C
Isophorone	ND	95.2	71.5	ug/L	75		SW846 8270C
	ND	95.2	71.4	ug/L	75	0.12	SW846 8270C
2-Nitrophenol	ND	95.2	74.8	ug/L	79		SW846 8270C
	ND	95.2	74.5	ug/L	78	0.37	SW846 8270C
2,4-Dimethylphenol	ND	95.2	73.0	ug/L	77		SW846 8270C
	ND	95.2	71.4	ug/L	75	2.1	SW846 8270C
bis(2-Chloroethoxy) methane	ND	95.2	73.7	ug/L	77		SW846 8270C
	ND	95.2	73.6	ug/L	77	0.05	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C01AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-001 MC8C01AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,4-Dichlorophenol	ND	95.2	72.7	ug/L	76		SW846 8270C
	ND	95.2	69.8	ug/L	73	4.1	SW846 8270C
1,2,4-Trichloro-benzene	ND	95.2	65.0	ug/L	68		SW846 8270C
	ND	95.2	60.7	ug/L	64	6.9	SW846 8270C
Naphthalene	ND	95.2	62.7	ug/L	66		SW846 8270C
	ND	95.2	59.2	ug/L	62	5.7	SW846 8270C
4-Chloroaniline	ND	95.2	36.8	ug/L	39		SW846 8270C
	ND	95.2	32.6	ug/L	34	12	SW846 8270C
Hexachlorobutadiene	ND	95.2	66.6	ug/L	70		SW846 8270C
	ND	95.2	62.3	ug/L	65	6.7	SW846 8270C
4-Chloro-3-methylphenol	ND	95.2	72.4	ug/L	76		SW846 8270C
	ND	95.2	67.8	ug/L	71	6.7	SW846 8270C
Hexachlorocyclopenta-diene	ND	95.2	67.4	ug/L	71		SW846 8270C
	ND	95.2	62.8	ug/L	66	7.1	SW846 8270C
2,4,6-Trichloro-phenol	ND	95.2	77.4	ug/L	81		SW846 8270C
	ND	95.2	69.6	ug/L	73	11	SW846 8270C
2,4,5-Trichloro-phenol	ND	95.2	81.2	ug/L	85		SW846 8270C
	ND	95.2	71.4	ug/L	75	13	SW846 8270C
2-Chloronaphthalene	ND	95.2	72.8	ug/L	77		SW846 8270C
	ND	95.2	64.6	ug/L	68	12	SW846 8270C
2-Nitroaniline	ND	95.2	77.9	ug/L	82		SW846 8270C
	ND	95.2	71.2	ug/L	75	9.0	SW846 8270C
Dimethyl phthalate	ND	95.2	78.1	ug/L	82		SW846 8270C
	ND	95.2	68.8	ug/L	72	13	SW846 8270C
Acenaphthylene	ND	95.2	79.9	ug/L	84		SW846 8270C
	ND	95.2	72.2	ug/L	76	10	SW846 8270C
2,6-Dinitrotoluene	ND	95.2	79.8	ug/L	84		SW846 8270C
	ND	95.2	70.7	ug/L	74	12	SW846 8270C
3-Nitroaniline	ND	95.2	36.2	ug/L	38		SW846 8270C
	ND	95.2	29.6	ug/L	31	20	SW846 8270C
Acenaphthene	ND	95.2	71.8	ug/L	75		SW846 8270C
	ND	95.2	65.0	ug/L	68	10	SW846 8270C
2,4-Dinitrophenol	ND	95.2	94.6	ug/L	99		SW846 8270C
	ND	95.2	79.9	ug/L	84	17	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C01AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-001 MC8C01AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
4-Nitrophenol	ND	95.2	28.6	ug/L	30		SW846 8270C
	ND	95.2	25.6	ug/L	27	11	SW846 8270C
Dibenzofuran	ND	95.2	74.5	ug/L	78		SW846 8270C
	ND	95.2	66.8	ug/L	70	11	SW846 8270C
2,4-Dinitrotoluene	ND	95.2	79.4	ug/L	83		SW846 8270C
	ND	95.2	69.4	ug/L	73	14	SW846 8270C
Diethyl phthalate	ND	95.2	78.5	ug/L	82		SW846 8270C
	ND	95.2	69.0	ug/L	72	13	SW846 8270C
Fluorene	ND	95.2	75.7	ug/L	80		SW846 8270C
	ND	95.2	68.4	ug/L	72	10	SW846 8270C
4-Chlorophenyl phenyl ether	ND	95.2	74.5	ug/L	78		SW846 8270C
	ND	95.2	65.9	ug/L	69	12	SW846 8270C
4-Nitroaniline	ND	95.2	72.5	ug/L	76		SW846 8270C
	ND	95.2	62.1	ug/L	65	16	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	95.2	96.6	ug/L	101		SW846 8270C
	ND	95.2	83.0	ug/L	87	15	SW846 8270C
N-Nitrosodiphenylamine	ND	95.2	96.9	ug/L	102		SW846 8270C
	ND	95.2	86.4	ug/L	91	11	SW846 8270C
4-Bromophenyl phenyl ether	ND	95.2	80.5	ug/L	85		SW846 8270C
	ND	95.2	71.4	ug/L	75	12	SW846 8270C
Hexachlorobenzene	ND	95.2	80.9	ug/L	85		SW846 8270C
	ND	95.2	72.2	ug/L	76	11	SW846 8270C
Pentachlorophenol	ND	95.2	84.5	ug/L	89		SW846 8270C
	ND	95.2	72.4	ug/L	76	15	SW846 8270C
Phenanthrene	ND	95.2	78.0	ug/L	82		SW846 8270C
	ND	95.2	69.2	ug/L	73	12	SW846 8270C
Anthracene	ND	95.2	79.7	ug/L	84		SW846 8270C
	ND	95.2	71.2	ug/L	75	11	SW846 8270C
Carbazole	ND	95.2	77.9	ug/L	82		SW846 8270C
	ND	95.2	68.9	ug/L	72	12	SW846 8270C
Fluoranthene	ND	95.2	76.7	ug/L	81		SW846 8270C
	ND	95.2	68.2	ug/L	72	12	SW846 8270C
Pyrene	ND	95.2	86.8	ug/L	91		SW846 8270C
	ND	95.2	77.9	ug/L	82	11	SW846 8270C
Butyl benzyl phthalate	ND	95.2	84.4	ug/L	89		SW846 8270C
	ND	95.2	77.7	ug/L	82	8.3	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C01AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-001 MC8C01AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(a)anthracene	ND	95.2	83.2	ug/L	87		SW846 8270C
	ND	95.2	74.6	ug/L	78	11	SW846 8270C
3,3'-Dichlorobenzidine	ND	95.2	43.9	ug/L	46		SW846 8270C
	ND	95.2	37.8	ug/L	40	15	SW846 8270C
Chrysene	ND	95.2	79.0	ug/L	83		SW846 8270C
	ND	95.2	71.6	ug/L	75	9.8	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	95.2	79.8	ug/L	84		SW846 8270C
	ND	95.2	74.8	ug/L	79	6.5	SW846 8270C
Di-n-butyl phthalate	ND	95.2	78.0	ug/L	82		SW846 8270C
	ND	95.2	69.9	ug/L	73	11	SW846 8270C
Di-n-octyl phthalate	ND	95.2	77.0	ug/L	81		SW846 8270C
	ND	95.2	72.6	ug/L	76	5.9	SW846 8270C
Benzo(b)fluoranthene	ND	95.2	90.0	ug/L	95		SW846 8270C
	ND	95.2	81.6	ug/L	86	9.9	SW846 8270C
Benzo(k)fluoranthene	ND	95.2	82.8	ug/L	87		SW846 8270C
	ND	95.2	75.5	ug/L	79	9.2	SW846 8270C
Benzo(a)pyrene	ND	95.2	81.6	ug/L	86		SW846 8270C
	ND	95.2	73.6	ug/L	77	10	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	95.2	85.9	ug/L	90		SW846 8270C
	ND	95.2	69.3	ug/L	73	21	SW846 8270C
Benzo(ghi)perylene	ND	95.2	84.8	ug/L	89		SW846 8270C
	ND	95.2	70.4	ug/L	74	19	SW846 8270C
Dibenz(a,h)anthracene	ND	95.2	83.1	ug/L	87		SW846 8270C
	ND	95.2	69.1	ug/L	73	18	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	47	(22 - 84)
	46	(22 - 84)
Phenol-d5	29	(11 - 71)
	28	(11 - 71)
Nitrobenzene-d5	80	(35 - 102)
	77	(35 - 102)
2-Fluorobiphenyl	81	(43 - 95)
	69	(43 - 95)
2,4,6-Tribromophenol	87	(51 - 110)
	74	(51 - 110)
Terphenyl-d14	97	(43 - 107)
	85	(43 - 107)

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C01AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-001 MC8C01AG-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EL1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-021 MC8EL1AG-MSD
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 02/14/11
Prep Batch #...: 1013085
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Phenol	ND	193	66.5	ug/L	35		SW846 8270C
	ND	187	59.9	ug/L	32	10	SW846 8270C
bis(2-Chloroethyl)-ether	ND	193	100	ug/L	52		SW846 8270C
	ND	187	89.6	ug/L	48	11	SW846 8270C
2-Chlorophenol	ND	193	105	ug/L	55		SW846 8270C
	ND	187	94.4	ug/L	50	11	SW846 8270C
1,3-Dichlorobenzene	ND	193	52.0	ug/L	27 T		SW846 8270C
	ND	187	64.5	ug/L	34	21	SW846 8270C
1,4-Dichlorobenzene	ND	193	54.4	ug/L	28		SW846 8270C
	ND	187	66.5	ug/L	36	20	SW846 8270C
1,2-Dichlorobenzene	ND	193	57.3	ug/L	30 T		SW846 8270C
	ND	187	68.4	ug/L	37	18	SW846 8270C
2-Methylphenol	ND	193	103	ug/L	54		SW846 8270C
	ND	187	94.3	ug/L	50	9.0	SW846 8270C
2,2'-oxybis (1-Chloropropane)	ND	193	94.6	ug/L	49		SW846 8270C
	ND	187	86.8	ug/L	46	8.6	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	193	123	ug/L	64		SW846 8270C
	ND	187	110	ug/L	59	11	SW846 8270C
Hexachloroethane	ND	193	51.6	ug/L	27		SW846 8270C
	ND	187	66.4	ug/L	36	25	SW846 8270C
Nitrobenzene	ND	193	86.9	ug/L	45		SW846 8270C
	ND	187	80.5	ug/L	43	7.6	SW846 8270C
2-Methylnaphthalene	ND	193	77.2	ug/L	40		SW846 8270C
	ND	187	68.0	ug/L	36	13	SW846 8270C
Isophorone	ND	193	101	ug/L	52		SW846 8270C
	ND	187	92.3	ug/L	49	8.9	SW846 8270C
2-Nitrophenol	ND	193	95.0	ug/L	49		SW846 8270C
	ND	187	87.0	ug/L	47	8.8	SW846 8270C
2,4-Dimethylphenol	ND	193	96.0	ug/L	50		SW846 8270C
	ND	187	89.7	ug/L	48	6.7	SW846 8270C
bis(2-Chloroethoxy) methane	ND	193	97.4	ug/L	51		SW846 8270C
	ND	187	88.6	ug/L	47	9.5	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EL1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-021 MC8EL1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,4-Dichlorophenol	ND	193	97.4	ug/L	51		SW846 8270C
	ND	187	90.4	ug/L	48	7.3	SW846 8270C
1,2,4-Trichloro-benzene	ND	193	64.0	ug/L	33		SW846 8270C
	ND	187	65.1	ug/L	35	1.6	SW846 8270C
Naphthalene	ND	193	67.1	ug/L	35		SW846 8270C
	ND	187	65.3	ug/L	35	2.6	SW846 8270C
4-Chloroaniline	ND	193	41.7	ug/L	22		SW846 8270C
	ND	187	49.3	ug/L	26	17	SW846 8270C
Hexachlorobutadiene	ND	193	58.3	ug/L	30 T		SW846 8270C
	ND	187	65.8	ug/L	35	12	SW846 8270C
4-Chloro-3-methylphenol	ND	193	101	ug/L	52		SW846 8270C
	ND	187	95.1	ug/L	51	6.1	SW846 8270C
Hexachlorocyclopenta-diene	ND	193	56.0	ug/L	29		SW846 8270C
	ND	187	46.1	ug/L	25	19	SW846 8270C
2,4,6-Trichloro-phenol	ND	193	106	ug/L	55		SW846 8270C
	ND	187	99.1	ug/L	53	6.9	SW846 8270C
2,4,5-Trichloro-phenol	ND	193	110	ug/L	57		SW846 8270C
	ND	187	103	ug/L	55	6.2	SW846 8270C
2-Chloronaphthalene	ND	193	94.9	ug/L	49		SW846 8270C
	ND	187	80.2	ug/L	43	17	SW846 8270C
2-Nitroaniline	ND	193	104	ug/L	54		SW846 8270C
	ND	187	98.2	ug/L	53	5.8	SW846 8270C
Dimethyl phthalate	ND	193	109	ug/L	56		SW846 8270C
	ND	187	101	ug/L	54	7.1	SW846 8270C
Acenaphthylene	ND	193	103	ug/L	53		SW846 8270C
	ND	187	88.6	ug/L	47	15	SW846 8270C
2,6-Dinitrotoluene	ND	193	113	ug/L	58		SW846 8270C
	ND	187	105	ug/L	56	7.1	SW846 8270C
3-Nitroaniline	ND	193	58.3	ug/L	30		SW846 8270C
	ND	187	64.1	ug/L	34	9.4	SW846 8270C
Acenaphthene	ND	193	95.9	ug/L	50		SW846 8270C
	ND	187	81.4	ug/L	44 T	16	SW846 8270C
2,4-Dinitrophenol	ND	193	130	ug/L	68		SW846 8270C
	ND	187	137	ug/L	73	5.1	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EL1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-021 MC8EL1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
4-Nitrophenol	ND	193	66.1	ug/L	34		SW846 8270C
	ND	187	61.7	ug/L	33	7.0	SW846 8270C
Dibenzofuran	ND	193	102	ug/L	53		SW846 8270C
	ND	187	88.6	ug/L	47	14	SW846 8270C
2,4-Dinitrotoluene	ND	193	114	ug/L	59		SW846 8270C
	ND	187	107	ug/L	57	6.3	SW846 8270C
Diethyl phthalate	ND	193	118	ug/L	61		SW846 8270C
	ND	187	118	ug/L	63	0.42	SW846 8270C
Fluorene	ND	193	105	ug/L	55		SW846 8270C
	ND	187	94.6	ug/L	51	11	SW846 8270C
4-Chlorophenyl phenyl ether	ND	193	106	ug/L	55		SW846 8270C
	ND	187	94.6	ug/L	51	11	SW846 8270C
4-Nitroaniline	ND	193	106	ug/L	55		SW846 8270C
	ND	187	101	ug/L	54	5.2	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	193	122	ug/L	63		SW846 8270C
	ND	187	119	ug/L	64	2.3	SW846 8270C
N-Nitrosodiphenylamine	ND	193	137	ug/L	71		SW846 8270C
	ND	187	125	ug/L	67	9.2	SW846 8270C
4-Bromophenyl phenyl ether	ND	193	108	ug/L	56		SW846 8270C
	ND	187	98.2	ug/L	53	9.1	SW846 8270C
Hexachlorobenzene	ND	193	110	ug/L	57		SW846 8270C
	ND	187	102	ug/L	54	7.4	SW846 8270C
Pentachlorophenol	ND	193	131	ug/L	68		SW846 8270C
	ND	187	125	ug/L	67	4.8	SW846 8270C
Phenanthrene	ND	193	110	ug/L	57		SW846 8270C
	ND	187	102	ug/L	55	7.7	SW846 8270C
Anthracene	ND	193	113	ug/L	58		SW846 8270C
	ND	187	104	ug/L	56	7.9	SW846 8270C
Carbazole	ND	193	113	ug/L	59		SW846 8270C
	ND	187	106	ug/L	57	7.0	SW846 8270C
Fluoranthene	ND	193	116	ug/L	60		SW846 8270C
	ND	187	106	ug/L	57	9.0	SW846 8270C
Pyrene	ND	193	110	ug/L	57		SW846 8270C
	ND	187	104	ug/L	55	5.7	SW846 8270C
Butyl benzyl phthalate	ND	193	119	ug/L	62		SW846 8270C
	ND	187	111	ug/L	59	6.6	SW846 8270C

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EL1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-021 MC8EL1AG-MSD

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzo(a)anthracene	ND	193	115	ug/L	60		SW846 8270C
	ND	187	107	ug/L	57	7.7	SW846 8270C
3,3'-Dichlorobenzidine	ND	193	52.2	ug/L	27		SW846 8270C
	ND	187	63.5	ug/L	34	20	SW846 8270C
Chrysene	ND	193	114	ug/L	59		SW846 8270C
	ND	187	105	ug/L	56	8.1	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	193	112	ug/L	58		SW846 8270C
	ND	187	104	ug/L	56	6.8	SW846 8270C
Di-n-butyl phthalate	ND	193	111	ug/L	58		SW846 8270C
	ND	187	103	ug/L	55	7.4	SW846 8270C
Di-n-octyl phthalate	ND	193	114	ug/L	59		SW846 8270C
	ND	187	105	ug/L	56	9.0	SW846 8270C
Benzo(b)fluoranthene	ND	193	110	ug/L	57		SW846 8270C
	ND	187	103	ug/L	55	7.2	SW846 8270C
Benzo(k)fluoranthene	ND	193	117	ug/L	61		SW846 8270C
	ND	187	106	ug/L	57	9.9	SW846 8270C
Benzo(a)pyrene	ND	193	111	ug/L	58		SW846 8270C
	ND	187	102	ug/L	54	8.8	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	193	111	ug/L	58		SW846 8270C
	ND	187	108	ug/L	58	3.0	SW846 8270C
Benzo(ghi)perylene	ND	193	119	ug/L	62		SW846 8270C
	ND	187	116	ug/L	62	2.8	SW846 8270C
Dibenz(a,h)anthracene	ND	193	118	ug/L	61		SW846 8270C
	ND	187	115	ug/L	61	2.7	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	45	(22 - 84)
	41	(22 - 84)
Phenol-d5	34	(11 - 71)
	31	(11 - 71)
Nitrobenzene-d5	47	(35 - 102)
	45	(35 - 102)
2-Fluorobiphenyl	49	(43 - 95)
	41 *	(43 - 95)
2,4,6-Tribromophenol	59	(51 - 110)
	58	(51 - 110)
Terphenyl-d14	65	(43 - 107)
	63	(43 - 107)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EL1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-021 MC8EL1AG-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

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

Bold print denotes control parameters

* Surrogate recovery is outside stated control limits.

T Spike sample recovery is outside control limits.

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111069

QC Batch 173784
Associated Samples 111069009, 111069010

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #45992**							
Diesel	TPHDIESEL		<80	ug/L					U	01/11/11
LCS			**QC Sample #45993**							
Diesel	TPHDIESEL		2200	ug/L	87.6	65 - 128				01/11/11
MS			**QC Sample #45994**							
			Original 111059013							
Diesel	TPHDIESEL		2100	ug/L	90.6	73 - 123				01/11/11
MSD			**QC Sample #45995**							
			Original 111059013					**Paired**	**45994**	
Diesel	TPHDIESEL		2200	ug/L	91.4	73 - 123	0.90	20		01/11/11

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111069

QC Batch 173817
Associated Samples 111069011, 111069012

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #46117**							
Diesel	TPHDIESEL		<80	ug/L					U	01/14/11
LCS			**QC Sample #46118**							
Diesel	TPHDIESEL		2300	ug/L	92.8	65 - 128				01/14/11
MS			**QC Sample #46119**							
			Original 111059014							
Diesel	TPHDIESEL		2100	ug/L	89.6	73 - 123				01/14/11
MSD			**QC Sample #46120**							
			Original 111059014					**Paired**	**46119**	
Diesel	TPHDIESEL		2000	ug/L	84.8	73 - 123	5.50	20		01/14/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

QC Batch 173910
Associated Samples 111069009, 111069010

Test Gasoline Range (W)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #46228**								
Gasoline	TPHGASOLI		<50	ug/L						U	01/12/11
LCS			**QC Sample #46229**								
Gasoline	TPHGASOLI		2400	ug/L	96	80 - 120					01/12/11
MS			**QC Sample #46230**								
			Original	**111059015**							
Gasoline	TPHGASOLI		2300	ug/L	93.6	75 - 125					01/12/11
MSD			**QC Sample #46231**								
			Original	**111059015**					**Paired**	**46230**	
Gasoline	TPHGASOLI		2300	ug/L	92.8	75 - 125	0.90	20			01/12/11
DUP			**QC Sample #46232**								
			Original	**111059015**							
Gasoline	TPHGASOLI		<50	ug/L			0.00	20		U	01/12/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

QC Batch 174098
Associated Samples 111069011, 111069012

Test Gasoline Range (W)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #46353**								
Gasoline	TPHGASOLI		<50	ug/L						U	01/13/11
LCS			**QC Sample #46354**								
Gasoline	TPHGASOLI		2800	ug/L	113.6	80 - 120					01/13/11
MS			**QC Sample #46355**								
			Original 111069011								
Gasoline	TPHGASOLI	<50	2300	ug/L	90.4	75 - 125					01/13/11
MSD			**QC Sample #46356**								
			Original 111069011						**Paired**	**46355**	
Gasoline	TPHGASOLI	<50	2600	ug/L	105.6	75 - 125	15.50	20			01/13/11
DUP			**QC Sample #46357**								
			Original 111069011								
Gasoline	TPHGASOLI	<50	<50	ug/L			0.00	20		U	01/13/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

QC Batch 174214
Associated Samples 111069009, 111069010, 111069011, 111069012

Test SW-846 Method 8015 for GPP

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #46472**							
Ethanol	64-17-5		<2000	ug/L					U	01/14/11
1-Propanol	71-23-8		<2000	ug/L					U	01/14/11
Ethylene glycol	107-21-1		<2000	ug/L					U	01/14/11
LCS			**QC Sample #46473**							
Ethanol	64-17-5		5860	ug/L	74.3	70 - 130				01/14/11
1-Propanol	71-23-8		7090	ug/L	88.6	70 - 130				01/14/11
Ethylene glycol	107-21-1		10300	ug/L	92.5	70 - 130				01/14/11
MS			**QC Sample #46474**							
			Original 111063005							
Ethanol	64-17-5		8200	ug/L	103.9	70 - 130				01/14/11
1-Propanol	71-23-8		8600	ug/L	107.5	70 - 130				01/14/11
Ethylene glycol	107-21-1		9170	ug/L	82.3	70 - 130				01/14/11
MSD			**QC Sample #46475**							
			Original 111063005						**Paired 46474**	
Ethanol	64-17-5		8220	ug/L	104.2	70 - 130	0.30	20		01/14/11
1-Propanol	71-23-8		8340	ug/L	104.2	70 - 130	3.10	20		01/14/11
Ethylene glycol	107-21-1		10400	ug/L	93.4	70 - 130	12.60	20		01/14/11
DUP			**QC Sample #46476**							
			Original 111063005							

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Ethanol	64-17-5		<2000	ug/L			0.00	20	U	01/14/11
1-Propanol	71-23-8		<2000	ug/L			0.00	20	U	01/14/11
Ethylene glycol	107-21-1		<2000	ug/L			0.00	20	U	01/14/11

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111069

QC Batch 173784
Associated Samples 111069009, 111069010

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111069009**							
o-Terphenyl	84-15-1				74	70 - 130				01/11/11
SAMPLE			**Sample #111069010**							
o-Terphenyl	84-15-1				86.7	70 - 130				01/11/11
BLANK			**QC Sample #45992**							
o-Terphenyl	84-15-1				88.3	70 - 130				01/11/11
LCS			**QC Sample #45993**							
o-Terphenyl	84-15-1				92	70 - 130				01/11/11
MS			**QC Sample #45994**							
			Original 111059013							
o-Terphenyl	84-15-1				93.4	70 - 130				01/11/11
MSD			**QC Sample #45995**							
			Original 111059013						**Paired 45994**	
o-Terphenyl	84-15-1				95.9	70 - 130	2.60	20		01/11/11

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111069

QC Batch 173817
Associated Samples 111069011, 111069012

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111069011**							
o-Terphenyl	84-15-1				87.7	70 - 130				01/14/11
SAMPLE			**Sample #111069012**							
o-Terphenyl	84-15-1				84.2	70 - 130				01/14/11
BLANK			**QC Sample #46117**							
o-Terphenyl	84-15-1				83.9	70 - 130				01/14/11
LCS			**QC Sample #46118**							
o-Terphenyl	84-15-1				98.9	70 - 130				01/14/11
MS			**QC Sample #46119**							
			Original 111059014							
o-Terphenyl	84-15-1				93	70 - 130				01/14/11
MSD			**QC Sample #46120**							
			Original 111059014					**Paired**	**46119**	
o-Terphenyl	84-15-1				87	70 - 130	6.70	20		01/14/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

QC Batch 173910
Associated Samples 111069009, 111069010

Test Gasoline Range (W)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111069009**							
4-Bromofluorobenzene	460-00-4				84.8	50 - 150				01/13/11
SAMPLE			**Sample #111069010**							
4-Bromofluorobenzene	460-00-4				115.2	50 - 150				01/13/11
BLANK			**QC Sample #46228**							
4-Bromofluorobenzene	460-00-4				121.2	50 - 150				01/12/11
LCS			**QC Sample #46229**							
4-Bromofluorobenzene	460-00-4				119.2	50 - 150				01/12/11
MS			**QC Sample #46230**							
			Original 111059015							
4-Bromofluorobenzene	460-00-4				123.2	50 - 150				01/12/11
MSD			**QC Sample #46231**							
			Original 111059015					**Paired**	**46230**	
4-Bromofluorobenzene	460-00-4				105.2	50 - 150	15.80			01/12/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
DUP			**QC Sample #46232**							
			Original 111059015							
4-Bromofluorobenzene	460-00-4				85.6	50 - 150	17.00			01/12/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

QC Batch 174098
Associated Samples 111069011, 111069012

Test Gasoline Range (W)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111069011**							
4-Bromofluorobenzene	460-00-4				99.6	50 - 150				01/13/11
SAMPLE			**Sample #111069012**							
4-Bromofluorobenzene	460-00-4				119.6	50 - 150				01/13/11
BLANK			**QC Sample #46353**							
4-Bromofluorobenzene	460-00-4				110	50 - 150				01/13/11
LCS			**QC Sample #46354**							
4-Bromofluorobenzene	460-00-4				121.6	50 - 150				01/13/11
MS			**QC Sample #46355**							
			Original 111069011							
4-Bromofluorobenzene	460-00-4				122.8	50 - 150				01/13/11
MSD			**QC Sample #46356**							
			Original 111069011					**Paired**	**46355**	
4-Bromofluorobenzene	460-00-4				120.4	50 - 150	2.00			01/13/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
DUP			**QC Sample #46357**							
			Original 111069011							
4-Bromofluorobenzene	460-00-4				108	50 - 150	7.70			01/13/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

QC Batch 174214
Associated Samples 111069009, 111069010, 111069011, 111069012

Test SW-846 Method 8015 for GPP

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111069009**							
2-Bromoethanol	540-51-2				100.6	70 - 130				01/14/11
SAMPLE			**Sample #111069010**							
2-Bromoethanol	540-51-2				103.4	70 - 130				01/14/11
SAMPLE			**Sample #111069011**							
2-Bromoethanol	540-51-2				105.1	70 - 130				01/14/11
SAMPLE			**Sample #111069012**							
2-Bromoethanol	540-51-2				103.4	70 - 130				01/14/11
BLANK			**QC Sample #46472**							
2-Bromoethanol	540-51-2				111.9	70 - 130				01/14/11
LCS			**QC Sample #46473**							
2-Bromoethanol	540-51-2				85.2	70 - 130				01/14/11
MS			**QC Sample #46474**							
			Original 111063005							
2-Bromoethanol	540-51-2				117	70 - 130				01/14/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MSD			**QC Sample #46475**							
			Original 111063005					**Paired**	**46474**	
2-Bromoethanol	540-51-2				114.2	70 - 130	2.40			01/14/11
DUP			**QC Sample #46476**							
			Original 111063005							
2-Bromoethanol	540-51-2				118.8	70 - 130	14.90			01/14/11

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111207

QC Batch 174805
Associated Samples 111207003

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #47043**							
Diesel	TPHDIESEL		<0.4	ug/L					U	01/20/11
LCS			**QC Sample #47044**							
Diesel	TPHDIESEL		2400	ug/L	95.4	65 - 128				01/20/11
MS			**QC Sample #47045**							
			Original 111181001							
Diesel	TPHDIESEL		1800	ug/L	77.2	73 - 123				01/20/11
MSD			**QC Sample #47046**							
			Original 111181001					**Paired**	**47045**	
Diesel	TPHDIESEL		2000	ug/L	85.2	73 - 123	9.90	20		01/20/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111207

QC Batch 175402
Associated Samples 111207003

Test SW-846 Method 8015 for GPP

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #47805**							
Ethanol	64-17-5		<2000	ug/L					U	01/31/11
1-Propanol	71-23-8		<2000	ug/L					U	01/31/11
Ethylene glycol	107-21-1		<2000	ug/L					U	01/31/11
LCS			**QC Sample #47806**							
Ethanol	64-17-5		6170	ug/L	78.2	70 - 130				01/31/11
1-Propanol	71-23-8		6490	ug/L	81.1	70 - 130				01/31/11
Ethylene glycol	107-21-1		9980	ug/L	89.6	70 - 130				01/31/11
MS			**QC Sample #47807**							
			Original 111207003							
Ethanol	64-17-5	<2000	6720	ug/L	85.2	70 - 130				01/31/11
1-Propanol	71-23-8	<2000	6120	ug/L	76.5	70 - 130				01/31/11
Ethylene glycol	107-21-1	<2000	9420	ug/L	84.6	70 - 130				01/31/11
MSD			**QC Sample #47808**							
			Original 111207003					**Paired**	**47807**	
Ethanol	64-17-5	<2000	6740	ug/L	85.4	70 - 130	0.20	20		01/31/11
1-Propanol	71-23-8	<2000	6510	ug/L	81.4	70 - 130	6.20	20		01/31/11
Ethylene glycol	107-21-1	<2000	8580	ug/L	77	70 - 130	9.40	20		01/31/11
DUP			**QC Sample #47809**							
			Original 111207003							

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REVISION 1

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111207

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Ethanol	64-17-5	<2000	<2000	ug/L			0.00	20	U	01/31/11
1-Propanol	71-23-8	<2000	<2000	ug/L			0.00	20	U	01/31/11
Ethylene glycol	107-21-1	<2000	<2000	ug/L			0.00	20	U	01/31/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111207

QC Batch 175439
Associated Samples 111207003

Test Gasoline Range (W)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #47896**								
Gasoline	TPHGASOLI		<50	ug/L						U	01/31/11
LCS			**QC Sample #47897**								
Gasoline	TPHGASOLI		2700	ug/L	109.6	80 - 120					01/31/11
MS			**QC Sample #47898**								
			Original 111204006								
Gasoline	TPHGASOLI		2800	ug/L	112	75 - 125					01/31/11
MSD			**QC Sample #47899**								
			Original 111204006						**Paired**	**47898**	
Gasoline	TPHGASOLI		2700	ug/L	108.8	75 - 125	2.90	20			01/31/11
DUP			**QC Sample #47900**								
			Original 111204006								
Gasoline	TPHGASOLI		<50	ug/L			0.00	20		U	01/31/11

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111207

QC Batch 174805
Associated Samples 111207003

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
SAMPLE			**Sample #111207003**								
o-Terphenyl	84-15-1				86.7	70 - 130					01/20/11
BLANK			**QC Sample #47043**								
o-Terphenyl	84-15-1				78.4	70 - 130					01/20/11
LCS			**QC Sample #47044**								
o-Terphenyl	84-15-1				93.8	70 - 130					01/20/11
MS			**QC Sample #47045**								
			Original	**111181001**							
o-Terphenyl	84-15-1				72.9	70 - 130					01/20/11
MSD			**QC Sample #47046**								
			Original	**111181001**					**Paired**	**47045**	
o-Terphenyl	84-15-1				91.1	70 - 130	22.20	20	*	X	01/20/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111207

QC Batch 175402
Associated Samples 111207003

Test SW-846 Method 8015 for GPP

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111207003**							
2-Bromoethanol	540-51-2				109.7	70 - 130				01/31/11
BLANK			**QC Sample #47805**							
2-Bromoethanol	540-51-2				92.6	70 - 130				01/31/11
LCS			**QC Sample #47806**							
2-Bromoethanol	540-51-2				112.5	70 - 130				01/31/11
MS			**QC Sample #47807**							
			Original 111207003							
2-Bromoethanol	540-51-2				123.9	70 - 130				01/31/11
MSD			**QC Sample #47808**							
			Original 111207003					**Paired**	**47807**	
2-Bromoethanol	540-51-2				115.9	70 - 130	6.70			01/31/11
DUP			**QC Sample #47809**							
			Original 111207003							
2-Bromoethanol	540-51-2				114.8	70 - 130	4.60			01/31/11

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF111207

QC Batch 175439
Associated Samples 111207003

Test Gasoline Range (W)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111207003**							
4-Bromofluorobenzene	460-00-4				111.2	50 - 150				01/31/11
BLANK			**QC Sample #47896**							
4-Bromofluorobenzene	460-00-4				121.6	50 - 150				01/31/11
LCS			**QC Sample #47897**							
4-Bromofluorobenzene	460-00-4				122.4	50 - 150				01/31/11
MS			**QC Sample #47898**							
			Original	**111204006**						
4-Bromofluorobenzene	460-00-4				123.6	50 - 150				01/31/11
MSD			**QC Sample #47899**							
			Original	**111204006**				**Paired**	**47898**	
4-Bromofluorobenzene	460-00-4				124	50 - 150	0.30			01/31/11
DUP			**QC Sample #47900**							
			Original	**111204006**						
4-Bromofluorobenzene	460-00-4				123.2	50 - 150	1.60			01/31/11

REVISED111207 -

Date: 14 July 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: CERC11
Subject: PCBs - Sample Data Group (SDG) WSCF111207

INTRODUCTION

This memorandum presents the results of data validation for SDG WSCF111207 prepared by WSCF. The sample validated along with the analytical method is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Method
B29HF7	1-18-2011	Water	C	8082

Data validation was conducted in accordance with the CHPRC validation statement of work and the Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study, DOE/RL-2009-42, Rev. 0 (SAP). 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 OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements for PCBs are extraction within one year of sample collection and analysis within one year of sample extraction. Sample preservation requires chilling to 4 degrees Celsius.

The sample was extracted and analyzed within the prescribed holding times and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable.

Trip Blanks

No trip blanks were submitted for validation.

Field Blanks

No field blanks were submitted for validation.

Equipment Blanks

No equipment blanks were submitted for validation.

- **Accuracy**

Accuracy is evaluated by reviewing surrogate results, matrix spike sample results, and laboratory control sample results. According to the SAP, the matrix spike and laboratory control sample accuracy limits are 80% to 120%. The surrogate accuracy limits used were the ones specified by the DV procedure (30% to 150%).

Surrogates

All surrogate recoveries were acceptable.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

All MS/MSD recoveries were acceptable. It should be noted that aroclor-1254 was the only analyte reported for the MS/MSD. Method 8082 guidance specifies aroclor-1016 and aroclor-1260 for MS/MSD analyses. No sample data are qualified as a result.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable. It should be noted that aroclor-1254 was the only analyte reported for the LCS. Method 8082 guidance specifies aroclor-1016 and aroclor-1260 for LCS analyses. No sample data are qualified as a result

- **Precision**

Precision is evaluated by reviewing MS/MSD results, field duplicate sample results and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limits are ±20%. When duplicate RPDs exceed the

limits and have associated results <5X the reporting limits with differences <1X the reporting limits no precision infraction occurred.

MS/MSD Samples

All MS/MSD RPD values were acceptable.

Field Duplicate Samples

No field duplicates were submitted for validation.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs were below the CRDLs.

- **Completeness**

SDG WSCF111207 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

GRP-GD-003, Rev. 0, Change 0, *Data Validation for Chemical Analyses*, August 2010.

DOE/RL-2009-42, Rev. 0, *Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study*, December 2010.

Appendix 1

Glossary of Data Reporting Qualifiers

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

- **U** — The constituent was analyzed for, but was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the RL. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J+** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J-** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **N** — The analysis indicates the presence of an analyte that has been tentatively identified.

- **NJ** — The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.

- **NJ+** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation.

- **NJ-** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation.

- **C** — This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).

- **X** — This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful. The data should be considered unusable for decision-making purposes.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** ─ Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

PCB Data Qualification Summary			
SDG: WSCF111207	Reviewer: AQA	Project: CERC11	Page 1 of 1
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
PCBs	None	N/A	N/A

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111207

Sample # 111207003
SAF# X11-016
Sample ID B29HF7

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
~~**Prep for Water**~~										~~**01/20/11**~~
TPHDWA										
~~Diesel~~	~~TPHDIESEL~~	~~LA-523-493~~	~~U~~	~~<70~~		~~ug/L~~	~~1~~	~~70~~	~~100~~	~~01/20/11~~
SPE										**02/01/11**
PCBs										
Aroclor-1016	12674-11-2	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1221	11104-28-2	LA-523-427	U	<0.2		ug/L	1	0.2	0.4	02/02/11
Aroclor-1232	11141-16-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1242	53469-21-9	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1248	12672-29-6	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1254	11097-69-1	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1260	11096-82-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1262	37324-23-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11
Aroclor-1268	11100-14-4	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	02/02/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED111207 -

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Attachment 2
Narrative, Rev. 1
WSCF111207

P&D Correction – Case Narrative Replaces the Prior Submittal in its Entirety
Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4. Additionally, a copy of the completed P&D # WSCFX111207 is included with this case narrative.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Attachment 2
Narrative, Rev. 1
WSCF111207

- Nitrate – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.

- All other applicable QC controls are within the established limits.

Cyanide – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Sodium – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.

- Magnesium, Potassium, Sodium and Calcium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.

- All other applicable QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

PCB – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Attachment 2
Narrative, Rev. 1
WSCF111207

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):
Tracers and surrogates are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- All other applicable QC controls are within the established limits.

TPHG-WA – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gross Alpha / Gross Beta:
  - All applicable QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - All applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Uranium-238 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Uranium-235 and Uranium-238 - The Blank is less than two times the MDC. "B" Flag not required.
    - All other applicable QC controls are within the established limits.
- Strontium-89/90:
  - All applicable QC controls are within the established limits.
- Tritium:

- All applicable QC controls are within the established limits.

- Technetium-99:
  - All applicable QC controls are within the established limits.

We 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 data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

Attachment 2
Narrative, Rev. 1
WSCF111207

3/14/2011

Problem and Discrepancy Report

WSCF

SDG WSCF111207

---

1. The data package has the following issues:

a) All of the electronic results are missing.

Resolution: *Provide missing results.*

Lab Response: **The electronic results have been provided.**

Please correct the issues and resubmit the electronic data packages.

5

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-192 Page 1 of 1

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA_DECEMBER_2010	Logbook No: HNF-N-506 3719	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

001 111207

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N26	N	W	01/18/11	1003	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011		VICTOR SIMS		1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-154 Page 1 of 2

Collector: J.S. Artzer CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NUURA DECEMBER 2010	Logbook No: HNF-N-506 37 / 9	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF6 ~~007~~ 002	Y	W	01/18/11	1003	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HF6	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HF6	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HF7 COR	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HF7	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HF7	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HF7	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HF7	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HF7	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HF7	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011	Victor Sims			1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-154 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters Husted	376-4650		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis		Preservative	
B29HF7	N	W	01/18/11	1003	1x1-L G/P	UISO_IE_PRECIP_AEA List-1 (3)	/	6 Months	HNO3 to pH <2
B29HF7	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	/	14/40 Days	HCl to pH <2 Cool~4C
B29HF7	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	/	14 Days	HCl to pH <2 Cool~4C
B29HF7	N	W			4x1-L aG	PCBs - 8082	/	1 yr/1 yr	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011	Victor Bins			1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Appendix 5

Data Validation Supporting Documentation

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: CERC11			DATA PACKAGE: VSR11-049		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 7-14-2011	
			SDG: WSCF111207		
ANALYSES PERFORMED					
SW-846 8081	SW-846 8081 (TCLP)	SW-846 8082 X	SW-846 8081 (TCLP)	SW-846 8310	
SAMPLES/MATRIX Water sample B29HF7					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments: None

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:

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: None

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: None

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: None

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: None

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: None

9. SAMPLE CLEANUP (Levels D and E)

Fluorisil ® (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

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111207

QC Batch 175861
Associated Samples 111207003

Test PCBs by EPA SW-846 Method 8082

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #48196**							
Aroclor-1016	12674-11-2		<0.1	ug/L					U	02/02/11
Aroclor-1221	11104-28-2		<0.2	ug/L					U	02/02/11
Aroclor-1232	11141-16-5		<0.1	ug/L					U	02/02/11
Aroclor-1242	53469-21-9		<0.1	ug/L					U	02/02/11
Aroclor-1248	12672-29-6		<0.1	ug/L					U	02/02/11
Aroclor-1254	11097-69-1		<0.1	ug/L					U	02/02/11
Aroclor-1260	11096-82-5		<0.1	ug/L					U	02/02/11
Aroclor-1262	37324-23-5		<0.1	ug/L					U	02/02/11
Aroclor-1268	11100-14-4		<0.1	ug/L					U	02/02/11
LCS			**QC Sample #48197**							
Aroclor-1254	11097-69-1		1.7	ug/L	84.2	70 - 130				02/02/11
MS			**QC Sample #48198**							
			Original 111207003							
Aroclor-1254	11097-69-1	<0.09	1.7	ug/L	88.1	60 - 130				02/02/11
MSD			**QC Sample #48199**							
			Original 111207003					**Paired 48198**		
Aroclor-1254	11097-69-1	<0.09	1.7	ug/L	88.1	60 - 130	0.00	20		02/02/11

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF111207

QC Batch 175861
Associated Samples 111207003

Test PCBs by EPA SW-846 Method 8082

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111207003**							
Tetrachloro-m-xylene	877-09-8				67.8	60 - 140				02/02/11
Decachlorobiphenyl	2051-24-3				88.9	60 - 140				02/02/11
BLANK			**QC Sample #48196**							
Tetrachloro-m-xylene	877-09-8				76.8	60 - 140				02/02/11
Decachlorobiphenyl	2051-24-3				94.2	60 - 140				02/02/11
LCS			**QC Sample #48197**							
Tetrachloro-m-xylene	877-09-8				73.6	60 - 140				02/02/11
Decachlorobiphenyl	2051-24-3				92.6	60 - 140				02/02/11
MS			**QC Sample #48198**							
			Original 111207003							
Tetrachloro-m-xylene	877-09-8				78.6	60 - 140				02/02/11
Decachlorobiphenyl	2051-24-3				82.8	60 - 140				02/02/11
MSD			**QC Sample #48199**							
			Original 111207003					**Paired**	**48198**	
Tetrachloro-m-xylene	877-09-8				76.6	60 - 140	2.60			02/02/11
Decachlorobiphenyl	2051-24-3				84.3	60 - 140	1.80			02/02/11

Date: 14 July 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: CERC11
Subject: Pesticides - Sample Data Group (SDG) SL1036

INTRODUCTION

This memorandum presents the results of data validation for SDG SL1036 prepared by TestAmerica. A list of samples validated along with the analytical method is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Method
B29H90	1/09/2011	Water	C	8081A
B29HC0	1/07/2011	Water	C	8081A
B29H66	1/07/2011	Water	C	8081A
B29HK0	1/07/2011	Water	C	8081A
B29H72	1/07/2011	Water	C	8081A
B29H47	1/09/2011	Water	C	8081A
B29H56	1/07/2011	Water	C	8081A
B29HD5	1/07/2011	Water	C	8081A
B29HB0	1/07/2011	Water	C	8081A
B29HK1	1/07/2011	Water	C	8081A
B29H42	1/09/2011	Water	C	8081A
B29H85	1/09/2011	Water	C	8081A
B29HF0	1/07/2011	Water	C	8081A
B29H71	1/07/2011	Water	C	8081A
B29H95	1/09/2011	Water	C	8081A
B29HF5	1/09/2011	Water	C	8081A
B29HJ5	1/07/2011	Water	C	8081A
B29H37	1/09/2011	Water	C	8081A
B29HD0	1/07/2011	Water	C	8081A
B29HJ0	1/07/2011	Water	C	8081A
B29HH5	1/07/2011	Water	C	8081A
B29H61	1/09/2011	Water	C	8081A
B29HC5	1/09/2011	Water	C	8081A
B29HB5	1/07/2011	Water	C	8081A
B29H48	1/09/2011	Water	C	8081A
B29H32	1/10/2011	Water	C	8081A

Data validation was conducted in accordance with the CHPRC validation statement of work and the Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study, DOE/RL-2009-42, Rev. 0 (SAP). 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 OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements for pesticides are extraction within 7 days of sample collection and analysis within 40 days of sample extraction. Sample preservation requires chilling to 4 degrees Celsius.

The samples were extracted and analyzed within the prescribed holding times and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable.

Trip Blanks

All trip blank results were acceptable.

Field Blanks

No field blanks were submitted for validation.

Equipment Blanks

No equipment blanks were submitted for validation.

- **Accuracy**

Accuracy is evaluated by reviewing surrogate results, matrix spike sample results, and laboratory control sample results. According to the SAP, the matrix spike and laboratory control sample accuracy limits are 80% to 120%. The limits for reported analytes not listed in the SAP are

specified by the DV procedure. The surrogate accuracy limits used for data validation were the ones specified by the DV procedure (30% to 150%).

Surrogates

All surrogate recoveries were acceptable.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

For batches 1013083 and 1013084, many MS/MSD recoveries were above the upper acceptance limit and are highlighted in the annotated QC summary forms in Appendix 5. All associated sample results were non-detects and should not be qualified for the recovery infractions.

It should be mentioned that MS/MSD analyses were not performed for multi-component analytes toxaphene and chlordane (technical). No sample data are qualified as a result.

Laboratory Control Samples (LCSs)

For batches 1013083 and 1013084, many LCS recoveries were above the upper acceptance limit and are highlighted in the annotated QC summary forms in Appendix 5. All associated sample results were non-detects and should not be qualified for the recovery infractions.

It should be mentioned that LCS analyses were not performed for multi-component analytes toxaphene and chlordane (technical). No sample data are qualified as a result.

- **Precision**

Precision is evaluated by reviewing MS/MSD results, field duplicate sample results, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limits are ±20%. The limits for reported analytes not listed in the SAP are specified by the DV procedure. When duplicate RPDs exceed the limits and have associated results <5X the reporting limits with differences <1X the reporting limits no precision infraction occurred.

MS/MSD Samples

All MS/MSD relative percent difference values were acceptable with the following exception. For batch 1013083, the endrin aldehyde RPD was above the upper acceptance limit. The endrin aldehyde results for the twenty associated samples were non-detects and should be qualified as estimates and flagged "UJ."

Field Duplicate Samples

All field duplicate results were acceptable.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs were below the CRDLs.

- **Completeness**

SDG SL1036 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

Minor deficiencies leading to qualification of endrin aldehyde sample results as estimates was due to an MS/MSD RPD infraction. See the table in Appendix 2 for a listing of all affected sample results.

REFERENCES

GRP-GD-003, Rev. 0, Change 0, *Data Validation for Chemical Analyses*, August 2010.

DOE/RL-2009-42, Rev. 0, *Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study*, December 2010.

Appendix 1

Glossary of Data Reporting Qualifiers

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

- **U** — The constituent was analyzed for, but was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the RL. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J+** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J-** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **N** — The analysis indicates the presence of an analyte that has been tentatively identified.

- **NJ** — The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.

- **NJ+** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation.

- **NJ-** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation.

- **C** — This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).

- **X** — This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful. The data should be considered unusable for decision-making purposes.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** ─ Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

Pesticides Data Qualification Summary			
SDG: SL1036	Reviewer: AQA	Project: CERC11	Page 1 of 1
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
Endrin aldehyde	UJ	B29H90, B29HC0, B29H66, B29HK0, B29H72, B29H47, B29H56, B29HD5, B29HB0, B29HK1, B29H42, B29H85, B29HF0, B29H71, B29H95, B29HF5, B29HJ5, B29H37, B29HD0, B29HJ0	Poor MS/MSD precision

Comments: None

Appendix 3

Annotated Laboratory Reports

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H90

GC Semivolatiles

Lot-Sample #...: F1A110510-001 **Work Order #...:** MC8C01AC **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90	(65 - 129)
Decachlorobiphenyl	96	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC0

GC Semivolatiles

Lot-Sample #...: F1A110510-002 **Work Order #...:** MC8C51AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(65 - 129)
Decachlorobiphenyl	98	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H66

GC Semivolatiles

Lot-Sample #...: F1A110510-003 **Work Order #...:** MC8C61AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	88	(65 - 129)
Decachlorobiphenyl	90	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK0

GC Semivolatiles

Lot-Sample #...: F1A110510-004 **Work Order #...:** MC8DA1AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(65 - 129)
Decachlorobiphenyl	94	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H72

GC Semivolatiles

Lot-Sample #...: F1A110510-005 **Work Order #...:** MC8DC1AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1.15 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.058	ug/L	0.012
alpha-BHC		ND	0.058	ug/L	0.012
beta-BHC		ND	0.058	ug/L	0.015
delta-BHC		ND	0.058	ug/L	0.012
gamma-BHC (Lindane)		ND	0.058	ug/L	0.012
Chlordane (technical)		ND	0.58	ug/L	0.27
4,4'-DDD		ND	0.058	ug/L	0.012
4,4'-DDE		ND	0.058	ug/L	0.012
4,4'-DDT		ND N	0.058	ug/L	0.012
Dieldrin		ND	0.058	ug/L	0.012
Endosulfan I		ND	0.058	ug/L	0.012
Endosulfan II		ND	0.058	ug/L	0.012
Endosulfan sulfate		ND	0.058	ug/L	0.012
Endrin		ND	0.058	ug/L	0.012
Endrin aldehyde	UJ	ND N	0.058	ug/L	0.012
Heptachlor		ND	0.058	ug/L	0.012
Heptachlor epoxide		ND	0.058	ug/L	0.012
Methoxychlor		ND	0.12	ug/L	0.012
Toxaphene		ND	2.3	ug/L	0.76

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(65 - 129)
Decachlorobiphenyl	100	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H47

GC Semivolatiles

Lot-Sample #...: F1A110510-006 **Work Order #...:** MC8DE1AC **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(65 - 129)
Decachlorobiphenyl	96	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H56

GC Semivolatiles

Lot-Sample #...: F1A110510-007 **Work Order #...:** MC8DH1AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(65 - 129)
Decachlorobiphenyl	96	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD5

GC Semivolatiles

Lot-Sample #...: F1A110510-008 **Work Order #...:** MC8DJ1AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	96	(65 - 129)
Decachlorobiphenyl	99	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB0

GC Semivolatiles

Lot-Sample #...: F1A110510-009 **Work Order #...:** MC8DR1AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	92	(65 - 129)
Decachlorobiphenyl	93	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HK1

GC Semivolatiles

Lot-Sample #...: F1A110510-010 **Work Order #...:** MC8DV1AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	90	(65 - 129)
Decachlorobiphenyl	94	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H42

GC Semivolatiles

Lot-Sample #...: F1A110510-011 **Work Order #...:** MC8DW1AC **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(65 - 129)
Decachlorobiphenyl	93	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H85

GC Semivolatiles

Lot-Sample #...: F1A110510-012 **Work Order #...:** MC8DX1AD **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(65 - 129)
Decachlorobiphenyl	90	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF0

GC Semivolatiles

Lot-Sample #...: F1A110510-013 **Work Order #...:** MC8D01AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(65 - 129)
Decachlorobiphenyl	89	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H71

GC Semivolatiles

Lot-Sample #...: F1A110510-014 **Work Order #...:** MC8D21AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(65 - 129)
Decachlorobiphenyl	101	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H95

GC Semivolatiles

Lot-Sample #...: F1A110510-015 **Work Order #...:** MC8EC1AC **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	94	(65 - 129)
Decachlorobiphenyl	96	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HF5

GC Semivolatiles

Lot-Sample #...: F1A110510-016 **Work Order #...:** MC8EE1AC **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	85	(65 - 129)
Decachlorobiphenyl	84	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ5

GC Semivolatiles

Lot-Sample #...: F1A110510-017 **Work Order #...:** MC8EF1AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(65 - 129)
Decachlorobiphenyl	98	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H37

GC Semivolatiles

Lot-Sample #...: F1A110510-018 **Work Order #...:** MC8EG1AC **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(65 - 129)
Decachlorobiphenyl	101	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD0

GC Semivolatiles

Lot-Sample #...: F1A110510-019 **Work Order #...:** MC8EH1AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99	(65 - 129)
Decachlorobiphenyl	97	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ0

GC Semivolatiles

Lot-Sample #...: F1A110510-020 **Work Order #...:** MC8EJ1AD **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013083
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin		ND	0.050	ug/L	0.010
alpha-BHC		ND	0.050	ug/L	0.010
beta-BHC		ND	0.050	ug/L	0.013
delta-BHC		ND	0.050	ug/L	0.010
gamma-BHC (Lindane)		ND	0.050	ug/L	0.010
Chlordane (technical)		ND	0.50	ug/L	0.23
4,4'-DDD		ND	0.050	ug/L	0.010
4,4'-DDE		ND	0.050	ug/L	0.010
4,4'-DDT		ND N	0.050	ug/L	0.010
Dieldrin		ND	0.050	ug/L	0.010
Endosulfan I		ND	0.050	ug/L	0.010
Endosulfan II		ND	0.050	ug/L	0.010
Endosulfan sulfate		ND	0.050	ug/L	0.010
Endrin		ND	0.050	ug/L	0.010
Endrin aldehyde	UJ	ND N	0.050	ug/L	0.010
Heptachlor		ND	0.050	ug/L	0.010
Heptachlor epoxide		ND	0.050	ug/L	0.010
Methoxychlor		ND	0.10	ug/L	0.010
Toxaphene		ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	95	(65 - 129)
Decachlorobiphenyl	101	(63 - 129)

NOTE(S):

N Spiked analyte recovery is outside stated control limits.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HH5

GC Semivolatiles

Lot-Sample #...: F1A110510-021 **Work Order #...:** MC8EL1AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013084
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin	ND	0.050	ug/L	0.010
alpha-BHC	ND	0.050	ug/L	0.010
beta-BHC	ND	0.050	ug/L	0.013
delta-BHC	ND	0.050	ug/L	0.010
gamma-BHC (Lindane)	ND	0.050	ug/L	0.010
Chlordane (technical)	ND	0.50	ug/L	0.23
4,4'-DDD	ND	0.050	ug/L	0.010
4,4'-DDE	ND	0.050	ug/L	0.010
4,4'-DDT	ND	0.050	ug/L	0.010
Dieldrin	ND	0.050	ug/L	0.010
Endosulfan I	ND	0.050	ug/L	0.010
Endosulfan II	ND	0.050	ug/L	0.010
Endosulfan sulfate	ND	0.050	ug/L	0.010
Endrin	ND	0.050	ug/L	0.010
Endrin aldehyde	ND	0.050	ug/L	0.010
Heptachlor	ND	0.050	ug/L	0.010
Heptachlor epoxide	ND	0.050	ug/L	0.010
Methoxychlor	ND	0.10	ug/L	0.010
Toxaphene	ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	96	(65 - 129)
Decachlorobiphenyl	98	(63 - 129)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H61

GC Semivolatiles

Lot-Sample #...: F1A110510-022 **Work Order #...:** MC8EM1AC **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013084
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin	ND	0.050	ug/L	0.010
alpha-BHC	ND	0.050	ug/L	0.010
beta-BHC	ND	0.050	ug/L	0.013
delta-BHC	ND	0.050	ug/L	0.010
gamma-BHC (Lindane)	ND	0.050	ug/L	0.010
Chlordane (technical)	ND	0.50	ug/L	0.23
4,4'-DDD	ND	0.050	ug/L	0.010
4,4'-DDE	ND	0.050	ug/L	0.010
4,4'-DDT	ND	0.050	ug/L	0.010
Dieldrin	ND	0.050	ug/L	0.010
Endosulfan I	ND	0.050	ug/L	0.010
Endosulfan II	ND	0.050	ug/L	0.010
Endosulfan sulfate	ND	0.050	ug/L	0.010
Endrin	ND	0.050	ug/L	0.010
Endrin aldehyde	ND	0.050	ug/L	0.010
Heptachlor	ND	0.050	ug/L	0.010
Heptachlor epoxide	ND	0.050	ug/L	0.010
Methoxychlor	ND	0.10	ug/L	0.010
Toxaphene	ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	92	(65 - 129)
Decachlorobiphenyl	87	(63 - 129)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HC5

GC Semivolatiles

Lot-Sample #...: F1A110510-023 **Work Order #...:** MC8EN1AC **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013084
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin	ND	0.050	ug/L	0.010
alpha-BHC	ND	0.050	ug/L	0.010
beta-BHC	ND	0.050	ug/L	0.013
delta-BHC	ND	0.050	ug/L	0.010
gamma-BHC (Lindane)	ND	0.050	ug/L	0.010
Chlordane (technical)	ND	0.50	ug/L	0.23
4,4'-DDD	ND	0.050	ug/L	0.010
4,4'-DDE	ND	0.050	ug/L	0.010
4,4'-DDT	ND	0.050	ug/L	0.010
Dieldrin	ND	0.050	ug/L	0.010
Endosulfan I	ND	0.050	ug/L	0.010
Endosulfan II	ND	0.050	ug/L	0.010
Endosulfan sulfate	ND	0.050	ug/L	0.010
Endrin	ND	0.050	ug/L	0.010
Endrin aldehyde	ND	0.050	ug/L	0.010
Heptachlor	ND	0.050	ug/L	0.010
Heptachlor epoxide	ND	0.050	ug/L	0.010
Methoxychlor	ND	0.10	ug/L	0.010
Toxaphene	ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(65 - 129)
Decachlorobiphenyl	97	(63 - 129)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HB5

GC Semivolatiles

Lot-Sample #...: F1A110510-024 **Work Order #...:** MC8EP1AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013084
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin	ND	0.050	ug/L	0.010
alpha-BHC	ND	0.050	ug/L	0.010
beta-BHC	ND	0.050	ug/L	0.013
delta-BHC	ND	0.050	ug/L	0.010
gamma-BHC (Lindane)	ND	0.050	ug/L	0.010
Chlordane (technical)	ND	0.50	ug/L	0.23
4,4'-DDD	ND	0.050	ug/L	0.010
4,4'-DDE	ND	0.050	ug/L	0.010
4,4'-DDT	ND	0.050	ug/L	0.010
Dieldrin	ND	0.050	ug/L	0.010
Endosulfan I	ND	0.050	ug/L	0.010
Endosulfan II	ND	0.050	ug/L	0.010
Endosulfan sulfate	ND	0.050	ug/L	0.010
Endrin	ND	0.050	ug/L	0.010
Endrin aldehyde	ND	0.050	ug/L	0.010
Heptachlor	ND	0.050	ug/L	0.010
Heptachlor epoxide	ND	0.050	ug/L	0.010
Methoxychlor	ND	0.10	ug/L	0.010
Toxaphene	ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	95	(65 - 129)
Decachlorobiphenyl	96	(63 - 129)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H48

GC Semivolatiles

Lot-Sample #...: F1A110510-025 **Work Order #...:** MC8EQ1AC **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013084
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin	ND	0.050	ug/L	0.010
alpha-BHC	ND	0.050	ug/L	0.010
beta-BHC	ND	0.050	ug/L	0.013
delta-BHC	ND	0.050	ug/L	0.010
gamma-BHC (Lindane)	ND	0.050	ug/L	0.010
Chlordane (technical)	ND	0.50	ug/L	0.23
4,4'-DDD	ND	0.050	ug/L	0.010
4,4'-DDE	ND	0.050	ug/L	0.010
4,4'-DDT	ND	0.050	ug/L	0.010
Dieldrin	ND	0.050	ug/L	0.010
Endosulfan I	ND	0.050	ug/L	0.010
Endosulfan II	ND	0.050	ug/L	0.010
Endosulfan sulfate	ND	0.050	ug/L	0.010
Endrin	ND	0.050	ug/L	0.010
Endrin aldehyde	ND	0.050	ug/L	0.010
Heptachlor	ND	0.050	ug/L	0.010
Heptachlor epoxide	ND	0.050	ug/L	0.010
Methoxychlor	ND	0.10	ug/L	0.010
Toxaphene	ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	92	(65 - 129)
Decachlorobiphenyl	98	(63 - 129)

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H32

GC Semivolatiles

Lot-Sample #...: F1A120486-001 **Work Order #...:** MC9HM1AC **Matrix.....:** WATER
Date Sampled...: 01/10/11 **Date Received..:** 01/12/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013084
Dilution Factor: 1 **Method.....:** SW846 8081A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Aldrin	ND	0.050	ug/L	0.010
alpha-BHC	ND	0.050	ug/L	0.010
beta-BHC	ND	0.050	ug/L	0.013
delta-BHC	ND	0.050	ug/L	0.010
gamma-BHC (Lindane)	ND	0.050	ug/L	0.010
Chlordane (technical)	ND	0.50	ug/L	0.23
4,4'-DDD	ND	0.050	ug/L	0.010
4,4'-DDE	ND	0.050	ug/L	0.010
4,4'-DDT	ND	0.050	ug/L	0.010
Dieldrin	ND	0.050	ug/L	0.010
Endosulfan I	ND	0.050	ug/L	0.010
Endosulfan II	ND	0.050	ug/L	0.010
Endosulfan sulfate	ND	0.050	ug/L	0.010
Endrin	ND	0.050	ug/L	0.010
Endrin aldehyde	ND	0.050	ug/L	0.010
Heptachlor	ND	0.050	ug/L	0.010
Heptachlor epoxide	ND	0.050	ug/L	0.010
Methoxychlor	ND	0.10	ug/L	0.010
Toxaphene	ND	2.0	ug/L	0.66

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	95	(65 - 129)
Decachlorobiphenyl	99	(63 - 129)

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
MS B3-60
Richland, Washington 99352
February 22, 2011
Attention: Mike Neely

TestAmerica Laboratories, Inc.

SDG	: SL1036
Number of Samples	: 26 samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: January 12, 2011

II. Introduction

Between January 11, 2011 and January 12, 2011, 26 water samples were received by TestAmerica - St. Louis for chemical analysis. The samples were received within temperature criteria. See the COC and CUR forms for documentation of any variations on receipt conditions and temperature. Upon receipt, the samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

One container for both SVOA 8270 and Pesticides 8081 was received broken. Sufficient sample volume from other containers was received to perform both analyses. Issue Resolution Form 11-303 accepted the proposed resolution to proceed with analysis.

The following SAFs are associated with this SDG: X11-016

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with a LCS/LCS duplicate.

Deviation from Request: None

IV. Definitions

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate
MS-	Matrix Spike
MSD-	Matrix Spike Duplicate

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

The following data qualifiers may be applicable to the results in this report, as appropriate.

- **B** – For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** – For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **J** – For organic analyses, the sample is estimated and less than the RL.
- **C** – For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **D** – For all analyses, the sample result was obtained from the analysis of a dilution.
- **N** – For inorganics and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** – For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.

Volatiles

Batch: 1021050

The LCS recovery for Acrolein is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (11): B29H42

The MS/MSD recoveries for Acrolein are outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. This analyte has been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (11): B29H42

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

Batch: 1018076

The surrogate recoveries are outside the upper QC limits, indicating a potential positive bias. There were no target analytes associated with these surrogates detected above the reporting limit in the samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (16): B29HF5
F1A110510 (20): B29HJ0

Sample surrogate recoveries are outside established QC limits. Samples were reprepared and reanalyzed outside hold time. The reanalysis yielded acceptable and similar results. Issue Resolution Form 11-317 accepted the proposed resolution to report the original analysis performed within hold time.
Affected Samples:
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (22): B29H61

The sample was analyzed outside of the 12 hour clock but within the hold time. The sample was re-analyzed 3 days outside the hold time with all QC recovering within limits. Both the original sample analysis and the final analysis had comparable results. Issue Resolution Form 11-317 accepted the proposed resolution to report the original analysis performed within hold time.
Affected Samples:
F1A110510 (25): B29H48

Cyclohexanone, 1,4-Dioxane, Acetone and Methylene chloride were detected in the method blank above the method detection limit but below the reporting limit. Acetone has been qualified accordingly with a "B" flag in the associated samples.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

F1A110510 (25): B29H48

The ICV and LCS recoveries for Acrolein are outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48

The MS recoveries for Dichlorodifluoromethane, Acrolein, Bromoform, Bromobenzene and 1,4-Dichlorobenzene are outside the upper QC limits, indicating a potential positive bias for these analytes. These analytes were not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The MSD recoveries for several compounds are outside the upper QC limits. This is the result of a low internal standard response in the MSD (between 32%D - 35%D). Although the IS %D in the MSD is within the lower QC limits, the affect on the spike recoveries are inversely higher. Even with the higher, out of QC control recoveries in the MSD, there were only 9 RPD values outside the QC limits. Method performance is demonstrated by the remaining acceptable MS and LCS recoveries. These analytes have been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

F1A110510 (24): B29HB5
F1A110510 (25): B29H48

Batch: 1021181

Methylene chloride was detected in the method blank above the method detection limit but below the reporting limit. This analyte was not detected in the associated samples.
Affected Samples:
F1A120486 (1): B29H32

The CCV recoveries are outside the upper QC limits (greater than 20% D) for Vinyl acetate and Ethyl methacrylate indicating a potential high bias for these analytes in the samples associated with this CCV. These analytes were not detected above the reporting limit in the associated samples. The RRF for 1,1,2,2-Tetrachloroethane is less than the method detection limit of 0.300 but greater than the QC limit 0.100. The RRF will be monitored and maintenance will be performed before the next calibration to try to rectify this problem.
Affected Samples:
F1A120486 (1): B29H32

The LCS recovery for Acrolein is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A120486 (1): B29H32

The MS recovery for Acrolein is outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. This analyte has been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A120486 (1): B29H32

Semivolatiles

Batch: 1012097

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

The MS/MSD RPD for Indeno (1,2,3-cd) pyrene is not within method acceptance criteria. MS/MSD recoveries are within QC limits demonstrating good extraction performance in the sample matrix.
Affected Samples:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

Due to the large number of compounds that may be analyzed by this method, it is expected that some compounds will fail to meet the criterion. If compounds fail to meet these criteria, the associated concentrations may still be determined. Hexachlorophene is outside the lower QC limits in the CCV. This compound is a poor responding compound.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1

Batch: 1013085

Three liters is the method suggested volume for sample, MS and MSD. Lab practice is to retain volume in case a QC failure requires a re-extraction. A reduced volume was used for the MS/MSD in order to retain volume.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

The CCV recovery was outside the upper QC limits (greater than 20% RSD) for Famphur indicating a potential high bias for this analyte in the samples associated with this CCV. This analyte was not detected above the reporting limit in the associated samples.
Affected Samples:
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

Samples exhibited poor surrogate recovery. Laboratory QC practices, based on CLP methodology, allow for one acid surrogate and/or one base surrogate recovery excursion without necessitating re-extraction/re-analysis. Sample extraction efficiency and compliance is demonstrated by the remaining acceptable surrogate recoveries.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5

The MS/MSD recoveries are outside the established QC limits for 4 analytes. The RPD values are not within method acceptance criteria for 2 analytes. Matrix interference is not physically evident in the sample but interference may still exist. Method performance is demonstrated by acceptable LCS recoveries. These analytes have been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

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CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

Pesticides

Batch: 1013083

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly. The dilution factor was used to elevate the MDL and RL. No dilution was performed on the sample.
Affected Samples:
F1A110510 (5): B29H72

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

The LCS recovery for delta-BHC is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

The MS and MSD recoveries for 4,4'-DDT and Endrin aldehyde are outside the upper QC limits, indicating a potential positive bias for these analytes. These analytes were not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The RPD for Endrin aldehyde is also outside QC limits. These analytes have been qualified accordingly with an "N" flag in the associated samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

Batch: 1013084

The LCS recovery for delta-BHC is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

PAHs

Batch: 1012098

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

The MS/MSD recoveries for Chrysene are outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The RPD for the target analytes Chrysene and Pyrene are not within method acceptance criteria. This analyte has been qualified accordingly with an "N" flag in the associated samples.
Affected Samples:
F1A110510 (3): B29H66
F1A110510 (5): B29H72
F1A110510 (8): B29HD5
F1A110510 (12): B29H85
F1A110510 (14): B29H71
F1A110510 (20): B29HJ0

Two analytes detected in the associated samples were given the "S" qualifier. The "S" was used to designate positive analyte detection on the primary column that appeared questionable during spectral confirmation.
Affected Samples:
F1A110510 (3): B29H66
F1A110510 (14): B29H71

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

Reviewed and approved:

Michael Franks
St. Louis Project Manager

13715 Rider Trail North Earth City, MO 63045 **tel** 314.298.8566 **fax** 314.298.8757 **www.testamericainc.com**

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-303

Date: January 12, 2011 SAF Nos. X11-016

SDG: SL1036 LOGIN No.: **F1A110510** TEST: SVOA , Pesticides

Sample No.(s) : **B29HH5**

Submitted By: Mike Franks
Phone No. 314-298-8566
Fax No. 314-298-8757

Submitted To: Sara Champoux
Phone No. 509-373-5290
Fax No. 509-373-1788

ISSUE	PROPOSED RESOLUTION
One container for both SVOA 8270 and Pesticides 8081 was received broken. There is still sufficient sample volume from the other containers received to perform both analyses	1) Proceed with analysis and note in the case narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 1/12/11
Signature and Date

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-317

Date: January 30, 2011 SAF Nos. X11-016

SDG: SL1036 LOGIN No.: **F1A110510** TEST: Volatiles

Sample No.(s) : **B29HF0, B29H71. B29H95, B29H61, B29H48**

Submitted By: Mike Franks
Phone No. 314-298-8566
Fax No. 314-298-8757

Submitted To: Sara Champoux
Phone No. 509-373-5290
Fax No. 509-373-1788

ISSUE	PROPOSED RESOLUTION
Please see below for details regarding issues with volatiles analysis for the samples listed above.	1) Report results from the out of hold re-analysis for all samples. 2) Report results from the initial in hold analysis for all samples.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution (2): report results from the initial in-hold analysis for all samples.

J. G. Douglas 1/31/2011
Signature and Date

-Sample F1A110510-013 (B29HF0) had three surrogates outside the upper QC limit, indicating a high bias. Except for Chloroform at 5.8 ppb, the associated target compounds were less than the reporting limit.
-Sample F1A110510-014 (B29H71) had two surrogates outside the lower QC limit, indicating a low bias. Except for Chloroform at 8.4 ppb, the associated client target compounds were less than the reporting limit.
-Sample F1A110510-015 (B29H95) had three surrogates outside the upper QC limit, indicating a high bias. Except for Chloroform at 2.8 ppb, the associated client target compounds were less than the reporting limit.
All 3 samples were re-analyzed outside sample hold time (1-3 days), but had surrogate recoveries within the QC limits. All 3 samples had similar result for Chloroform.
-Sample F1A110510-013 (B29HF0) reports Chloroform at 3.4 ppb, F1A110510-014 (B29H71) reports Chloroform at 5.9 ppb and F1A110510-015 (B29H95) reports Chloroform at 1.6 ppb.

-Sample F1A110510-022 (B29H61) had low surrogate recoveries and all results are ND (below the MDL) The samples was re-analyzed outside hold time with all surrogate recoveries within QC limits and all results ND (below MDL).

-Sample FIA110510-025 (B29H48): the first analysis was outside the 12 hour clock on 01/17/11, it was re-analyzed on 01/21/11 and the auto sampler jammed. The sample was re-analyzed on

01/24/11 all surrogate recoveries are within QC limits and analyzed within the 12 hour clock but its 3 days out of the holding time.

50 lbs

CHPRC CWR 86 SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-3

Page 1 of 1

Collector: MS McCoy ~~CHPRC~~	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 32 194	Ice Chest No.: 6WS-107
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0664 2539
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H32	N	W	01/10/11	1200	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H32	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H32	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H32	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
MS McCoy CHPRC	1330 JAN 10 2011	SSU-1	1330 JAN 10 2011
SSU-	JAN 11 2011 0700	L.D. Wall CHPRC	JAN 11 2011 0700
L.D. Wall CHPRC	JAN 11 2011 1400	FEDEX	
Fed Ex		NICHOLAS OWENS	1/12/11 0915

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

SDG# SL1036

SL1036 CUL82

CHPRC

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-72

Collector: JOSH ARTZER, CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 38 / 10	Ice Chest No.: GWS-188
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 7169
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: ~~7943 0384 7169~~ N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time (7 D 4) Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H90	N	W	01-9-11	1150	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H90	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H90	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H90	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
JOSH ARTZER CHPRC			1250 JAN 0 9 2011	SSU #1			1250 JAN 0 9 2011
SSU- 1			0920 JAN 1 0 2011	RT Sickle CHPRC			0920 JAN 1 0 2011
RT Sickle CHPRC			1430 JAN 1 0 2011	FEDEX			
FEDEX				NICHOLAS Davis			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-104

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: GWS-188
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 7169
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: 15 ~~7943 0384 7169~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HC0	N	W	1/7/11	1254	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HC0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HC0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HC0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1430 JAN 10 2011	FEDEX			
FEDEX				NICHOLAS OWENS		1/11/11	1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-40

Page 1 of 1

Collector FM Hall CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 381 9	**Ice Chest No.** GWS-252
Shipped To (Lab) TestAmerica St. Louis	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.**
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H66	N	W	JAN 07 2011	0845	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H66	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H66	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H66	N	W			2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H66	N	W	JAN 07 2011	0845	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC			1300 JAN 07 2011				1300 JAN 07 2011
SSIL 1			0800 1/10/11 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				NICHOLAS DAVIS			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-184

Page 1 of 1

64 lbs

Collector J.S. Artzer CHRPC	Contact/Requester Karen Waters-Husted	Telephone No. 376-4650
SAF No. X11-016	Sampling Origin Hanford Site	Purchase Order/Charge Code 300104ES20
Project Title NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33/96	Ice Chest No. GWS-252
Shipped To (Lab) TestAmerica St. Louis	Method of Shipment Commercial Carrier	Bill of Lading/Air Bill No. 7966 3878 9580
Protocol CERCLA	Priority: 30 Days PRIORITY	Offsite Property No. N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HK0	N	W	01/07/11	1224	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HK0	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HK0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HK0	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0800 JAN 10 2011	SE Hamaker CHRPC	0800 JAN 10 2011
SE Hamaker CHRPC	1400 JAN 10 2011	FEDEX	
FEDEX		NICHOLAS OWENS	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-49

Page 1 of 1

Collector CA Snyder CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 3716	**Ice Chest No.** GWS-222-4
Shipped To (Lab) TestAmerica St. Louis	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.** 7966 3883 2849
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** ~~7966 3883 2849~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H72	N	W	1/7/11	0730	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H72	N	W	|	|	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H72	N	W	|	|	1x20-mL P	Activity Scan	6 Months	None
B29H72	N	W	|	|	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H72	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1430	FEDEX			
FEDEX				NICHOLAS OWENS			1/11/11 1008

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

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CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-16

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 3919	Ice Chest No.: GWS-222-4
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 2849
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 2849~~ MA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H47	N	W	1-9-11	1100	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H47	N	W	|	|	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H47	N	W	|	|	1x20-mL P	Activity Scan	6 Months	None
B29H47	N	W	↑	↑	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1230 JAN 09 2011	SSU- 1			1230 JAN 09 2011
SSU- 1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1430 JAN 10 2011	FEDEX			
FedEx				NICHOLAS OWENS			1/11/11 1008

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-24

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: GUS-063
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0383 5945
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0383 5945~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** j-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H56	N	W	1/7/11	0945	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H56	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H56	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H56	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			JAN 07 2011 1540	SSU- 1			JAN 07 2011 1540
SSU- 1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1420	FEDEX			
FedEx				Nicholas Owens			1/11/11 1000

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-128 (64/160)

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 371 6	Ice Chest No.: GWS-063
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 79430383 5945
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0383 5945~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HD5	N	W	1/7/11	1012	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HD5	N	W	|	|	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HD5	N	W	|	|	1x20-mL P	Activity Scan	6 Months	None
B29HD5	N	W	|	|	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29HD5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By: CA Snyder CHPRC (Print / Sign) Date/Time: 1300 JAN 07 2011	Received By: SSU- 1 (Print / Sign) Date/Time: 1300 JAN 07 2011	Matrix *
Relinquished By: SSU- 1 Date/Time: 0920 JAN 10 2011	Received By: RT Sickle CHPRC Date/Time: 0920 JAN 10 2011	S = Soil; SE = Sediment; SO = Solid; SL = Sludge; W = Water; O = Oil; A = Air; DS = Drum Solid; DL = Drum Liqui; T = Tissue; WI = Wipe; L = Liquid; V = Vegetation; X = Other
Relinquished By: RT Sickle CHPRC Date/Time: 1430 JAN 10 2011	Received By: FEDEX Date/Time:	
Relinquished By: FedEx Date/Time:	Received By: NICHOLAS OWENS 1/11/11 1000 Date/Time:	
FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By:	Date/Time:

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-88

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 391 8	Ice Chest No.: GWS-196
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 8856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3881 8856~~ HA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB0	N	W	1/7/11	1109	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HB0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HB0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HB0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1470 JAN 10 2011	FEDEX			
FEDEX				Nicholas Owens			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-185

Page 1 of 1

61165

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 33196	Ice Chest No.: GWS-196
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 8856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3881 8856~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HK1	N	W	01/07/11	1224	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HK1	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HK1	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HK1	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer, CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0920 JAN 10 2011	RT Sickle, CHPRC	0920 JAN 10 2011
RT Sickle, CHPRC	JAN 10 2011 1430	FEDEX	
FedEx		NICHOLAS OWENS	1/11/11 1000

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

SDG# SL1036

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-11 (0010)

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39 / 9	Ice Chest No.: GWS-238
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3884 6856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3884 6856~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H42	N	W	1-9-11	0930	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H42	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H42	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H42	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Date/Time	Received By	Date/Time
Print: CA Snyder CHPRC; Sign: [signature]	1230 JAN 09 2011	Print: SSU- 1; Sign: [signature]	1230 JAN 09 2011
Print: SSU- 1; Sign: [signature]	0920 JAN 10 2011	Print: RT Sickle CHPRC; Sign: [signature]	0920 JAN 10 2011
Print: RT Sickle CHPRC; Sign: [signature]	0920 JAN 10 2011	FEDEX	
FedEx		Brian Daniels B-1	1/11/11 1000

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-64

Page 1 of 1

Collector: SE Hamaker CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 32 / 93	Ice Chest No.: GWS-238
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3884 6856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3884 6856~~ N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H85	N	W	01/09/11	0854	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H85	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H85	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H85	N	W			2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H85	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
SE Hamaker CHPRC	SE Hamaker	JAN 0 9 2011 1400	SSU #1		JAN 0 9 2011 1400
SSU- 1		JAN 1 0 2011 0920	RT Sickle CHPRC		JAN 1 0 2011 0920
RT Sickle CHPRC		JAN 1 0 2011 1430	FEDEX		
FedEx			Brian Daniels		1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

SDG# SL1036

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-136

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 3716	Ice Chest No.: GWS-029
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3880 2776
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF0	N	W	1/7/11	1210	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HF0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HF0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HF0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) | Disposed By | Date/Time

A-6004-842 (REV 2)

TestAmerica St. Louis

SDG# SL1036

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-48

Page 1 of 1

Collector: CA Snyder, CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 37 / 6	Ice Chest No.: GWS-029
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3880 2776
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H71	N	W	1/7/11	0913	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H71	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H71	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29H71	N	W	/	/	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H71	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to ~~pH <2 Cool~4C~~

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) | Disposed By | Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-80

Page 1 of 1

Collector: JOSH ARTZER, CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 38 / 10	Ice Chest No.: GWS-115
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 1296
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: ~~7943 0384 1296~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1404 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H95	N	W	01-9-11	1010	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H95	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H95	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H95	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
JOSH ARTZER CHPRC		JAN 0 9 2011 1250	SSU #1		JAN 0 9 2011 1250
SSU-1		JAN 1 0 2011 0920	RT Sickle CHPRC		JAN 1 0 2011 0920
RT Sickle CHPRC		JAN 1 0 2011 1430	FEDEX		
FedEx			Brian Daniels		1/11/11 1030

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-144

Page 1 of 1

Collector: JOSH ARTZER CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 38/10	Ice Chest No.: GWS-115
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 1296
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0384 1296~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF5	N	W	01-9-11	0904	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HF5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HF5	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HF5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
JOSH ARTZER CHPRC	JAN 09 2011 1250	SSU#1	JAN 09 2011 1250
SSU-1	JAN 10 2011 0920	RT Sickle CHPRC	JAN 10 2011 0920
RT Sickle CHPRC	JAN 10 2011 1430	FEDEX	
FedEx		Brian Daniels	1/11/10 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-176

Page 1 of 1

74 lbs

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 196	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HJ5	N	W	01/07/11	1041	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HJ5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HJ5	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HJ5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer, CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0800 JAN 10 2011	S. Hamaker, CHPRC	0800 JAN 10 2011
S. Hamaker, CHPRC	1400 JAN 10 2011	FEDEX	
FedEx		Brian Daniels	1/11/11 1000

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-7

Page 1 of 1

Collector: D. R. Williamson CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 37 / 7	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H37	N	W	1-9-11	1016	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H37	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H37	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29H37	N	W	/	/	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D. R. Williamson CHPRC			JAN 09 2011 / 1130	SSU #1		1/9/11	JAN 09 2011 / 1130
SSU #1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels		B-1	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-120

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 37/6	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HD0	N	W	1/7/11	1113	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HD0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HD0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HD0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU-1			1300 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FEDEX				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-168

Page 1 of 1

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 196	Ice Chest No.: GWS-192
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3879 6538
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HJ0	N	W	01/07/11	0918	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HJ0	N	W	↓	↓	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer, CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0800 JAN 10 2011	SE Hamaker, CHPRC	0800 JAN 10 2011
SE Hamaker, CHPRC	1400 JAN 10 2011	FEDEX	
FedEx		Brian Daniels	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-160

Page 1 of 1

66lbs

Collector: FM Hall CHPRC F. HALL	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 381 9	Ice Chest No.: GWS-192
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3879 6538
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HH5	N	W	JAN 07 2011	1157	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HH5	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HH5	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HH5	N	W	JAN 07 2011	1157	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC			JAN 07 2011 1300	SSutt			JAN 07 2011 1300
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

SDG# SL1036

CHPRC SL036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-32

Page 1 of 1

6/105

Collector: SE Hamaker	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: CHPRC X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 32 / 93	Ice Chest No.: GWS-16
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3882 5571
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3882 5571~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H61	N	W	01/09/11	1255	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H61	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H61	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H61	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
SE Hamaker CHPRC	Scott Hamaker	1400 JAN 09 2011	SSU #1		1400 JAN 09 2011
SSU-1		0920 JAN 10 2011	RT Sickle CHPRC		0920 JAN 10 2011
RT Sickle CHPRC		1430 JAN 10 2011	FEDEX		
FedEx			Brian Daniels		1/11/11 1000

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-112

Page 1 of 1

Collector: SE Hamaker CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 32 193	Ice Chest No. GWS-110
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No. 7966 3882 5571
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No. NA ~~7966 3882 5571~~

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HC5	N	W	01/09/11	1043	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HC5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HC5	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HC5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
SE Hamaker CHPRC	1400 JAN 09 2011	SSU #2	1400 JAN 09 2011
SSU- 1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	1430 JAN 10 2011	FEDEX	
Fedex		Brian Daniels B-1	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

SDG# SL1036

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-96

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: GWS-500
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 9670
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 9670~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB5	N	W	1/7/11	1048	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HB5	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HB5	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29HB5	N	W	✓	✓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			1-10-11 0920	R.T. Sickle			1-10-11 0920
R.T. Sickle			1-10-11 1430	Fed Ex			
Fed Ex				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-17

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39/9	Ice Chest No.: GWS-500
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 9670
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 9670~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H48	N	W	1-9-11	1100	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H48	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H48	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H48	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1230 JAN 09 2011	SSU-1			JAN 09 2011 1230
SSU-1			1-10-11 0920	R.T. Sickle			1-10-11 0920
R.T. Sickle			1-10-11 1430	FedEx			
FedEx				Brian Daniels			1/11/10 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

Appendix 5

Data Validation Supporting Documentation

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: CERC11			DATA PACKAGE: VSR11-049		
VALIDATOR: Carl Schloesslin		LAB: TestAmerica		DATE: 7-14-2011	
			SDG: SL1036		
ANALYSES PERFORMED					
SW-846 8081 X	SW-846 8081 (TCLP)	SW-846 8082	SW-846 8081 (TCLP)	SW-846 8310	
SAMPLES/MATRIX Water samples					
B29H90, B29HC0, B29H66, B29HK0, B29H72, B29H47, B29H56, B29HD5, B29HB0, B29HK1, B29H42, B29H85, B29HF0, B29H71, B29H95, B29HF5, B29HJ5, B29H37, B29HD0, B29HJ0, B29HH5, B29H61, B29HC5, B29HB5, B29H48, B29H32					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments: None

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:

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: None

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:

LCS and MS/MSD recovery infractions: see attached annotated QC summary forms

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:

MS/MSD RPD infraction: see attached annotated QC summary forms

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: None

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: None

9. SAMPLE CLEANUP (Levels D and E)

Fluorisil ® (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:

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC94P1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A130000-083
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aldrin	**0.500**	**0.538**	**ug/L**	**108**	**SW846 8081A**
alpha-BHC	**0.500**	**0.536**	**ug/L**	**107**	**SW846 8081A**
beta-BHC	**0.500**	**0.504**	**ug/L**	**101**	**SW846 8081A**
delta-BHC	**0.500**	**0.992 N**	**ug/L**	**198**	**SW846 8081A**
gamma-BHC (Lindane)	**0.500**	**0.529**	**ug/L**	**106**	**SW846 8081A**
4,4'-DDD	**0.500**	**0.591**	**ug/L**	**118**	**SW846 8081A**
4,4'-DDE	**0.500**	**0.563**	**ug/L**	**113**	**SW846 8081A**
4,4'-DDT	**0.500**	**0.627**	**ug/L**	**125**	**SW846 8081A**
Dieldrin	**0.500**	**0.529**	**ug/L**	**106**	**SW846 8081A**
Endosulfan I	**0.500**	**0.503**	**ug/L**	**101**	**SW846 8081A**
Endosulfan II	**0.500**	**0.542**	**ug/L**	**108**	**SW846 8081A**
Endosulfan sulfate	**0.500**	**0.543**	**ug/L**	**109**	**SW846 8081A**
Endrin	**0.500**	**0.573**	**ug/L**	**115**	**SW846 8081A**
Endrin aldehyde	**0.500**	**0.609**	**ug/L**	**122**	**SW846 8081A**
Heptachlor	**0.500**	**0.609**	**ug/L**	**122**	**SW846 8081A**
Heptachlor epoxide	**0.500**	**0.520**	**ug/L**	**104**	**SW846 8081A**
Methoxychlor	**0.500**	**0.563**	**ug/L**	**113**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	96	(64 - 134)
Decachlorobiphenyl	98	(49 - 140)

NOTE(S):

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

Bold print denotes control parameters

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC94M1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A130000-084
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013084
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aldrin	**0.500**	**0.559**	**ug/L**	**112**	**SW846 8081A**
alpha-BHC	**0.500**	**0.571**	**ug/L**	**114**	**SW846 8081A**
beta-BHC	**0.500**	**0.536**	**ug/L**	**107**	**SW846 8081A**
delta-BHC	**0.500**	**0.816 N**	**ug/L**	**163**	**SW846 8081A**
gamma-BHC (Lindane)	**0.500**	**0.575**	**ug/L**	**115**	**SW846 8081A**
4,4'-DDD	**0.500**	**0.598**	**ug/L**	**120**	**SW846 8081A**
4,4'-DDE	**0.500**	**0.584**	**ug/L**	**117**	**SW846 8081A**
4,4'-DDT	**0.500**	**0.601**	**ug/L**	**120**	**SW846 8081A**
Dieldrin	**0.500**	**0.553**	**ug/L**	**111**	**SW846 8081A**
Endosulfan I	**0.500**	**0.549**	**ug/L**	**110**	**SW846 8081A**
Endosulfan II	**0.500**	**0.562**	**ug/L**	**112**	**SW846 8081A**
Endosulfan sulfate	**0.500**	**0.554**	**ug/L**	**111**	**SW846 8081A**
Endrin	**0.500**	**0.586**	**ug/L**	**117**	**SW846 8081A**
Endrin aldehyde	**0.500**	**0.614**	**ug/L**	**123**	**SW846 8081A**
Heptachlor	**0.500**	**0.657**	**ug/L**	**131**	**SW846 8081A**
Heptachlor epoxide	**0.500**	**0.548**	**ug/L**	**110**	**SW846 8081A**
Methoxychlor	**0.500**	**0.582**	**ug/L**	**116**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	100	(64 - 134)
Decachlorobiphenyl	96	(49 - 140)

NOTE(S):

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

Bold print denotes control parameters

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 Work Order #...: MC8C51AF-MS Matrix.....: WATER
MS Lot-Sample #: F1A110510-002 MC8C51AG-MSD
Date Sampled...: 01/07/11 Date Received..: 01/11/11
Prep Date.....: 01/13/11 Analysis Date..: 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aldrin	ND	0.473	0.491	ug/L	104		SW846 8081A
	ND	0.472	0.517	ug/L	110	5.2	SW846 8081A
alpha-BHC	ND	0.473	0.504	ug/L	107		SW846 8081A
	ND	0.472	0.525	ug/L	111	4.1	SW846 8081A
beta-BHC	ND	0.473	0.470	ug/L	99		SW846 8081A
	ND	0.472	0.492	ug/L	104	4.6	SW846 8081A
delta-BHC	ND	0.473	0.631	ug/L	133		SW846 8081A
	ND	0.472	0.615	ug/L	130	2.6	SW846 8081A
gamma-BHC (Lindane)	ND	0.473	0.502	ug/L	106		SW846 8081A
	ND	0.472	0.527	ug/L	112	4.8	SW846 8081A
4,4'-DDD	ND	0.473	0.538	ug/L	114		SW846 8081A
	ND	0.472	0.552	ug/L	117	2.6	SW846 8081A
4,4'-DDE	ND	0.473	0.502	ug/L	106		SW846 8081A
	ND	0.472	0.534	ug/L	113	6.2	SW846 8081A
4,4'-DDT	ND	0.473	0.920	ug/L	195		SW846 8081A
		Qualifiers: N					
	ND	0.472	1.12	ug/L	238	20	SW846 8081A
		Qualifiers: N					
Dieldrin	ND	0.473	0.488	ug/L	103		SW846 8081A
	ND	0.472	0.511	ug/L	108	4.6	SW846 8081A
Endosulfan I	ND	0.473	0.478	ug/L	101		SW846 8081A
	ND	0.472	0.514	ug/L	109	7.2	SW846 8081A
Endosulfan II	ND	0.473	0.528	ug/L	112		SW846 8081A
	ND	0.472	0.537	ug/L	114	1.7	SW846 8081A
Endosulfan sulfate	ND	0.473	0.489	ug/L	103		SW846 8081A
	ND	0.472	0.509	ug/L	108	4.0	SW846 8081A
Endrin	ND	0.473	0.516	ug/L	109		SW846 8081A
	ND	0.472	0.541	ug/L	115	4.7	SW846 8081A
Endrin aldehyde	ND	0.473	1.38	ug/L	292		SW846 8081A
		Qualifiers: N					
	ND	0.472	1.08	ug/L	228	25	SW846 8081A
		Qualifiers: N					
Heptachlor	ND	0.473	0.554	ug/L	117		SW846 8081A
	ND	0.472	0.576	ug/L	122	3.9	SW846 8081A
Heptachlor epoxide	ND	0.473	0.493	ug/L	104		SW846 8081A
	ND	0.472	0.516	ug/L	109	4.6	SW846 8081A
Methoxychlor	ND	0.473	0.507	ug/L	107		SW846 8081A
	ND	0.472	0.516	ug/L	109	1.8	SW846 8081A

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C51AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-002 MC8C51AG-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(65 - 129)
	97	(65 - 129)
Decachlorobiphenyl	93	(63 - 129)
	94	(63 - 129)

NOTE(S):

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

Bold print denotes control parameters

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EM1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-022 MC8EM1AG-MSD
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013084
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aldrin	ND	0.482	0.536	ug/L	111		SW846 8081A
	ND	0.492	0.546	ug/L	111	1.8	SW846 8081A
alpha-BHC	ND	0.482	0.553	ug/L	115		SW846 8081A
	ND	0.492	0.558	ug/L	113	0.90	SW846 8081A
beta-BHC	ND	0.482	0.523	ug/L	109		SW846 8081A
	ND	0.492	0.526	ug/L	107	0.57	SW846 8081A
delta-BHC	ND	0.482	0.683	ug/L	142		SW846 8081A
	ND	0.492	0.629	ug/L	128	8.2	SW846 8081A
gamma-BHC (Lindane)	ND	0.482	0.552	ug/L	115		SW846 8081A
	ND	0.492	0.555	ug/L	113	0.54	SW846 8081A
4,4'-DDD	ND	0.482	0.592	ug/L	123		SW846 8081A
	ND	0.492	0.602	ug/L	122	1.7	SW846 8081A
4,4'-DDE	ND	0.482	0.553	ug/L	115		SW846 8081A
	ND	0.492	0.568	ug/L	115	2.7	SW846 8081A
4,4'-DDT	ND	0.482	0.617	ug/L	128		SW846 8081A
	ND	0.492	0.595	ug/L	121	3.6	SW846 8081A
Dieldrin	ND	0.482	0.532	ug/L	110		SW846 8081A
	ND	0.492	0.541	ug/L	110	1.7	SW846 8081A
Endosulfan I	ND	0.482	0.520	ug/L	108		SW846 8081A
	ND	0.492	0.529	ug/L	108	1.7	SW846 8081A
Endosulfan II	ND	0.482	0.546	ug/L	113		SW846 8081A
	ND	0.492	0.549	ug/L	112	0.54	SW846 8081A
Endosulfan sulfate	ND	0.482	0.540	ug/L	112		SW846 8081A
	ND	0.492	0.557	ug/L	113	3.1	SW846 8081A
Endrin	ND	0.482	0.569	ug/L	118		SW846 8081A
	ND	0.492	0.575	ug/L	117	1.0	SW846 8081A
Endrin aldehyde	ND	0.482	0.595	ug/L	123		SW846 8081A
	ND	0.492	0.592	ug/L	120	0.50	SW846 8081A
Heptachlor	ND	0.482	0.619	ug/L	128		SW846 8081A
	ND	0.492	0.598	ug/L	122	3.4	SW846 8081A
Heptachlor epoxide	ND	0.482	0.529	ug/L	110		SW846 8081A
	ND	0.492	0.538	ug/L	109	1.7	SW846 8081A
Methoxychlor	ND	0.482	0.593	ug/L	123		SW846 8081A
	ND	0.492	0.573	ug/L	116	3.4	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99	(65 - 129)
	97	(65 - 129)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EM1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-022 MC8EM1AG-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	100	(63 - 129)
	97	(63 - 129)

NOTE(S):

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

Bold print denotes control parameters

Appendix 6

Additional Documentation Requested By Client

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC94P1AA **Matrix.....:** WATER
MB Lot-Sample #: F1A130000-083

Prep Date.....: 01/13/11
Analysis Date..: 01/14/11 **Prep Batch #...:** 1013083
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	0.050	ug/L	SW846 8081A
alpha-BHC	ND	0.050	ug/L	SW846 8081A
beta-BHC	ND	0.050	ug/L	SW846 8081A
delta-BHC	ND	0.050	ug/L	SW846 8081A
gamma-BHC (Lindane)	ND	0.050	ug/L	SW846 8081A
Chlordane (technical)	ND	0.50	ug/L	SW846 8081A
4,4'-DDD	ND	0.050	ug/L	SW846 8081A
4,4'-DDE	ND	0.050	ug/L	SW846 8081A
4,4'-DDT	ND	0.050	ug/L	SW846 8081A
Dieldrin	ND	0.050	ug/L	SW846 8081A
Endosulfan I	ND	0.050	ug/L	SW846 8081A
Endosulfan II	ND	0.050	ug/L	SW846 8081A
Endosulfan sulfate	ND	0.050	ug/L	SW846 8081A
Endrin	ND	0.050	ug/L	SW846 8081A
Endrin aldehyde	ND	0.050	ug/L	SW846 8081A
Heptachlor	ND	0.050	ug/L	SW846 8081A
Heptachlor epoxide	ND	0.050	ug/L	SW846 8081A
Methoxychlor	ND	0.10	ug/L	SW846 8081A
Toxaphene	ND	2.0	ug/L	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	97	(65 - 129)
Decachlorobiphenyl	97	(63 - 129)

NOTE(S):

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

METHOD BLANK REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC94M1AA **Matrix.....:** WATER
MB Lot-Sample #: F1A130000-084

Prep Date.....: 01/13/11
Analysis Date..: 01/15/11 **Prep Batch #...:** 1013084
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Aldrin	ND	0.050	ug/L	SW846 8081A
alpha-BHC	ND	0.050	ug/L	SW846 8081A
beta-BHC	ND	0.050	ug/L	SW846 8081A
delta-BHC	ND	0.050	ug/L	SW846 8081A
gamma-BHC (Lindane)	ND	0.050	ug/L	SW846 8081A
Chlordane (technical)	ND	0.50	ug/L	SW846 8081A
4,4'-DDD	ND	0.050	ug/L	SW846 8081A
4,4'-DDE	ND	0.050	ug/L	SW846 8081A
4,4'-DDT	ND	0.050	ug/L	SW846 8081A
Dieldrin	ND	0.050	ug/L	SW846 8081A
Endosulfan I	ND	0.050	ug/L	SW846 8081A
Endosulfan II	ND	0.050	ug/L	SW846 8081A
Endosulfan sulfate	ND	0.050	ug/L	SW846 8081A
Endrin	ND	0.050	ug/L	SW846 8081A
Endrin aldehyde	ND	0.050	ug/L	SW846 8081A
Heptachlor	ND	0.050	ug/L	SW846 8081A
Heptachlor epoxide	ND	0.050	ug/L	SW846 8081A
Methoxychlor	ND	0.10	ug/L	SW846 8081A
Toxaphene	ND	2.0	ug/L	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	98	(65 - 129)
Decachlorobiphenyl	94	(63 - 129)

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC94P1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A130000-083
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aldrin	**0.500**	**0.538**	**ug/L**	**108**	**SW846 8081A**
alpha-BHC	**0.500**	**0.536**	**ug/L**	**107**	**SW846 8081A**
beta-BHC	**0.500**	**0.504**	**ug/L**	**101**	**SW846 8081A**
delta-BHC	**0.500**	**0.992 N**	**ug/L**	**198**	**SW846 8081A**
gamma-BHC (Lindane)	**0.500**	**0.529**	**ug/L**	**106**	**SW846 8081A**
4,4'-DDD	**0.500**	**0.591**	**ug/L**	**118**	**SW846 8081A**
4,4'-DDE	**0.500**	**0.563**	**ug/L**	**113**	**SW846 8081A**
4,4'-DDT	**0.500**	**0.627**	**ug/L**	**125**	**SW846 8081A**
Dieldrin	**0.500**	**0.529**	**ug/L**	**106**	**SW846 8081A**
Endosulfan I	**0.500**	**0.503**	**ug/L**	**101**	**SW846 8081A**
Endosulfan II	**0.500**	**0.542**	**ug/L**	**108**	**SW846 8081A**
Endosulfan sulfate	**0.500**	**0.543**	**ug/L**	**109**	**SW846 8081A**
Endrin	**0.500**	**0.573**	**ug/L**	**115**	**SW846 8081A**
Endrin aldehyde	**0.500**	**0.609**	**ug/L**	**122**	**SW846 8081A**
Heptachlor	**0.500**	**0.609**	**ug/L**	**122**	**SW846 8081A**
Heptachlor epoxide	**0.500**	**0.520**	**ug/L**	**104**	**SW846 8081A**
Methoxychlor	**0.500**	**0.563**	**ug/L**	**113**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	96	(64 - 134)
Decachlorobiphenyl	98	(49 - 140)

NOTE(S):

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

Bold print denotes control parameters

N Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC94M1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A130000-084
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013084
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Aldrin	**0.500**	**0.559**	**ug/L**	**112**	**SW846 8081A**
alpha-BHC	**0.500**	**0.571**	**ug/L**	**114**	**SW846 8081A**
beta-BHC	**0.500**	**0.536**	**ug/L**	**107**	**SW846 8081A**
delta-BHC	**0.500**	**0.816 N**	**ug/L**	**163**	**SW846 8081A**
gamma-BHC (Lindane)	**0.500**	**0.575**	**ug/L**	**115**	**SW846 8081A**
4,4'-DDD	**0.500**	**0.598**	**ug/L**	**120**	**SW846 8081A**
4,4'-DDE	**0.500**	**0.584**	**ug/L**	**117**	**SW846 8081A**
4,4'-DDT	**0.500**	**0.601**	**ug/L**	**120**	**SW846 8081A**
Dieldrin	**0.500**	**0.553**	**ug/L**	**111**	**SW846 8081A**
Endosulfan I	**0.500**	**0.549**	**ug/L**	**110**	**SW846 8081A**
Endosulfan II	**0.500**	**0.562**	**ug/L**	**112**	**SW846 8081A**
Endosulfan sulfate	**0.500**	**0.554**	**ug/L**	**111**	**SW846 8081A**
Endrin	**0.500**	**0.586**	**ug/L**	**117**	**SW846 8081A**
Endrin aldehyde	**0.500**	**0.614**	**ug/L**	**123**	**SW846 8081A**
Heptachlor	**0.500**	**0.657**	**ug/L**	**131**	**SW846 8081A**
Heptachlor epoxide	**0.500**	**0.548**	**ug/L**	**110**	**SW846 8081A**
Methoxychlor	**0.500**	**0.582**	**ug/L**	**116**	**SW846 8081A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	100	(64 - 134)
Decachlorobiphenyl	96	(49 - 140)

NOTE(S):

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

Bold print denotes control parameters

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C51AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-002 MC8C51AG-MSD
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/14/11
Prep Batch #...: 1013083
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aldrin	ND	0.473	0.491	ug/L	104		SW846 8081A
	ND	0.472	0.517	ug/L	110	5.2	SW846 8081A
alpha-BHC	ND	0.473	0.504	ug/L	107		SW846 8081A
	ND	0.472	0.525	ug/L	111	4.1	SW846 8081A
beta-BHC	ND	0.473	0.470	ug/L	99		SW846 8081A
	ND	0.472	0.492	ug/L	104	4.6	SW846 8081A
delta-BHC	ND	0.473	0.631	ug/L	133		SW846 8081A
	ND	0.472	0.615	ug/L	130	2.6	SW846 8081A
gamma-BHC (Lindane)	ND	0.473	0.502	ug/L	106		SW846 8081A
	ND	0.472	0.527	ug/L	112	4.8	SW846 8081A
4,4'-DDD	ND	0.473	0.538	ug/L	114		SW846 8081A
	ND	0.472	0.552	ug/L	117	2.6	SW846 8081A
4,4'-DDE	ND	0.473	0.502	ug/L	106		SW846 8081A
	ND	0.472	0.534	ug/L	113	6.2	SW846 8081A
4,4'-DDT	ND	0.473	0.920	ug/L	195		SW846 8081A
		Qualifiers: N					
	ND	0.472	1.12	ug/L	238	20	SW846 8081A
		Qualifiers: N					
Dieldrin	ND	0.473	0.488	ug/L	103		SW846 8081A
	ND	0.472	0.511	ug/L	108	4.6	SW846 8081A
Endosulfan I	ND	0.473	0.478	ug/L	101		SW846 8081A
	ND	0.472	0.514	ug/L	109	7.2	SW846 8081A
Endosulfan II	ND	0.473	0.528	ug/L	112		SW846 8081A
	ND	0.472	0.537	ug/L	114	1.7	SW846 8081A
Endosulfan sulfate	ND	0.473	0.489	ug/L	103		SW846 8081A
	ND	0.472	0.509	ug/L	108	4.0	SW846 8081A
Endrin	ND	0.473	0.516	ug/L	109		SW846 8081A
	ND	0.472	0.541	ug/L	115	4.7	SW846 8081A
Endrin aldehyde	ND	0.473	1.38	ug/L	292		SW846 8081A
		Qualifiers: N					
	ND	0.472	1.08	ug/L	228	25	SW846 8081A
		Qualifiers: N					
Heptachlor	ND	0.473	0.554	ug/L	117		SW846 8081A
	ND	0.472	0.576	ug/L	122	3.9	SW846 8081A
Heptachlor epoxide	ND	0.473	0.493	ug/L	104		SW846 8081A
	ND	0.472	0.516	ug/L	109	4.6	SW846 8081A
Methoxychlor	ND	0.473	0.507	ug/L	107		SW846 8081A
	ND	0.472	0.516	ug/L	109	1.8	SW846 8081A

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8C51AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-002 MC8C51AG-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	93	(65 - 129)
	97	(65 - 129)
Decachlorobiphenyl	93	(63 - 129)
	94	(63 - 129)

NOTE(S):

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

Bold print denotes control parameters

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EM1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-022 MC8EM1AG-MSD
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/13/11 **Analysis Date..:** 01/15/11
Prep Batch #...: 1013084
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Aldrin	ND	0.482	0.536	ug/L	111		SW846 8081A
	ND	0.492	0.546	ug/L	111	1.8	SW846 8081A
alpha-BHC	ND	0.482	0.553	ug/L	115		SW846 8081A
	ND	0.492	0.558	ug/L	113	0.90	SW846 8081A
beta-BHC	ND	0.482	0.523	ug/L	109		SW846 8081A
	ND	0.492	0.526	ug/L	107	0.57	SW846 8081A
delta-BHC	ND	0.482	0.683	ug/L	142		SW846 8081A
	ND	0.492	0.629	ug/L	128	8.2	SW846 8081A
gamma-BHC (Lindane)	ND	0.482	0.552	ug/L	115		SW846 8081A
	ND	0.492	0.555	ug/L	113	0.54	SW846 8081A
4,4'-DDD	ND	0.482	0.592	ug/L	123		SW846 8081A
	ND	0.492	0.602	ug/L	122	1.7	SW846 8081A
4,4'-DDE	ND	0.482	0.553	ug/L	115		SW846 8081A
	ND	0.492	0.568	ug/L	115	2.7	SW846 8081A
4,4'-DDT	ND	0.482	0.617	ug/L	128		SW846 8081A
	ND	0.492	0.595	ug/L	121	3.6	SW846 8081A
Dieldrin	ND	0.482	0.532	ug/L	110		SW846 8081A
	ND	0.492	0.541	ug/L	110	1.7	SW846 8081A
Endosulfan I	ND	0.482	0.520	ug/L	108		SW846 8081A
	ND	0.492	0.529	ug/L	108	1.7	SW846 8081A
Endosulfan II	ND	0.482	0.546	ug/L	113		SW846 8081A
	ND	0.492	0.549	ug/L	112	0.54	SW846 8081A
Endosulfan sulfate	ND	0.482	0.540	ug/L	112		SW846 8081A
	ND	0.492	0.557	ug/L	113	3.1	SW846 8081A
Endrin	ND	0.482	0.569	ug/L	118		SW846 8081A
	ND	0.492	0.575	ug/L	117	1.0	SW846 8081A
Endrin aldehyde	ND	0.482	0.595	ug/L	123		SW846 8081A
	ND	0.492	0.592	ug/L	120	0.50	SW846 8081A
Heptachlor	ND	0.482	0.619	ug/L	128		SW846 8081A
	ND	0.492	0.598	ug/L	122	3.4	SW846 8081A
Heptachlor epoxide	ND	0.482	0.529	ug/L	110		SW846 8081A
	ND	0.492	0.538	ug/L	109	1.7	SW846 8081A
Methoxychlor	ND	0.482	0.593	ug/L	123		SW846 8081A
	ND	0.492	0.573	ug/L	116	3.4	SW846 8081A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Tetrachloro-m-xylene	99	(65 - 129)
	97	(65 - 129)

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MATRIX SPIKE SAMPLE DATA REPORT

GC Semivolatiles

Client Lot #...: SL1036 **Work Order #...:** MC8EM1AF-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-022 MC8EM1AG-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Decachlorobiphenyl	100	(63 - 129)
	97	(63 - 129)

NOTE(S):

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

Bold print denotes control parameters

Date: 14 July 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: CERC11
Subject: PAHs - Sample Data Group (SDG) SL1036

INTRODUCTION

This memorandum presents the results of data validation for SDG SL1036 prepared by TestAmerica. A list of samples validated along with the analytical method is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Method
B29H66	1/07/2011	Water	C	8310
B29H72	1/07/2011	Water	C	8310
B29HD5	1/07/2011	Water	C	8310
B29H85	1/09/2011	Water	C	8310
B29H71	1/07/2011	Water	C	8310
B29HJ0	1/07/2011	Water	C	8310

Data validation was conducted in accordance with the CHPRC validation statement of work and the Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study, DOE/RL-2009-42, Rev. 0 (SAP). 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 OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements for PAHs are extraction within 14 days of sample collection and analysis within 40 days of sample extraction. Sample preservation requires chilling to 4 degrees Celsius.

The samples were extracted and analyzed within the prescribed holding times and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable.

Trip Blanks

All trip blank results were acceptable.

Field Blanks

No field blanks were submitted for validation.

Equipment Blanks

No equipment blanks were submitted for validation.

- **Accuracy**

Accuracy is evaluated by reviewing surrogate results, matrix spike sample results, and laboratory control sample results. According to the SAP, the matrix spike and laboratory control sample accuracy limits are 80% to 120%. The limits for reported analytes not listed in the SAP are specified by the DV procedure. The surrogate accuracy limits used for data validation were the ones specified by the DV procedure (30% to 150%).

Surrogates

All surrogate recoveries were acceptable.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

Many MS/MSD recovery infractions occurred and are highlighted in the annotated QC summary forms in Appendix 5. Detected sample results with associated MS/MSD recoveries above or below the acceptance limits should be qualified as estimates and flagged "J." Non-detected sample results with associated MS/MSD recoveries below the lower acceptance limits should be qualified as estimates and flagged "UJ." See the table in Appendix 2 for a listing of all affected sample results.

Laboratory Control Samples (LCSs)

Many LCS recovery infractions occurred and are highlighted in the annotated QC summary forms in Appendix 5. Detected sample results with associated LCS recoveries above or below

the acceptance limits should be qualified as estimates and flagged "J." Non-detected sample results with associated LCS recoveries below the lower acceptance limits should be qualified as estimates and flagged "UJ."

- **Precision**

Precision is evaluated by reviewing MS/MSD results, field duplicate sample results, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limits are ±20%. When duplicate RPDs exceed the limits and have associated results <5X the reporting limits with differences <1X the reporting limits no precision infraction occurred.

MS/MSD Samples

Two MS/MSD RPD infractions occurred and are highlighted in the annotated QC summary forms in Appendix 5. Detected sample results with associated RPD values above the acceptance limits should be qualified as estimates and flagged "J" for detects and "UJ" for non-detects. See the table in Appendix 2 for a listing of all affected sample results.

Field Duplicate Samples

All field duplicate results were acceptable.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs were below the CRDLs.

- **Completeness**

SDG SL1036 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

Multiple minor deficiencies leading to qualification of sample results as estimates occurred. See the table in Appendix 2 for a listing of all affected sample results.

REFERENCES

GRP-GD-003, Rev. 0, Change 0, *Data Validation for Chemical Analyses*, August 2010.

DOE/RL-2009-42, Rev. 0, *Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study*, December 2010.

Appendix 1

Glossary of Data Reporting Qualifiers

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

- **U** — The constituent was analyzed for, but was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the RL. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J+** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J-** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **N** — The analysis indicates the presence of an analyte that has been tentatively identified.

- **NJ** — The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.

- **NJ+** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation.

- **NJ-** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

PAHs Data Qualification Summary			
SDG: SL1036	Reviewer: AQA	Project: CERC11	
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
Acenaphthene Acenaphthylene Anthracene Benzo(a)pyrene Fluoranthene Fluorene Naphthalene	UJ	B29H66	Low LCS recovery, low MS and/or MSD recovery
Phenanthrene	UJ	B29H66	Low LCS recovery
Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(ghi)perylene Dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene	UJ	B29H66	Low MS and/or MSD recovery
Chrysene	UJ	B29H66	Poor MS/MSD precision
Pyrene	J	B29H66	Low MSD recovery, poor MS/MSD precision
Acenaphthene Acenaphthylene Anthracene Benzo(a)pyrene Fluoranthene Fluorene Naphthalene	UJ	B29H72, B29HD5, B29H85, B29HJ0	Low LCS recovery, low MS and/or MSD recovery
Phenanthrene	UJ	B29H72, B29HD5, B29H85, B29HJ0	Low LCS recovery
Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(ghi)perylene Dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene	UJ	B29H72, B29HD5, B29H85, B29HJ0	Low MS and/or MSD recovery
Chrysene	UJ	B29H72, B29HD5, B29H85, B29HJ0	Poor MS/MSD precision
Pyrene	UJ	B29H72, B29HD5, B29H85, B29HJ0	Low MSD recovery, poor MS/MSD precision

Acenaphthene Acenaphthylene Benzo(a)pyrene Fluoranthene Fluorene Naphthalene	UJ	B29H71	Low LCS recovery, low MS and/or MSD recovery
Anthracene	J	B29H71	Low LCS recovery, low MSD recovery
Phenanthrene	UJ	B29H71	Low LCS recovery
Benzo(a)anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(ghi)perylene Dibenz(a,h)anthracene Indeno(1,2,3-cd)pyrene	UJ	B29H71	Low MS and/or MSD recovery
Chrysene	UJ	B29H71	Poor MS/MSD precision
Pyrene	UJ	B29H71	Low MSD recovery, poor MS/MSD precision

Comments: None

Appendix 3

Annotated Laboratory Reports

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H66

HPLC

Lot-Sample #...: F1A110510-003 **Work Order #...:** MC8C61AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/18/11
Prep Batch #...: 1012098
Dilution Factor: 1 **Method.....:** SW846 8310

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	UJ	ND	5.0	ug/L	0.65
Acenaphthylene	UJ	ND	5.0	ug/L	0.40
Anthracene	UJ	ND	1.0	ug/L	0.020
Benzo(a)anthracene	UJ	ND	1.0	ug/L	0.063
Benzo(b)fluoranthene	UJ	ND	1.0	ug/L	0.051
Benzo(k)fluoranthene	UJ	ND	1.0	ug/L	0.074
Benzo(ghi)perylene	UJ	ND	1.0	ug/L	0.16
Benzo(a)pyrene	UJ	ND	1.0	ug/L	0.075
Chrysene	UJ	ND N	1.0	ug/L	0.035
Dibenz(a,h)anthracene	UJ	ND	1.0	ug/L	0.15
Fluoranthene	UJ	ND	1.0	ug/L	0.18
Fluorene	UJ	ND	1.0	ug/L	0.071
Indeno(1,2,3-cd)pyrene	UJ	ND	1.0	ug/L	0.14
Naphthalene	UJ	ND	5.0	ug/L	0.20
Phenanthrene	UJ	ND	1.0	ug/L	0.10
Pyrene	J	**0.95 J,S**	**1.0**	**ug/L**	**0.083**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	74	(60 - 98)

NOTE(S):

J Estimated result. Result is less than RL.

S Positive analyte detection appears questionable during spectral confirmation.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H72

HPLC

Lot-Sample #...: F1A110510-005 **Work Order #...:** MC8DC1AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/18/11
Prep Batch #...: 1012098
Dilution Factor: 1 **Method.....:** SW846 8310

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	UJ	ND	5.0	ug/L	0.65
Acenaphthylene	UJ	ND	5.0	ug/L	0.40
Anthracene	UJ	ND	1.0	ug/L	0.020
Benzo(a)anthracene	UJ	ND	1.0	ug/L	0.063
Benzo(b)fluoranthene	UJ	ND	1.0	ug/L	0.051
Benzo(k)fluoranthene	UJ	ND	1.0	ug/L	0.074
Benzo(ghi)perylene	UJ	ND	1.0	ug/L	0.16
Benzo(a)pyrene	UJ	ND	1.0	ug/L	0.075
Chrysene	UJ	ND N	1.0	ug/L	0.035
Dibenz(a,h)anthracene	UJ	ND	1.0	ug/L	0.15
Fluoranthene	UJ	ND	1.0	ug/L	0.18
Fluorene	UJ	ND	1.0	ug/L	0.071
Indeno(1,2,3-cd)pyrene	UJ	ND	1.0	ug/L	0.14
Naphthalene	UJ	ND	5.0	ug/L	0.20
Phenanthrene	UJ	ND	1.0	ug/L	0.10
Pyrene	UJ	ND	1.0	ug/L	0.083

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	84	(60 - 98)

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HD5

HPLC

Lot-Sample #...: F1A110510-008 **Work Order #...:** MC8DJ1AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/18/11
Prep Batch #...: 1012098
Dilution Factor: 1 **Method.....:** SW846 8310

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	UJ	ND	5.0	ug/L	0.65
Acenaphthylene	UJ	ND	5.0	ug/L	0.40
Anthracene	UJ	ND	1.0	ug/L	0.020
Benzo(a)anthracene	UJ	ND	1.0	ug/L	0.063
Benzo(b)fluoranthene	UJ	ND	1.0	ug/L	0.051
Benzo(k)fluoranthene	UJ	ND	1.0	ug/L	0.074
Benzo(ghi)perylene	UJ	ND	1.0	ug/L	0.16
Benzo(a)pyrene	UJ	ND	1.0	ug/L	0.075
Chrysene	UJ	ND N	1.0	ug/L	0.035
Dibenz(a,h)anthracene	UJ	ND	1.0	ug/L	0.15
Fluoranthene	UJ	ND	1.0	ug/L	0.18
Fluorene	UJ	ND	1.0	ug/L	0.071
Indeno(1,2,3-cd)pyrene	UJ	ND	1.0	ug/L	0.14
Naphthalene	UJ	ND	5.0	ug/L	0.20
Phenanthrene	UJ	ND	1.0	ug/L	0.10
Pyrene	UJ	ND	1.0	ug/L	0.083

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	82	(60 - 98)

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H85

HPLC

Lot-Sample #...: F1A110510-012 **Work Order #...:** MC8DX1AC **Matrix.....:** WATER
Date Sampled...: 01/09/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/18/11
Prep Batch #...: 1012098
Dilution Factor: 1 **Method.....:** SW846 8310

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	UJ	ND	5.0	ug/L	0.65
Acenaphthylene	UJ	ND	5.0	ug/L	0.40
Anthracene	UJ	ND	1.0	ug/L	0.020
Benzo(a)anthracene	UJ	ND	1.0	ug/L	0.063
Benzo(b)fluoranthene	UJ	ND	1.0	ug/L	0.051
Benzo(k)fluoranthene	UJ	ND	1.0	ug/L	0.074
Benzo(ghi)perylene	UJ	ND	1.0	ug/L	0.16
Benzo(a)pyrene	UJ	ND	1.0	ug/L	0.075
Chrysene	UJ	ND N	1.0	ug/L	0.035
Dibenz(a,h)anthracene	UJ	ND	1.0	ug/L	0.15
Fluoranthene	UJ	ND	1.0	ug/L	0.18
Fluorene	UJ	ND	1.0	ug/L	0.071
Indeno(1,2,3-cd)pyrene	UJ	ND	1.0	ug/L	0.14
Naphthalene	UJ	ND	5.0	ug/L	0.20
Phenanthrene	UJ	ND	1.0	ug/L	0.10
Pyrene	UJ	ND	1.0	ug/L	0.083

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	78	(60 - 98)

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29H71

HPLC

Lot-Sample #...: F1A110510-014 **Work Order #...:** MC8D21AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/18/11
Prep Batch #...: 1012098
Dilution Factor: 1 **Method.....:** SW846 8310

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	UJ	ND	5.0	ug/L	0.65
Acenaphthylene	UJ	ND	5.0	ug/L	0.40
Anthracene	J	**0.059 J,S**	**1.0**	**ug/L**	**0.020**
Benzo(a)anthracene	UJ	ND	1.0	ug/L	0.063
Benzo(b)fluoranthene	UJ	ND	1.0	ug/L	0.051
Benzo(k)fluoranthene	UJ	ND	1.0	ug/L	0.074
Benzo(ghi)perylene	UJ	ND	1.0	ug/L	0.16
Benzo(a)pyrene	UJ	ND	1.0	ug/L	0.075
Chrysene	UJ	ND N	1.0	ug/L	0.035
Dibenz(a,h)anthracene	UJ	ND	1.0	ug/L	0.15
Fluoranthene	UJ	ND	1.0	ug/L	0.18
Fluorene	UJ	ND	1.0	ug/L	0.071
Indeno(1,2,3-cd)pyrene	UJ	ND	1.0	ug/L	0.14
Naphthalene	UJ	ND	5.0	ug/L	0.20
Phenanthrene	UJ	ND	1.0	ug/L	0.10
Pyrene	UJ	ND	1.0	ug/L	0.083

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	81	(60 - 98)

NOTE(S):

J Estimated result. Result is less than RL.

S Positive analyte detection appears questionable during spectral confirmation.

LS
7-14-2011

CH2M Hill Plateau Remediation DOE RL

Client Sample ID: B29HJ0

HPLC

Lot-Sample #...: F1A110510-020 **Work Order #...:** MC8EJ1AC **Matrix.....:** WATER
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/18/11
Prep Batch #...: 1012098
Dilution Factor: 1 **Method.....:** SW846 8310

PARAMETER		RESULT	REPORTING LIMIT	UNITS	MDL
Acenaphthene	UJ	ND	5.0	ug/L	0.65
Acenaphthylene	UJ	ND	5.0	ug/L	0.40
Anthracene	UJ	ND	1.0	ug/L	0.020
Benzo(a)anthracene	UJ	ND	1.0	ug/L	0.063
Benzo(b)fluoranthene	UJ	ND	1.0	ug/L	0.051
Benzo(k)fluoranthene	UJ	ND	1.0	ug/L	0.074
Benzo(ghi)perylene	UJ	ND	1.0	ug/L	0.16
Benzo(a)pyrene	UJ	ND	1.0	ug/L	0.075
Chrysene	UJ	ND N	1.0	ug/L	0.035
Dibenz(a,h)anthracene	UJ	ND	1.0	ug/L	0.15
Fluoranthene	UJ	ND	1.0	ug/L	0.18
Fluorene	UJ	ND	1.0	ug/L	0.071
Indeno(1,2,3-cd)pyrene	UJ	ND	1.0	ug/L	0.14
Naphthalene	UJ	ND	5.0	ug/L	0.20
Phenanthrene	UJ	ND	1.0	ug/L	0.10
Pyrene	UJ	ND	1.0	ug/L	0.083

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	80	(60 - 98)

LS
7-14-2011

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CH2MHill Plateau Remediation Company
P.O. Box 1600
MS B3-60
Richland, Washington 99352
February 22, 2011
Attention: Mike Neely

TestAmerica Laboratories, Inc.

SDG	: SL1036
Number of Samples	: 26 samples
Sample Matrix	: Water
Data Deliverable	: Summary
Date SDG Closed	: January 12, 2011

II. Introduction

Between January 11, 2011 and January 12, 2011, 26 water samples were received by TestAmerica - St. Louis for chemical analysis. The samples were received within temperature criteria. See the COC and CUR forms for documentation of any variations on receipt conditions and temperature. Upon receipt, the samples were given laboratory Ids to correspond with specific client Ids. Please refer to the Sample Summary sheets attached to this case narrative. This report is incomplete without the narrative.

One container for both SVOA 8270 and Pesticides 8081 was received broken. Sufficient sample volume from other containers was received to perform both analyses. Issue Resolution Form 11-303 accepted the proposed resolution to proceed with analysis.

The following SAFs are associated with this SDG: X11-016

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits. All results are based upon samples as they were received, i.e. wet weight, unless otherwise noted on the data sheets. See the attached Methods Summary Form for the methods used in this SDG.

MS/MSD/Dup analysis was done per the client requirements. Analytical batches that did not contain matrix QC were analyzed with a LCS/LCS duplicate.

Deviation from Request: None

IV. Definitions

QCBLK-	Quality Control Blank, Method Blank
QCLCS-	Quality Control Laboratory Control Sample, Blank Spike
DUP-	Laboratory Duplicate
MS-	Matrix Spike
MSD-	Matrix Spike Duplicate

The term "Detection Limit" used in the analytical data report refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

TestAmerica
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CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

The following data qualifiers may be applicable to the results in this report, as appropriate.

- **B** – For inorganic analyses, the sample result is greater than the MDL but less than the RL.
- **B** – For organic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **J** – For organic analyses, the sample is estimated and less than the RL.
- **C** – For inorganic analyses, Method Blank contamination. The Method Blank contains the target analyte at a concentration above the MDL.
- **D** – For all analyses, the sample result was obtained from the analysis of a dilution.
- **N** – For inorganics and GC analyses, the spike/spike duplicate recoveries are outside QC limits.
- **T** – For GCMS analyses, the spike/spike duplicate recoveries are outside QC limits.

Volatiles

Batch: 1021050

The LCS recovery for Acrolein is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (11): B29H42

The MS/MSD recoveries for Acrolein are outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. This analyte has been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (11): B29H42

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TestAmerica Laboratories, Inc.

Batch: 1018076

The surrogate recoveries are outside the upper QC limits, indicating a potential positive bias. There were no target analytes associated with these surrogates detected above the reporting limit in the samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (16): B29HF5
F1A110510 (20): B29HJ0

Sample surrogate recoveries are outside established QC limits. Samples were reprepared and reanalyzed outside hold time. The reanalysis yielded acceptable and similar results. Issue Resolution Form 11-317 accepted the proposed resolution to report the original analysis performed within hold time.
Affected Samples:
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (22): B29H61

The sample was analyzed outside of the 12 hour clock but within the hold time. The sample was re-analyzed 3 days outside the hold time with all QC recovering within limits. Both the original sample analysis and the final analysis had comparable results. Issue Resolution Form 11-317 accepted the proposed resolution to report the original analysis performed within hold time.
Affected Samples:
F1A110510 (25): B29H48

Cyclohexanone, 1,4-Dioxane, Acetone and Methylene chloride were detected in the method blank above the method detection limit but below the reporting limit. Acetone has been qualified accordingly with a "B" flag in the associated samples.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5

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TestAmerica Laboratories, Inc.

F1A110510 (25): B29H48

The ICV and LCS recoveries for Acrolein are outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48

The MS recoveries for Dichlorodifluoromethane, Acrolein, Bromoform, Bromobenzene and 1,4-Dichlorobenzene are outside the upper QC limits, indicating a potential positive bias for these analytes. These analytes were not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The MSD recoveries for several compounds are outside the upper QC limits. This is the result of a low internal standard response in the MSD (between 32%D - 35%D). Although the IS %D in the MSD is within the lower QC limits, the affect on the spike recoveries are inversely higher. Even with the higher, out of QC control recoveries in the MSD, there were only 9 RPD values outside the QC limits. Method performance is demonstrated by the remaining acceptable MS and LCS recoveries. These analytes have been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (10): B29HK1
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5

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THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

F1A110510 (24): B29HB5
F1A110510 (25): B29H48

Batch: 1021181

Methylene chloride was detected in the method blank above the method detection limit but below the reporting limit. This analyte was not detected in the associated samples.
Affected Samples:
F1A120486 (1): B29H32

The CCV recoveries are outside the upper QC limits (greater than 20% D) for Vinyl acetate and Ethyl methacrylate indicating a potential high bias for these analytes in the samples associated with this CCV. These analytes were not detected above the reporting limit in the associated samples. The RRF for 1,1,2,2-Tetrachloroethane is less than the method detection limit of 0.300 but greater than the QC limit 0.100. The RRF will be monitored and maintenance will be performed before the next calibration to try to rectify this problem.
Affected Samples:
F1A120486 (1): B29H32

The LCS recovery for Acrolein is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A120486 (1): B29H32

The MS recovery for Acrolein is outside the upper QC limits, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. This analyte has been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A120486 (1): B29H32

Semivolatiles

Batch: 1012097

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

The MS/MSD RPD for Indeno (1,2,3-cd) pyrene is not within method acceptance criteria. MS/MSD recoveries are within QC limits demonstrating good extraction performance in the sample matrix.
Affected Samples:

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TestAmerica Laboratories, Inc.

F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

Due to the large number of compounds that may be analyzed by this method, it is expected that some compounds will fail to meet the criterion. If compounds fail to meet these criteria, the associated concentrations may still be determined. Hexachlorophene is outside the lower QC limits in the CCV. This compound is a poor responding compound.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1

Batch: 1013085

Three liters is the method suggested volume for sample, MS and MSD. Lab practice is to retain volume in case a QC failure requires a re-extraction. A reduced volume was used for the MS/MSD in order to retain volume.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5

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THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

The CCV recovery was outside the upper QC limits (greater than 20% RSD) for Famphur indicating a potential high bias for this analyte in the samples associated with this CCV. This analyte was not detected above the reporting limit in the associated samples.
Affected Samples:
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

Samples exhibited poor surrogate recovery. Laboratory QC practices, based on CLP methodology, allow for one acid surrogate and/or one base surrogate recovery excursion without necessitating re-extraction/re-analysis. Sample extraction efficiency and compliance is demonstrated by the remaining acceptable surrogate recoveries.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5

The MS/MSD recoveries are outside the established QC limits for 4 analytes. The RPD values are not within method acceptance criteria for 2 analytes. Matrix interference is not physically evident in the sample but interference may still exist. Method performance is demonstrated by acceptable LCS recoveries. These analytes have been qualified accordingly with a "T" flag in the associated samples.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

Pesticides

Batch: 1013083

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly. The dilution factor was used to elevate the MDL and RL. No dilution was performed on the sample.
Affected Samples:
F1A110510 (5): B29H72

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

The LCS recovery for delta-BHC is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

The MS and MSD recoveries for 4,4'-DDT and Endrin aldehyde are outside the upper QC limits, indicating a potential positive bias for these analytes. These analytes were not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The RPD for Endrin aldehyde is also outside QC limits. These analytes have been qualified accordingly with an "N" flag in the associated samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

Affected Samples:
F1A110510 (1): B29H90
F1A110510 (2): B29HC0
F1A110510 (3): B29H66
F1A110510 (4): B29HK0
F1A110510 (5): B29H72
F1A110510 (6): B29H47
F1A110510 (7): B29H56
F1A110510 (8): B29HD5
F1A110510 (9): B29HB0
F1A110510 (10): B29HK1
F1A110510 (11): B29H42
F1A110510 (12): B29H85
F1A110510 (13): B29HF0
F1A110510 (14): B29H71
F1A110510 (15): B29H95
F1A110510 (16): B29HF5
F1A110510 (17): B29HJ5
F1A110510 (18): B29H37
F1A110510 (19): B29HD0
F1A110510 (20): B29HJ0

Batch: 1013084

The LCS recovery for delta-BHC is outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion.
Affected Samples:
F1A110510 (21): B29HH5
F1A110510 (22): B29H61
F1A110510 (23): B29HC5
F1A110510 (24): B29HB5
F1A110510 (25): B29H48
F1A120486 (1): B29H32

PAHs

Batch: 1012098

There was insufficient sample provided to perform the analysis at the method specified amount. A reduced sample amount was prepared. The reporting limit has been elevated accordingly.
Affected Samples:
F1A110510 (3): B29H66

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CH2M Hill Plateau Remediation Company
February 22, 2011
SDG: SL1036

TestAmerica Laboratories, Inc.

The MS/MSD recoveries for Chrysene are outside the upper QC limit, indicating a potential positive bias for this analyte. This analyte was not detected above the reporting limit in the associated samples; therefore the sample data was not adversely affected by this excursion. The RPD for the target analytes Chrysene and Pyrene are not within method acceptance criteria. This analyte has been qualified accordingly with an "N" flag in the associated samples.
Affected Samples:
F1A110510 (3): B29H66
F1A110510 (5): B29H72
F1A110510 (8): B29HD5
F1A110510 (12): B29H85
F1A110510 (14): B29H71
F1A110510 (20): B29HJ0

Two analytes detected in the associated samples were given the "S" qualifier. The "S" was used to designate positive analyte detection on the primary column that appeared questionable during spectral confirmation.
Affected Samples:
F1A110510 (3): B29H66
F1A110510 (14): B29H71

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

Reviewed and approved:

Michael Franks
St. Louis Project Manager

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-303

Date: January 12, 2011 SAF Nos. X11-016

SDG: SL1036 LOGIN No.: **F1A110510** TEST: SVOA , Pesticides

Sample No.(s) : **B29HH5**

Submitted By: Mike Franks
Phone No. 314-298-8566
Fax No. 314-298-8757

Submitted To: Sara Champoux
Phone No. 509-373-5290
Fax No. 509-373-1788

ISSUE	PROPOSED RESOLUTION
One container for both SVOA 8270 and Pesticides 8081 was received broken. There is still sufficient sample volume from the other containers received to perform both analyses	1) Proceed with analysis and note in the case narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 1/12/11
Signature and Date

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-317

Date: January 30, 2011 SAF Nos. X11-016

SDG: SL1036 LOGIN No.: **F1A110510** TEST: Volatiles

Sample No.(s) : **B29HF0, B29H71. B29H95, B29H61, B29H48**

Submitted By: Mike Franks
Phone No. 314-298-8566
Fax No. 314-298-8757

Submitted To: Sara Champoux
Phone No. 509-373-5290
Fax No. 509-373-1788

ISSUE	PROPOSED RESOLUTION
Please see below for details regarding issues with volatiles analysis for the samples listed above.	1) Report results from the out of hold re-analysis for all samples. 2) Report results from the initial in hold analysis for all samples.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution (2): report results from the initial in-hold analysis for all samples.

J. G. Douglas 1/31/2011
Signature and Date

-Sample F1A110510-013 (B29HF0) had three surrogates outside the upper QC limit, indicating a high bias. Except for Chloroform at 5.8 ppb, the associated target compounds were less than the reporting limit.
-Sample F1A110510-014 (B29H71) had two surrogates outside the lower QC limit, indicating a low bias. Except for Chloroform at 8.4 ppb, the associated client target compounds were less than the reporting limit.
-Sample F1A110510-015 (B29H95) had three surrogates outside the upper QC limit, indicating a high bias. Except for Chloroform at 2.8 ppb, the associated client target compounds were less than the reporting limit.
All 3 samples were re-analyzed outside sample hold time (1-3 days), but had surrogate recoveries within the QC limits. All 3 samples had similar result for Chloroform.
-Sample F1A110510-013 (B29HF0) reports Chloroform at 3.4 ppb, F1A110510-014 (B29H71) reports Chloroform at 5.9 ppb and F1A110510-015 (B29H95) reports Chloroform at 1.6 ppb.

-Sample F1A110510-022 (B29H61) had low surrogate recoveries and all results are ND (below the MDL) The samples was re-analyzed outside hold time with all surrogate recoveries within QC limits and all results ND (below MDL).

-Sample FIA110510-025 (B29H48): the first analysis was outside the 12 hour clock on 01/17/11, it was re-analyzed on 01/21/11 and the auto sampler jammed. The sample was re-analyzed on

01/24/11 all surrogate recoveries are within QC limits and analyzed within the 12 hour clock but its 3 days out of the holding time.

50 lbs

CHPRC CWR 86 SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-3

Page 1 of 1

Collector: MS McCoy ~~CHPRC~~	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 32 194	Ice Chest No.: 6WS-107
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0664 2539
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H32	N	W	01/10/11	1200	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H32	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H32	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H32	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
MS McCoy CHPRC	1330 JAN 10 2011	SSU-1	1330 JAN 10 2011
SSU-	JAN 11 2011 0700	L.D. Wall CHPRC	JAN 11 2011 0700
L.D. Wall CHPRC	JAN 11 2011 1400	FEDEX	
Fed Ex		NICHOLAS OWENS	1/12/11 0915

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

SDG# SL1036

SL1036 CUL82

CHPRC

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-72

Collector: JOSH ARTZER, CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 38 / 10	Ice Chest No.: GWS-188
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 7169
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: ~~7943 0384 7169~~ N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time (7 D 4) Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H90	N	W	01-9-11	1150	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H90	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H90	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H90	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
JOSH ARTZER CHPRC	1250 JAN 09 2011	SSU #1	1250 JAN 09 2011
SSU- 1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	1430 JAN 10 2011	FEDEX	
FEDEX		NICHOLAS Davis	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-104

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: GWS-188
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 7169
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0384 7169~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HC0	N	W	1/7/11	1254	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HC0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HC0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HC0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			JAN 07 2011 1540	SSU-1			JAN 07 2011 1540
SSU-1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1430	FEDEX			
FEDEX				NICHOLAS OWENS		1/11/11	1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-40

Page 1 of 1

Collector FM Hall CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 381 9	**Ice Chest No.** GWS-252
Shipped To (Lab) TestAmerica St. Louis	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.**
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H66	N	W	JAN 07 2011	0845	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H66	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H66	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H66	N	W			2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H66	N	W	JAN 07 2011	0845	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC			1300 JAN 07 2011				1300 JAN 07 2011
SSIL 1			0800 1/10/11 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				NICHOLAS DUFFUS			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-184

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64 lbs

Collector J.S. Artzer CHRPC	Contact/Requester Karen Waters-Husted	Telephone No. 376-4650
SAF No. X11-016	Sampling Origin Hanford Site	Purchase Order/Charge Code 300104ES20
Project Title NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33/96	Ice Chest No. GWS-252
Shipped To (Lab) TestAmerica St. Louis	Method of Shipment Commercial Carrier	Bill of Lading/Air Bill No. 7966 3878 9580
Protocol CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No. N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HK0	N	W	01/07/11	1224	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HK0	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HK0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HK0	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0800 JAN 10 2011	SE Hamaker CHRPC	0800 JAN 10 2011
SE Hamaker CHRPC	1400 JAN 10 2011	FEDEX	
FEDEX		NICHOLAS OWENS	1/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-49

Page 1 of 1

Collector CA Snyder CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 3716	**Ice Chest No.** GWS-222-4
Shipped To (Lab) TestAmerica St. Louis	**Method of Shipment** Commercial Carrier	**Bill of Lading/Air Bill No.** 7966 3883 2849
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** ~~7966 3883 2849~~ N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H72	N	W	1/7/11	0730	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H72	N	W	|	|	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H72	N	W	|	|	1x20-mL P	Activity Scan	6 Months	None
B29H72	N	W	|	|	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H72	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1430 JAN 10 2011	FEDEX			
FEDEX				NICHOLAS OWENS		1/11/11	1008

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

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CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-16

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 3919	Ice Chest No.: GWS-222-4
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 2849
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 2849~~ MA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H47	N	W	1-9-11	1100	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H47	N	W	|	|	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H47	N	W	|	|	1x20-mL P	Activity Scan	6 Months	None
B29H47	N	W	|	|	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1230 JAN 09 2011	SSU- 1			1230 JAN 09 2011
SSU- 1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1430	FEDEX			
FedEx				NICHOLAS OWENS			1/11/11 1008

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-24

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: GUS-063
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0383 5945
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0383 5945~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** j-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H56	N	W	1/7/11	0945	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H56	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H56	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H56	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			JAN 07 2011 1540	SSU- 1			JAN 07 2011 1540
SSU- 1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1420	FEDEX			
FedEx				Nicholas Owens			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-128 (64/160)

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 371 6	Ice Chest No.: GWS-063
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 79430383 5945
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0383 5945~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HD5	N	W	1/7/11	1012	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HD5	N	W	|	|	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HD5	N	W	|	|	1x20-mL P	Activity Scan	6 Months	None
B29HD5	N	W	|	|	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29HD5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Date/Time	Received By	Date/Time
CA Snyder CHPRC (Print / Sign)	1300 JAN 07 2011	SSU- 1 (Print / Sign)	1300 JAN 07 2011
SSU- 1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	1430 JAN 10 2011	FEDEX	
FedEx		NICHOLAS OWENS	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-88

Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 391 8	Ice Chest No.: GWS-196
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 8856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3881 8856~~ HA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB0	N	W	1/7/11	1109	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HB0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HB0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HB0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			0920 JAN 10 2011	RT Sickle CHPRC			0920 JAN 10 2011
RT Sickle CHPRC			1470 JAN 10 2011	FEDEX			
FEDEX				Nicholas Owens			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-185

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Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 / 196	Ice Chest No.: GWS-196
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 8856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3881 8856~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HK1	N	W	01/07/11	1224	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HK1	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HK1	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HK1	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer, CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0920 JAN 10 2011	RT Sickle, CHPRC	0920 JAN 10 2011
RT Sickle, CHPRC	JAN 10 2011 1430	FEDEX	
FedEx		NICHOLAS OWENS	1/11/11 1000

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-11 (0010)

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39 / 9	Ice Chest No.: GWS-238
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3884 6856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3884 6856~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H42	N	W	1-9-11	0930	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H42	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H42	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H42	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
CA Snyder CHPRC	1230 JAN 09 2011	SSU- 1	1230 JAN 09 2011
SSU- 1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	0920 JAN 10 2011	FEDEX	
FedEx		Brian Daniels B-1	1/11/11 1000

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-64

Page 1 of 1

Collector: SE Hamaker CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 32 / 93	Ice Chest No.: GWS-238
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3884 6856
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3884 6856~~ N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H85	N	W	01/09/11	0854	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H85	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H85	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H85	N	W			2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H85	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
SE Hamaker CHPRC	SE Hamaker	1400 JAN 09 2011	SSU #1		1400 JAN 09 2011
SSU-1		0920 JAN 10 2011	RT Sickle CHPRC		0920 JAN 10 2011
RT Sickle CHPRC		1430 JAN 10 2011	FEDEX		
FedEx			Brian Daniels		1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-136

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 3716	Ice Chest No.: GWS-029
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3880 2776
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF0	N	W	1/7/11	1210	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HF0	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HF0	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HF0	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-48

Page 1 of 1

Collector: CA Snyder, CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 37 / 6	Ice Chest No.: GWS-029
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3880 2776
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H71	N	W	1/7/11	0913	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H71	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H71	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29H71	N	W	/	/	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29H71	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to ~~pH <2 Cool~4C~~

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU- 1			1300 JAN 07 2011
SSU- 1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-80

Page 1 of 1

Collector: JOSH ARTZER, CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 38 / 10	Ice Chest No.: GWS-115
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 1296
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0384 1296~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1404 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H95	N	W	01-9-11	1010	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H95	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H95	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H95	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
JOSH ARTZER CHPRC			JAN 09 2011 1250	SSU #1			JAN 09 2011 1250
SSU-1			JAN 10 2011 0920	RT Sickle CHPRC			JAN 10 2011 0920
RT Sickle CHPRC			JAN 10 2011 1430	FEDEX			
FedEx				Brian Daniels			1/11/11 1030

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SU036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-144

Page 1 of 1

Collector: JOSH ARTZER CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 38 / 10	Ice Chest No.: GWS-115
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7943 0384 1296
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7943 0384 1296~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF5	N	W	01-9-11	0904	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HF5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HF5	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HF5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
JOSH ARTZER CHPRC	1250 JAN 09 2011	SSU#1	1250 JAN 09 2011
SSU-1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	1430 JAN 10 2011	FEDEX	
FedEx		Brian Daniels	1/11/10 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-176

Page 1 of 1

74 lbs

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 / 196	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HJ5	N	W	01/07/11	1041	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HJ5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HJ5	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HJ5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer, CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0800 JAN 10 2011	S. Hamaker, CHPRC	0800 JAN 10 2011
S. Hamaker, CHPRC	1400 JAN 10 2011	FEDEX	
FedEx		Brian Daniels	1/11/11 1000

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-7

Page 1 of 1

Collector: D. R. Williamson CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 37 / 7	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H37	N	W	1-9-11	1016	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H37	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H37	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29H37	N	W	/	/	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
D. R. Williamson CHPRC			JAN 09 2011 / 1130	SSU #1		1/9/11	JAN 09 2011 / 1130
SSU #1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels		B-1	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-120

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 37/6	Ice Chest No.: GWS-154
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3881 0190
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HD0	N	W	1/7/11	1113	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HD0	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HD0	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HD0	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU-1			1300 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FEDEX				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-168

Page 1 of 1

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 196	Ice Chest No.: GWS-192
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3879 6538
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HJ0	N	W	01/07/11	0918	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HJ0	N	W	↓	↓	2x1-L aG	8310_SVOA_HPLC	14/40 Days	Cool~4C
B29HJ0	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer, CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0800 JAN 10 2011	SE Hamaker, CHPRC	0800 JAN 10 2011
SE Hamaker, CHPRC	1400 JAN 10 2011	FEDEX	
FedEx		Brian Daniels	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-160

Page 1 of 1

66lbs

Collector: FM Hall CHPRC F. HALL	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 381 9	Ice Chest No.: GWS-192
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3879 6538
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HH5	N	W	JAN 07 2011	1157	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HH5	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HH5	N	W			1x20-mL P	Activity Scan	6 Months	None
B29HH5	N	W	JAN 07 2011	1157	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC			1300 JAN 07 2011	SSutt			1300 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1400 JAN 10 2011	FEDEX			
FedEx				Brian Daniels			1/11/11 1000

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

SDG# SL1036

CHPRC SL036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-32

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6/105

Collector: SE Hamaker	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: CHPRC X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No.: HNF-N-506 32 / 93	Ice Chest No.: GWS-16
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3882 5571
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3882 5571~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H61	N	W	01/09/11	1255	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H61	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H61	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29H61	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
SE Hamaker CHPRC	Scott Hamaker	1400 JAN 09 2011	SSU #1		1400 JAN 09 2011
SSU-1		0920 JAN 10 2011	RT Sickle CHPRC		0920 JAN 10 2011
RT Sickle CHPRC		1430 JAN 10 2011	FEDEX		
FedEx			Brian Daniels		1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

TestAmerica St. Louis

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-112

Page 1 of 1

Collector: SE Hamaker CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 32 193	Ice Chest No.: GWS-110
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3882 5571
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: NA ~~7966 3882 5571~~

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HC5	N	W	01/09/11	1043	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HC5	N	W	↓	↓	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HC5	N	W	↓	↓	1x20-mL P	Activity Scan	6 Months	None
B29HC5	N	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
SE Hamaker CHPRC	1400 JAN 09 2011	SSU #2	1400 JAN 09 2011
SSU- 1	0920 JAN 10 2011	RT Sickle CHPRC	0920 JAN 10 2011
RT Sickle CHPRC	1430 JAN 10 2011	FEDEX	
Fedex		Brian Daniels B-1	1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-96

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60105

Collector: Halse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: GWS-500
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 9670
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 9670~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB5	N	W	1/7/11	1048	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29HB5	N	W	/	/	2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29HB5	N	W	/	/	1x20-mL P	Activity Scan	6 Months	None
B29HB5	N	W	✓	✓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Halse	KS Halse		1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			1-10-11 0920	R.T. Sickle			1-10-11 0920
R.T. Sickle			1-10-11 1430	Fed Ex			
Fed Ex				Brian Daniels			1/11/11 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION
Disposal Method (e.g., Return to customer, per lab procedure, used in process)
Disposed By
Date/Time

A-6004-842 (REV 2)

CHPRC SL1036

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-17

Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 J9 / 9	Ice Chest No.: GWS-500
Shipped To (Lab): TestAmerica St. Louis	Method of Shipment: Commercial Carrier	Bill of Lading/Air Bill No.: 7966 3883 9670
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: ~~7966 3883 9670~~ NA

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** 1-10-11 Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H48	N	W	1-9-11	1100	3x1-L aG	8270_SVOA_GCMS_IX: List-2 (124)	7/40 Days	Cool~4C
B29H48	N	W			2x1-L aG	8081_PEST_GC: List-1 (19)	7/40 Days	Cool~4C
B29H48	N	W			1x20-mL P	Activity Scan	6 Months	None
B29H48	N	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (55); VOA - 8260 (Add-On)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1230 JAN 09 2011	SSU- 1			JAN 09 2011 1230
SSU-1			1-10-11 0920	RT. SICKLE			1-10-11 0920
RT. SICKLE			1-10-11 1430	FedEx			
FedEx				Brian Daniels			1/11/10 1000

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

Appendix 5

Data Validation Supporting Documentation

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: CERC11			DATA PACKAGE: VSR11-049		
VALIDATOR: Carl Schloesslin		LAB: TestAmerica		DATE: 7-14-2011	
			SDG: SL1036		
ANALYSES PERFORMED					
SW-846 8081	SW-846 8081 (TCLP)	SW-846 8082	SW-846 8081 (TCLP)	SW-846 8310 X	
SAMPLES/MATRIX Water samples B29H66, B29H72, B29HD5, B29H85, B29H71, B29HJ0					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments: None

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:

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: None

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:

LCS and MS/MSD recovery infractions: see attached annotated QC summary forms

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:

MS/MSD RPD infraction: see attached annotated QC summary forms

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: None

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: None

9. SAMPLE CLEANUP (Levels D and E)

Fluorisil ® (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:

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC

Client Lot #...: SL1036 **Work Order #...:** MC80W1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A120000-098
Prep Date.....: 01/12/11 **Analysis Date..:** 01/18/11
Prep Batch #...: 1012098
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	20.0	12.7	ug/L	64	SW846 8310
Acenaphthylene	40.0	27.3	ug/L	68	SW846 8310
Anthracene	2.00	1.46	ug/L	73	SW846 8310
Benzo(a)anthracene	2.00	1.75	ug/L	87	SW846 8310
Benzo(b)fluoranthene	4.00	3.57	ug/L	89	SW846 8310
Benzo(k)fluoranthene	2.00	1.72	ug/L	86	SW846 8310
Benzo(ghi)perylene	4.00	3.58	ug/L	89	SW846 8310
Benzo(a)pyrene	2.00	1.56	ug/L	78	SW846 8310
Chrysene	2.00	1.72	ug/L	86	SW846 8310
Dibenz(a,h)anthracene	4.00	3.49	ug/L	87	SW846 8310
Fluoranthene	4.00	3.12	ug/L	78	SW846 8310
Fluorene	4.00	2.86	ug/L	71	SW846 8310
Indeno(1,2,3-cd)pyrene	2.00	1.72	ug/L	86	SW846 8310
Naphthalene	20.0	11.0	ug/L	55	SW846 8310
Phenanthrene	2.00	1.56	ug/L	78	SW846 8310
Pyrene	2.00	1.72	ug/L	86	SW846 8310

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	88	(56 - 108)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC

Client Lot #...: SL1036 **Work Order #...:** MC8C61AG-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-003 MC8C61AH-MSD
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/18/11
Prep Batch #...: 1012098
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	ND	24.0	15.2	ug/L	63		SW846 8310
	ND	22.5	13.5	ug/L	60	12	SW846 8310
Acenaphthylene	ND	48.1	35.1	ug/L	73		SW846 8310
	ND	45.0	31.6	ug/L	70	11	SW846 8310
Anthracene	ND	2.40	1.93	ug/L	80		SW846 8310
	ND	2.25	1.72	ug/L	76	12	SW846 8310
Benzo(a)anthracene	ND	2.40	1.71	ug/L	71		SW846 8310
	ND	2.25	1.61	ug/L	71	6.3	SW846 8310
Benzo(b)fluoranthene	ND	4.81	4.03	ug/L	84		SW846 8310
	ND	4.50	3.54	ug/L	79	13	SW846 8310
Benzo(k)fluoranthene	ND	2.40	1.97	ug/L	82		SW846 8310
	ND	2.25	1.74	ug/L	77	12	SW846 8310
Benzo(ghi)perylene	ND	4.81	4.23	ug/L	88		SW846 8310
	ND	4.50	3.54	ug/L	79	18	SW846 8310
Benzo(a)pyrene	ND	2.40	1.88	ug/L	78		SW846 8310
	ND	2.25	1.70	ug/L	76	10	SW846 8310
Chrysene	ND	2.40	7.13	ug/L	297		SW846 8310
		Qualifiers:	N				
	ND	2.25	3.03	ug/L	134	81	SW846 8310
		Qualifiers:	N				
Dibenz(a,h)anthracene	ND	4.81	4.31	ug/L	90		SW846 8310
	ND	4.50	3.53	ug/L	78	20	SW846 8310
Fluoranthene	ND	4.81	3.85	ug/L	80		SW846 8310
	ND	4.50	3.43	ug/L	76	11	SW846 8310
Fluorene	ND	4.81	3.52	ug/L	73		SW846 8310
	ND	4.50	3.15	ug/L	70	11	SW846 8310
Indeno(1,2,3-cd)pyrene	ND	2.40	1.91	ug/L	79		SW846 8310
	ND	2.25	1.66	ug/L	74	14	SW846 8310
Naphthalene	ND	24.0	13.9	ug/L	58		SW846 8310
	ND	22.5	12.9	ug/L	57	7.7	SW846 8310
Phenanthrene	ND	2.40	2.18	ug/L	91		SW846 8310
	ND	2.25	1.92	ug/L	85	13	SW846 8310
Pyrene	0.95	2.40	2.97	ug/L	84		SW846 8310
	0.95	2.25	2.20	ug/L	56	30	SW846 8310

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	84	(60 - 98)
	79	(60 - 98)

(Continued on next page)

Appendix 6

Additional Documentation Requested By Client

METHOD BLANK REPORT

HPLC

Client Lot #...: SL1036 **Work Order #...:** MC80W1AA **Matrix.....:** WATER
MB Lot-Sample #: F1A120000-098

Prep Date.....: 01/12/11
Analysis Date..: 01/18/11 **Prep Batch #...:** 1012098
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acenaphthene	ND	5.0	ug/L	SW846 8310
Acenaphthylene	ND	5.0	ug/L	SW846 8310
Anthracene	ND	1.0	ug/L	SW846 8310
Benzo(a)anthracene	ND	1.0	ug/L	SW846 8310
Benzo(b)fluoranthene	ND	1.0	ug/L	SW846 8310
Benzo(k)fluoranthene	ND	1.0	ug/L	SW846 8310
Benzo(ghi)perylene	ND	1.0	ug/L	SW846 8310
Benzo(a)pyrene	ND	1.0	ug/L	SW846 8310
Chrysene	ND	1.0	ug/L	SW846 8310
Dibenz(a,h)anthracene	ND	1.0	ug/L	SW846 8310
Fluoranthene	ND	1.0	ug/L	SW846 8310
Fluorene	ND	1.0	ug/L	SW846 8310
Indeno(1,2,3-cd)pyrene	ND	1.0	ug/L	SW846 8310
Naphthalene	ND	5.0	ug/L	SW846 8310
Phenanthrene	ND	1.0	ug/L	SW846 8310
Pyrene	ND	1.0	ug/L	SW846 8310

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	78	(60 - 98)

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC

Client Lot #...: SL1036 **Work Order #...:** MC80W1AC **Matrix.....:** WATER
LCS Lot-Sample#: F1A120000-098
Prep Date.....: 01/12/11 **Analysis Date..:** 01/18/11
Prep Batch #...: 1012098
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Acenaphthene	**20.0**	**12.7**	**ug/L**	**64**	**SW846 8310**
Acenaphthylene	**40.0**	**27.3**	**ug/L**	**68**	**SW846 8310**
Anthracene	**2.00**	**1.46**	**ug/L**	**73**	**SW846 8310**
Benzo(a)anthracene	**2.00**	**1.75**	**ug/L**	**87**	**SW846 8310**
Benzo(b)fluoranthene	**4.00**	**3.57**	**ug/L**	**89**	**SW846 8310**
Benzo(k)fluoranthene	**2.00**	**1.72**	**ug/L**	**86**	**SW846 8310**
Benzo(ghi)perylene	**4.00**	**3.58**	**ug/L**	**89**	**SW846 8310**
Benzo(a)pyrene	**2.00**	**1.56**	**ug/L**	**78**	**SW846 8310**
Chrysene	**2.00**	**1.72**	**ug/L**	**86**	**SW846 8310**
Dibenz(a,h)anthracene	**4.00**	**3.49**	**ug/L**	**87**	**SW846 8310**
Fluoranthene	**4.00**	**3.12**	**ug/L**	**78**	**SW846 8310**
Fluorene	**4.00**	**2.86**	**ug/L**	**71**	**SW846 8310**
Indeno(1,2,3-cd)pyrene	**2.00**	**1.72**	**ug/L**	**86**	**SW846 8310**
Naphthalene	**20.0**	**11.0**	**ug/L**	**55**	**SW846 8310**
Phenanthrene	**2.00**	**1.56**	**ug/L**	**78**	**SW846 8310**
Pyrene	**2.00**	**1.72**	**ug/L**	**86**	**SW846 8310**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	88	(56 - 108)

NOTE(S):

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

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC

Client Lot #...: SL1036 **Work Order #...:** MC8C61AG-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-003 MC8C61AH-MSD
Date Sampled...: 01/07/11 **Date Received..:** 01/11/11
Prep Date.....: 01/12/11 **Analysis Date..:** 01/18/11
Prep Batch #...: 1012098
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Acenaphthene	ND	24.0	15.2	ug/L	63		SW846 8310
	ND	22.5	13.5	ug/L	60	12	SW846 8310
Acenaphthylene	ND	48.1	35.1	ug/L	73		SW846 8310
	ND	45.0	31.6	ug/L	70	11	SW846 8310
Anthracene	ND	2.40	1.93	ug/L	80		SW846 8310
	ND	2.25	1.72	ug/L	76	12	SW846 8310
Benzo(a)anthracene	ND	2.40	1.71	ug/L	71		SW846 8310
	ND	2.25	1.61	ug/L	71	6.3	SW846 8310
Benzo(b)fluoranthene	ND	4.81	4.03	ug/L	84		SW846 8310
	ND	4.50	3.54	ug/L	79	13	SW846 8310
Benzo(k)fluoranthene	ND	2.40	1.97	ug/L	82		SW846 8310
	ND	2.25	1.74	ug/L	77	12	SW846 8310
Benzo(ghi)perylene	ND	4.81	4.23	ug/L	88		SW846 8310
	ND	4.50	3.54	ug/L	79	18	SW846 8310
Benzo(a)pyrene	ND	2.40	1.88	ug/L	78		SW846 8310
	ND	2.25	1.70	ug/L	76	10	SW846 8310
Chrysene	ND	2.40	7.13	ug/L	297		SW846 8310
		Qualifiers:	N				
	ND	2.25	3.03	ug/L	134	81	SW846 8310
		Qualifiers:	N				
Dibenz(a,h)anthracene	ND	4.81	4.31	ug/L	90		SW846 8310
	ND	4.50	3.53	ug/L	78	20	SW846 8310
Fluoranthene	ND	4.81	3.85	ug/L	80		SW846 8310
	ND	4.50	3.43	ug/L	76	11	SW846 8310
Fluorene	ND	4.81	3.52	ug/L	73		SW846 8310
	ND	4.50	3.15	ug/L	70	11	SW846 8310
Indeno(1,2,3-cd)pyrene	ND	2.40	1.91	ug/L	79		SW846 8310
	ND	2.25	1.66	ug/L	74	14	SW846 8310
Naphthalene	ND	24.0	13.9	ug/L	58		SW846 8310
	ND	22.5	12.9	ug/L	57	7.7	SW846 8310
Phenanthrene	ND	2.40	2.18	ug/L	91		SW846 8310
	ND	2.25	1.92	ug/L	85	13	SW846 8310
Pyrene	0.95	2.40	2.97	ug/L	84		SW846 8310
	0.95	2.25	2.20	ug/L	56	30	SW846 8310

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
p-Terphenyl	84	(60 - 98)
	79	(60 - 98)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

HPLC

Client Lot #...: SL1036 **Work Order #...:** MC8C61AG-MS **Matrix.....:** WATER
MS Lot-Sample #: F1A110510-003 MC8C61AH-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

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

Bold print denotes control parameters

N Spiked analyte recovery is outside stated control limits.

Date: 14 July 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: CERC11
Subject: Inorganics - Sample Data Groups (SDGs) WSCF111069 and WSCF111207

INTRODUCTION

This memorandum presents the results of data validation for SDGs WSCF111069 and WSCF111207 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B29H52	1-07-2011	Water	C	6010C, 200.8
B29HB1	1-07-2011	Water	C	6010C, 200.8
B29HB6	1-07-2011	Water	C	6010C, 200.8
B29H96	1-07-2011	Water	C	6010C, 200.8
B29H53	1-07-2011	Water	C	6010C, 200.8
B29HB2	1-07-2011	Water	C	6010C, 200.8
B29HB7	1-07-2011	Water	C	6010C, 200.8
B29H97	1-07-2011	Water	C	6010C, 200.8
B29HF6	1-18-2011	Water	C	6010C, 200.8
B29HF7	1-18-2011	Water	C	6010C, 200.8

Data validation was conducted in accordance with the CHPRC validation statement of work and the Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study, DOE/RL-2009-42, Rev. 0 (SAP). 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 OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirement for ICP metals are analysis within 180 days of sample collection, and the holding time requirement for mercury is analysis within 28 days of sample collection. Sample preservation requires acid preservation with nitric acid to pH <2.

The samples were analyzed within the prescribed holding times and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable with the following exceptions.

For SDG WSCF111069, batches 176169 and 176265, the Na laboratory blank results were > the method detection limit (MDL) but < the reporting limit (RL). The Na results for all associated samples were well above the RL and should not be qualified.

For SDG WSCF111069, batch 176169, the Si laboratory blank result was > the RL. The Si results for all associated samples were >10X the blank result and should not be qualified.

For SDG WSCF111207, the Na laboratory blank result was > the MDL but < the RL. The Na results for samples B29HF6 and B29HF7 were well above the RL and should not be qualified.

Trip Blanks

No trip blanks were submitted for validation.

Field Blanks

No field blanks were submitted for validation.

Equipment Blanks

No equipment blanks were submitted for validation.

- **Accuracy**

Accuracy is evaluated by reviewing matrix spike sample results and laboratory control sample results. According to the SAP, the matrix spike sample and laboratory control sample accuracy limits are 80% to 120%. The limits for reported analytes not listed in the SAP are specified by the DV procedure.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

All MS/MSD recoveries were acceptable with the following exceptions.

For SDG WSCF111069, batch 176256, the 6010C MS and MSD recoveries for Tl were < the lower acceptance limit. The 6010C Tl results for samples B29H96, B29H53, B29HB2, B29HB7 and B29H97 were non-detects and should be qualified as estimates and flagged "UJ."

For SDG WSCF111207, the 6010C MS recovery for Tl was < the lower acceptance limit. The 6010C Tl results for samples B29HF6 and B29HF7 were non-detects and should be qualified as estimates and flagged "UJ."

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable with the following exception.

For SDG WSCF111069, batch 176169, the LCS recovery for K was > the upper acceptance limit. The K results for samples B29H52, B29HB1 and B29HB6 were detects and should be qualified as estimates and flagged "J+."

- **Precision**

Precision is evaluated by reviewing MS/MSD results, field duplicate sample results and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limits are ±20%. The limits for reported analytes not listed in the SAP are specified by the DV procedure. When duplicate RPDs exceed the limits and have associated results <5X the reporting limits with differences <1X the reporting limits no precision infraction occurred.

MS/MSD Samples

All MS/MSD RPD values were acceptable.

Field Duplicate Samples

No field duplicates were submitted for validation.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs with associated non-detected sample results were below the CRDLs with the following exceptions.

For SDGs WSCF111069 and WSCF111207, the B and Mn MDLs for all samples were greater than the CRDLs.

- **Completeness**

SDGs WSCF111069 and WSCF111207 were 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

Minor deficiencies leading to qualification of sample results as estimates were due low MS and/or MSD recoveries for Tl and a high LCS recovery for K. See the table in Appendix 2 for a listing of all affected sample results.

REFERENCES

GRP-GD-003, Rev. 0, Change 0, *Data Validation for Chemical Analyses*, August 2010.

DOE/RL-2009-42, Rev. 0, *Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study*, December 2010.

Appendix 1

Glossary of Data Reporting Qualifiers

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

- **U** — The constituent was analyzed for, but was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the RL. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J+** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J-** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **N** — The analysis indicates the presence of an analyte that has been tentatively identified.

- **NJ** — The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.

- **NJ+** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation.

- **NJ-** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

Inorganic Data Qualification Summary			
SDGs: WSCF111069 & WSCF111207	Reviewer: AQA	Project: CERC11	Page 1 of 1
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
Tl (method 6010C)	UJ	B29H96, B29H53, B29HB2, B29HB7, B29H97, B29HF6, B29HF7	Low MS and/or MSD recoveries
K	J+	B29H52, B29HB1, B29HB6	High LCS recovery

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069005
SAF# X11-016
Sample ID B29H52

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**01/31/11**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	U	<19		ug/L	1	19	95	02/07/11
Iron	7439-89-6	LA-505-411	U	<38		ug/L	1	38	190	02/07/11
Magnesium	7439-95-4	LA-505-411		12500		ug/L	1	14	70	02/07/11
Manganese	7439-96-5	LA-505-411	U	<6.0		ug/L	1	6.0	30	02/07/11
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Potassium	7440-09-7	LA-505-411	X	3070 J+		ug/L	1	73	360	02/07/11
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	02/07/11
Sodium	7440-23-5	LA-505-411		6660		ug/L	1	11	55	02/07/11
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	02/07/11
Barium	7440-39-3	LA-505-411		51.0		ug/L	1	4.0	20	02/07/11
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	02/07/11
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Copper	7440-50-8	LA-505-411	U	<5.0		ug/L	1	5.0	25	02/07/11
Vanadium	7440-62-2	LA-505-411	U	<17		ug/L	1	17	85	02/07/11
Zinc	7440-66-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Calcium	7440-70-2	LA-505-411		70100		ug/L	1	28	140	02/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
7-14-2011

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069005
SAF# X11-016
Sample ID B29H52

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	02/07/11
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Molybdenum	7439-98-7	LA-505-411	B	7.00		ug/L	1	4.0	20	02/07/11
Strontium	7440-24-6	LA-505-411		368		ug/L	1	4.0	20	02/07/11
Thallium	7440-28-0	LA-505-411	U	<49		ug/L	1	49	240	02/07/11
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	02/07/11
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	02/07/11
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	02/07/11
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	02/07/11
Silicon	7440-21-3	LA-505-411		9610		ug/L	1	25	120	02/07/11
Phosphorus	7723-14-0	LA-505-411	U	<72		ug/L	1	72	360	02/07/11
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	02/07/11
ICPMS Prep										**01/18/11**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	BD	28.6		ug/L	2	10	200	01/21/11
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	01/21/11
Barium	7440-39-3	LA-505-412	D	41.9		ug/L	2	0.40	4.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069005
SAF# X11-016
Sample ID B29H52

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Chromium	7440-47-3	LA-505-412	BD	3.81		ug/L	2	1.0	10	01/21/11
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	01/21/11
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	01/21/11
Molybdenum	7439-98-7	LA-505-412	BD	0.873		ug/L	2	0.10	1.0	01/21/11
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Arsenic	7440-38-2	LA-505-412	BD	1.38		ug/L	2	0.80	8.0	01/21/11
Selenium	7782-49-2	LA-505-412	BD	1.85		ug/L	2	0.60	6.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069006
SAF# X11-016
Sample ID B29HB1

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**01/31/11**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	U	<19		ug/L	1	19	95	02/07/11
Iron	7439-89-6	LA-505-411	U	<38		ug/L	1	38	190	02/07/11
Magnesium	7439-95-4	LA-505-411		8850		ug/L	1	14	70	02/07/11
Manganese	7439-96-5	LA-505-411	U	<6.0		ug/L	1	6.0	30	02/07/11
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Potassium	7440-09-7	LA-505-411	X	3520 J+		ug/L	1	73	360	02/07/11
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	02/07/11
Sodium	7440-23-5	LA-505-411		8190		ug/L	1	11	55	02/07/11
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	02/07/11
Barium	7440-39-3	LA-505-411		26.0		ug/L	1	4.0	20	02/07/11
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	02/07/11
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Copper	7440-50-8	LA-505-411	U	<5.0		ug/L	1	5.0	25	02/07/11
Vanadium	7440-62-2	LA-505-411	B	23.0		ug/L	1	17	85	02/07/11
Zinc	7440-66-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Calcium	7440-70-2	LA-505-411		28800		ug/L	1	28	140	02/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
7-14-2011

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069006
SAF# X11-016
Sample ID B29HB1

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	02/07/11
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Molybdenum	7439-98-7	LA-505-411	B	6.00		ug/L	1	4.0	20	02/07/11
Strontium	7440-24-6	LA-505-411		204		ug/L	1	4.0	20	02/07/11
Thallium	7440-28-0	LA-505-411	U	<49		ug/L	1	49	240	02/07/11
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	02/07/11
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	02/07/11
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	02/07/11
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	02/07/11
Silicon	7440-21-3	LA-505-411		13100		ug/L	1	25	120	02/07/11
Phosphorus	7723-14-0	LA-505-411	U	<72		ug/L	1	72	360	02/07/11
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	02/07/11
ICPMS Prep										**01/18/11**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	200	01/21/11
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	01/21/11
Barium	7440-39-3	LA-505-412	D	21.9		ug/L	2	0.40	4.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069006
SAF# X11-016
Sample ID B29HB1

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Chromium	7440-47-3	LA-505-412	BD	4.54		ug/L	2	1.0	10	01/21/11
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	01/21/11
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	01/21/11
Molybdenum	7439-98-7	LA-505-412	D	2.07		ug/L	2	0.10	1.0	01/21/11
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Arsenic	7440-38-2	LA-505-412	BD	3.49		ug/L	2	0.80	8.0	01/21/11
Selenium	7782-49-2	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069007
SAF# X11-016
Sample ID B29HB6

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**01/31/11**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	U	<19		ug/L	1	19	95	02/07/11
Iron	7439-89-6	LA-505-411	U	<38		ug/L	1	38	190	02/07/11
Magnesium	7439-95-4	LA-505-411		30500		ug/L	1	14	70	02/07/11
Manganese	7439-96-5	LA-505-411	U	<6.0		ug/L	1	6.0	30	02/07/11
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Potassium	7440-09-7	LA-505-411	X	4540 J+		ug/L	1	73	360	02/07/11
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	02/07/11
Sodium	7440-23-5	LA-505-411		7560		ug/L	1	11	55	02/07/11
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	02/07/11
Barium	7440-39-3	LA-505-411		197		ug/L	1	4.0	20	02/07/11
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	02/07/11
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Copper	7440-50-8	LA-505-411	B	6.00		ug/L	1	5.0	25	02/07/11
Vanadium	7440-62-2	LA-505-411	U	<17		ug/L	1	17	85	02/07/11
Zinc	7440-66-6	LA-505-411	B	17.0		ug/L	1	4.0	20	02/07/11
Calcium	7440-70-2	LA-505-411		1.88E5		ug/L	1	28	140	02/07/11

MDL = Minimum Detection
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TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

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C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
7-14-2011

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069007
SAF# X11-016
Sample ID B29HB6

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	02/07/11
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Molybdenum	7439-98-7	LA-505-411	B	4.00		ug/L	1	4.0	20	02/07/11
Strontium	7440-24-6	LA-505-411		751		ug/L	1	4.0	20	02/07/11
Thallium	7440-28-0	LA-505-411	U	<49		ug/L	1	49	240	02/07/11
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	02/07/11
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	02/07/11
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/07/11
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	02/07/11
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	02/07/11
Silicon	7440-21-3	LA-505-411		8800		ug/L	1	25	120	02/07/11
Phosphorus	7723-14-0	LA-505-411	U	<72		ug/L	1	72	360	02/07/11
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	02/07/11
ICPMS Prep										**01/18/11**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	200	01/21/11
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Antimony	7440-36-0	LA-505-412	BD	5.12		ug/L	2	0.60	6.0	01/21/11
Barium	7440-39-3	LA-505-412	D	158		ug/L	2	0.40	4.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069007
SAF# X11-016
Sample ID B29HB6

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Chromium	7440-47-3	LA-505-412	BD	4.91		ug/L	2	1.0	10	01/21/11
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	01/21/11
Copper	7440-50-8	LA-505-412	D	3.56		ug/L	2	0.20	2.0	01/21/11
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	01/21/11
Molybdenum	7439-98-7	LA-505-412	BD	0.571		ug/L	2	0.10	1.0	01/21/11
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Arsenic	7440-38-2	LA-505-412	UD	<0.80		ug/L	2	0.80	8.0	01/21/11
Selenium	7782-49-2	LA-505-412	BD	2.74		ug/L	2	0.60	6.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069008
SAF# X11-016
Sample ID B29H96

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**01/31/11**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	U	<19		ug/L	1	19	95	02/08/11
Iron	7439-89-6	LA-505-411	U	<38		ug/L	1	38	190	02/08/11
Magnesium	7439-95-4	LA-505-411		13800		ug/L	1	14	70	02/08/11
Manganese	7439-96-5	LA-505-411	U	<6.0		ug/L	1	6.0	30	02/08/11
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Potassium	7440-09-7	LA-505-411		4130		ug/L	1	73	360	02/08/11
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	02/08/11
Sodium	7440-23-5	LA-505-411		9990		ug/L	1	11	55	02/08/11
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	02/08/11
Barium	7440-39-3	LA-505-411		36.0		ug/L	1	4.0	20	02/08/11
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	02/08/11
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Copper	7440-50-8	LA-505-411	U	<5.0		ug/L	1	5.0	25	02/08/11
Vanadium	7440-62-2	LA-505-411	B	18.0		ug/L	1	17	85	02/08/11
Zinc	7440-66-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Calcium	7440-70-2	LA-505-411		46900		ug/L	1	28	140	02/08/11

MDL = Minimum Detection
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B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069008
SAF# X11-016
Sample ID B29H96

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	02/08/11
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Molybdenum	7439-98-7	LA-505-411	B	10.0		ug/L	1	4.0	20	02/08/11
Strontium	7440-24-6	LA-505-411		335		ug/L	1	4.0	20	02/08/11
Thallium	7440-28-0	LA-505-411	U	<49 UJ		ug/L	1	49	240	02/08/11
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	02/08/11
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	02/08/11
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	02/08/11
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	02/08/11
Silicon	7440-21-3	LA-505-411		15600		ug/L	1	25	120	02/08/11
Phosphorus	7723-14-0	LA-505-411	U	<72		ug/L	1	72	360	02/08/11
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	02/08/11
ICPMS Prep										**01/18/11**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	200	01/21/11
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	01/21/11
Barium	7440-39-3	LA-505-412	D	33.5		ug/L	2	0.40	4.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
7-14-2011

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069008
SAF# X11-016
Sample ID B29H96

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Chromium	7440-47-3	LA-505-412	D	12.3		ug/L	2	1.0	10	01/21/11
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	01/21/11
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	01/21/11
Molybdenum	7439-98-7	LA-505-412	D	2.55		ug/L	2	0.10	1.0	01/21/11
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Arsenic	7440-38-2	LA-505-412	BD	4.02		ug/L	2	0.80	8.0	01/21/11
Selenium	7782-49-2	LA-505-412	BD	0.821		ug/L	2	0.60	6.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
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C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069009
SAF# X11-016
Sample ID B29H53

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**01/31/11**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	B	20.0		ug/L	1	19	95	02/08/11
Iron	7439-89-6	LA-505-411	U	<38		ug/L	1	38	190	02/08/11
Magnesium	7439-95-4	LA-505-411		11200		ug/L	1	14	70	02/08/11
Manganese	7439-96-5	LA-505-411	U	<6.0		ug/L	1	6.0	30	02/08/11
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Potassium	7440-09-7	LA-505-411		2790		ug/L	1	73	360	02/08/11
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	02/08/11
Sodium	7440-23-5	LA-505-411		5930		ug/L	1	11	55	02/08/11
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	02/08/11
Barium	7440-39-3	LA-505-411		46.0		ug/L	1	4.0	20	02/08/11
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	02/08/11
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Copper	7440-50-8	LA-505-411	U	<5.0		ug/L	1	5.0	25	02/08/11
Vanadium	7440-62-2	LA-505-411	U	<17		ug/L	1	17	85	02/08/11
Zinc	7440-66-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Calcium	7440-70-2	LA-505-411		64200		ug/L	1	28	140	02/08/11

MDL = Minimum Detection
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TP Err = Total Propagated
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C - Analyte was found in the Associated Blank. (Inorganic)
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N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069009
SAF# X11-016
Sample ID B29H53

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	02/08/11
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Molybdenum	7439-98-7	LA-505-411	B	4.00		ug/L	1	4.0	20	02/08/11
Strontium	7440-24-6	LA-505-411		328		ug/L	1	4.0	20	02/08/11
Thallium	7440-28-0	LA-505-411	U	<49 UJ		ug/L	1	49	240	02/08/11
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	02/08/11
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	02/08/11
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	02/08/11
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	02/08/11
Silicon	7440-21-3	LA-505-411		8900		ug/L	1	25	120	02/08/11
Phosphorus	7723-14-0	LA-505-411	U	<72		ug/L	1	72	360	02/08/11
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	02/08/11
ICPMS Prep										**01/18/11**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	BD	13.4		ug/L	2	10	200	01/21/11
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	01/21/11
Barium	7440-39-3	LA-505-412	D	42.4		ug/L	2	0.40	4.0	01/21/11

MDL = Minimum Detection
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B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
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LS
7-14-2011

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069009
SAF# X11-016
Sample ID B29H53

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Chromium	7440-47-3	LA-505-412	BD	4.82		ug/L	2	1.0	10	01/21/11
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	01/21/11
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	01/21/11
Molybdenum	7439-98-7	LA-505-412	BD	0.923		ug/L	2	0.10	1.0	01/21/11
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Uranium	7440-61-1	LA-505-412	D	0.701		ug/L	2	0.10	0.40	01/21/11
Arsenic	7440-38-2	LA-505-412	BD	1.47		ug/L	2	0.80	8.0	01/21/11
Selenium	7782-49-2	LA-505-412	BD	1.62		ug/L	2	0.60	6.0	01/21/11

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U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069010
SAF# X11-016
Sample ID B29HB2

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**01/31/11**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	U	<19		ug/L	1	19	95	02/08/11
Iron	7439-89-6	LA-505-411	U	<38		ug/L	1	38	190	02/08/11
Magnesium	7439-95-4	LA-505-411		8240		ug/L	1	14	70	02/08/11
Manganese	7439-96-5	LA-505-411	U	<6.0		ug/L	1	6.0	30	02/08/11
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Potassium	7440-09-7	LA-505-411		3300		ug/L	1	73	360	02/08/11
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	02/08/11
Sodium	7440-23-5	LA-505-411		7780		ug/L	1	11	55	02/08/11
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	02/08/11
Barium	7440-39-3	LA-505-411		25.0		ug/L	1	4.0	20	02/08/11
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	02/08/11
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Copper	7440-50-8	LA-505-411	U	<5.0		ug/L	1	5.0	25	02/08/11
Vanadium	7440-62-2	LA-505-411	U	<17		ug/L	1	17	85	02/08/11
Zinc	7440-66-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Calcium	7440-70-2	LA-505-411		26400		ug/L	1	28	140	02/08/11

MDL = Minimum Detection
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TP Err = Total Propagated
DF = Dilution Factor
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N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069010
SAF# X11-016
Sample ID B29HB2

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	02/08/11
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Molybdenum	7439-98-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Strontium	7440-24-6	LA-505-411		194		ug/L	1	4.0	20	02/08/11
Thallium	7440-28-0	LA-505-411	U	<49 UJ		ug/L	1	49	240	02/08/11
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	02/08/11
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	02/08/11
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	02/08/11
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	02/08/11
Silicon	7440-21-3	LA-505-411		12700		ug/L	1	25	120	02/08/11
Phosphorus	7723-14-0	LA-505-411	U	<72		ug/L	1	72	360	02/08/11
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	02/08/11
ICPMS Prep										**01/18/11**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	BD	12.0		ug/L	2	10	200	01/21/11
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	01/21/11
Barium	7440-39-3	LA-505-412	D	21.7		ug/L	2	0.40	4.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
7-14-2011

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069010
SAF# X11-016
Sample ID B29HB2

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Chromium	7440-47-3	LA-505-412	BD	4.69		ug/L	2	1.0	10	01/21/11
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	01/21/11
Copper	7440-50-8	LA-505-412	BD	0.369		ug/L	2	0.20	2.0	01/21/11
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	01/21/11
Molybdenum	7439-98-7	LA-505-412	D	1.92		ug/L	2	0.10	1.0	01/21/11
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Uranium	7440-61-1	LA-505-412	D	0.911		ug/L	2	0.10	0.40	01/21/11
Arsenic	7440-38-2	LA-505-412	BD	3.47		ug/L	2	0.80	8.0	01/21/11
Selenium	7782-49-2	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069011
SAF# X11-016
Sample ID B29HB7

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**01/31/11**
ICP-AES										
Aluminum	7429-90-5	LA-505-411		3030		ug/L	1	19	95	02/08/11
Iron	7439-89-6	LA-505-411		5010		ug/L	1	38	190	02/08/11
Magnesium	7439-95-4	LA-505-411		30500		ug/L	1	14	70	02/08/11
Manganese	7439-96-5	LA-505-411		172		ug/L	1	6.0	30	02/08/11
Nickel	7440-02-0	LA-505-411	B	10.0		ug/L	1	4.0	20	02/08/11
Potassium	7440-09-7	LA-505-411		4580		ug/L	1	73	360	02/08/11
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	02/08/11
Sodium	7440-23-5	LA-505-411		7210		ug/L	1	11	55	02/08/11
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	02/08/11
Barium	7440-39-3	LA-505-411		275		ug/L	1	4.0	20	02/08/11
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	02/08/11
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Copper	7440-50-8	LA-505-411		48.0		ug/L	1	5.0	25	02/08/11
Vanadium	7440-62-2	LA-505-411	U	<17		ug/L	1	17	85	02/08/11
Zinc	7440-66-6	LA-505-411		134		ug/L	1	4.0	20	02/08/11
Calcium	7440-70-2	LA-505-411		1.84E5		ug/L	1	28	140	02/08/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069011
SAF# X11-016
Sample ID B29HB7

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	02/08/11
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Molybdenum	7439-98-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Strontium	7440-24-6	LA-505-411		744		ug/L	1	4.0	20	02/08/11
Thallium	7440-28-0	LA-505-411	U	<49 UJ		ug/L	1	49	240	02/08/11
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	02/08/11
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	02/08/11
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	02/08/11
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	02/08/11
Silicon	7440-21-3	LA-505-411		12500		ug/L	1	25	120	02/08/11
Phosphorus	7723-14-0	LA-505-411		413		ug/L	1	72	360	02/08/11
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	02/08/11
ICPMS Prep										**01/18/11**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	D	2270		ug/L	2	10	200	01/21/11
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Antimony	7440-36-0	LA-505-412	BD	2.53		ug/L	2	0.60	6.0	01/21/11
Barium	7440-39-3	LA-505-412	D	238		ug/L	2	0.40	4.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
7-14-2011

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069011
SAF# X11-016
Sample ID B29HB7

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Cadmium	7440-43-9	LA-505-412	BD	1.20		ug/L	2	0.20	2.0	01/21/11
Chromium	7440-47-3	LA-505-412	D	11.6		ug/L	2	1.0	10	01/21/11
Cobalt	7440-48-4	LA-505-412	D	3.14		ug/L	2	0.10	0.50	01/21/11
Copper	7440-50-8	LA-505-412	D	53.7		ug/L	2	0.20	2.0	01/21/11
Lead	7439-92-1	LA-505-412	D	18.8		ug/L	2	0.20	2.0	01/21/11
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	01/21/11
Molybdenum	7439-98-7	LA-505-412	BD	0.253		ug/L	2	0.10	1.0	01/21/11
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Tin	7440-31-5	LA-505-412	BD	0.174		ug/L	2	0.10	1.0	01/21/11
Uranium	7440-61-1	LA-505-412	D	2.94		ug/L	2	0.10	0.40	01/21/11
Arsenic	7440-38-2	LA-505-412	BD	1.18		ug/L	2	0.80	8.0	01/21/11
Selenium	7782-49-2	LA-505-412	BD	5.54		ug/L	2	0.60	6.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069012
SAF# X11-016
Sample ID B29H97

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**01/31/11**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	U	<19		ug/L	1	19	95	02/08/11
Iron	7439-89-6	LA-505-411	U	<38		ug/L	1	38	190	02/08/11
Magnesium	7439-95-4	LA-505-411		14500		ug/L	1	14	70	02/08/11
Manganese	7439-96-5	LA-505-411	U	<6.0		ug/L	1	6.0	30	02/08/11
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Potassium	7440-09-7	LA-505-411		4360		ug/L	1	73	360	02/08/11
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	02/08/11
Sodium	7440-23-5	LA-505-411		10500		ug/L	1	11	55	02/08/11
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	02/08/11
Barium	7440-39-3	LA-505-411		37.0		ug/L	1	4.0	20	02/08/11
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	02/08/11
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Copper	7440-50-8	LA-505-411	U	<5.0		ug/L	1	5.0	25	02/08/11
Vanadium	7440-62-2	LA-505-411	U	<17		ug/L	1	17	85	02/08/11
Zinc	7440-66-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Calcium	7440-70-2	LA-505-411		47700		ug/L	1	28	140	02/08/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069012
SAF# X11-016
Sample ID B29H97

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	02/08/11
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Molybdenum	7439-98-7	LA-505-411	B	5.00		ug/L	1	4.0	20	02/08/11
Strontium	7440-24-6	LA-505-411		354		ug/L	1	4.0	20	02/08/11
Thallium	7440-28-0	LA-505-411	U	<49 UJ		ug/L	1	49	240	02/08/11
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	02/08/11
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	02/08/11
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/08/11
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	02/08/11
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	02/08/11
Silicon	7440-21-3	LA-505-411		16000		ug/L	1	25	120	02/08/11
Phosphorus	7723-14-0	LA-505-411	U	<72		ug/L	1	72	360	02/08/11
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	02/08/11
ICPMS Prep										**01/18/11**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	BD	25.2		ug/L	2	10	200	01/21/11
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	01/21/11
Barium	7440-39-3	LA-505-412	D	32.4		ug/L	2	0.40	4.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
7-14-2011

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069012
SAF# X11-016
Sample ID B29H97

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Chromium	7440-47-3	LA-505-412	D	12.5		ug/L	2	1.0	10	01/21/11
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	01/21/11
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	01/21/11
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	01/21/11
Molybdenum	7439-98-7	LA-505-412	D	2.40		ug/L	2	0.10	1.0	01/21/11
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	01/21/11
Tin	7440-31-5	LA-505-412	BD	0.104		ug/L	2	0.10	1.0	01/21/11
Uranium	7440-61-1	LA-505-412	D	1.90		ug/L	2	0.10	0.40	01/21/11
Arsenic	7440-38-2	LA-505-412	BD	4.08		ug/L	2	0.80	8.0	01/21/11
Selenium	7782-49-2	LA-505-412	BD	0.875		ug/L	2	0.60	6.0	01/21/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Sample # 111207002
SAF# X11-016
Sample ID B29HF6

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**02/07/11**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	B	33.0		ug/L	1	19	95	02/16/11
Iron	7439-89-6	LA-505-411		808		ug/L	1	38	190	02/16/11
Magnesium	7439-95-4	LA-505-411		6830		ug/L	1	14	70	02/16/11
Manganese	7439-96-5	LA-505-411		69.0		ug/L	1	6.0	30	02/16/11
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/16/11
Potassium	7440-09-7	LA-505-411		4690		ug/L	1	73	360	02/16/11
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	02/16/11
Sodium	7440-23-5	LA-505-411		14900		ug/L	1	11	55	02/16/11
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	02/16/11
Barium	7440-39-3	LA-505-411	B	11.0		ug/L	1	4.0	20	02/16/11
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/16/11
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	02/16/11
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/16/11
Copper	7440-50-8	LA-505-411	U	<5.0		ug/L	1	5.0	25	02/16/11
Vanadium	7440-62-2	LA-505-411	U	<17		ug/L	1	17	85	02/16/11
Zinc	7440-66-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/16/11
Calcium	7440-70-2	LA-505-411		15800		ug/L	1	28	140	02/16/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED111207 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Sample # 111207002
SAF# X11-016
Sample ID B29HF6

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	02/16/11
Lithium	7439-93-2	LA-505-411	B	5.00		ug/L	1	4.0	20	02/16/11
Molybdenum	7439-98-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/16/11
Strontium	7440-24-6	LA-505-411		111		ug/L	1	4.0	20	02/16/11
Thallium	7440-28-0	LA-505-411	U	<49 UJ		ug/L	1	49	240	02/16/11
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	02/16/11
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	02/16/11
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/16/11
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	02/16/11
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	02/16/11
Silicon	7440-21-3	LA-505-411		1100		ug/L	1	25	120	02/16/11
Phosphorus	7723-14-0	LA-505-411	U	<72		ug/L	1	72	360	02/16/11
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	02/16/11
ICPMS Prep										**02/07/11**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	200	02/07/11
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	02/07/11
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	02/07/11
Barium	7440-39-3	LA-505-412	D	143		ug/L	2	0.40	4.0	02/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
7-14-2011

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED111207 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Sample # 111207002
SAF# X11-016
Sample ID B29HF6

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	02/07/11
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	02/07/11
Chromium	7440-47-3	LA-505-412	BD	7.64		ug/L	2	1.0	10	02/07/11
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	02/07/11
Copper	7440-50-8	LA-505-412	BD	0.679		ug/L	2	0.20	2.0	02/07/11
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	02/07/11
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	02/07/11
Molybdenum	7439-98-7	LA-505-412	BD	0.909		ug/L	2	0.10	1.0	02/07/11
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	02/07/11
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	02/07/11
Arsenic	7440-38-2	LA-505-412	UD	<0.80		ug/L	2	0.80	8.0	02/07/11
Selenium	7782-49-2	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	02/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED111207 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Sample # 111207003
SAF# X11-016
Sample ID B29HF7

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**02/07/11**
ICP-AES										
Aluminum	7429-90-5	LA-505-411		103		ug/L	1	19	95	02/16/11
Iron	7439-89-6	LA-505-411	U	<38		ug/L	1	38	190	02/16/11
Magnesium	7439-95-4	LA-505-411		17200		ug/L	1	14	70	02/16/11
Manganese	7439-96-5	LA-505-411	U	<6.0		ug/L	1	6.0	30	02/16/11
Nickel	7440-02-0	LA-505-411	B	5.00		ug/L	1	4.0	20	02/16/11
Potassium	7440-09-7	LA-505-411		3460		ug/L	1	73	360	02/16/11
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	02/16/11
Sodium	7440-23-5	LA-505-411		31600		ug/L	1	11	55	02/16/11
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	02/16/11
Barium	7440-39-3	LA-505-411		151		ug/L	1	4.0	20	02/16/11
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/16/11
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	02/16/11
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/16/11
Copper	7440-50-8	LA-505-411	U	<5.0		ug/L	1	5.0	25	02/16/11
Vanadium	7440-62-2	LA-505-411	U	<17		ug/L	1	17	85	02/16/11
Zinc	7440-66-6	LA-505-411	B	5.00		ug/L	1	4.0	20	02/16/11
Calcium	7440-70-2	LA-505-411		98600		ug/L	1	28	140	02/16/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED111207 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Sample # 111207003
SAF# X11-016
Sample ID B29HF7

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	02/16/11
Lithium	7439-93-2	LA-505-411	B	4.00		ug/L	1	4.0	20	02/16/11
Molybdenum	7439-98-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/16/11
Strontium	7440-24-6	LA-505-411		457		ug/L	1	4.0	20	02/16/11
Thallium	7440-28-0	LA-505-411	U	<49 UJ		ug/L	1	49	240	02/16/11
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	02/16/11
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	02/16/11
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	02/16/11
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	02/16/11
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	02/16/11
Silicon	7440-21-3	LA-505-411		8550		ug/L	1	25	120	02/16/11
Phosphorus	7723-14-0	LA-505-411	U	<72		ug/L	1	72	360	02/16/11
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	02/16/11
ICPMS Prep										**02/07/11**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	200	02/07/11
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	02/07/11
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	02/07/11
Barium	7440-39-3	LA-505-412	D	143		ug/L	2	0.40	4.0	02/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

LS
7-14-2011

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED111207 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Sample # 111207003
SAF# X11-016
Sample ID B29HF7

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	02/07/11
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	02/07/11
Chromium	7440-47-3	LA-505-412	BD	8.45		ug/L	2	1.0	10	02/07/11
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	02/07/11
Copper	7440-50-8	LA-505-412	BD	0.973		ug/L	2	0.20	2.0	02/07/11
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	02/07/11
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	02/07/11
Molybdenum	7439-98-7	LA-505-412	D	1.02		ug/L	2	0.10	1.0	02/07/11
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	02/07/11
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	02/07/11
Uranium	7440-61-1	LA-505-412	D	4.34		ug/L	2	0.10	0.40	02/07/11
Arsenic	7440-38-2	LA-505-412	UD	<0.80		ug/L	2	0.80	8.0	02/07/11
Selenium	7782-49-2	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	02/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED111207 -

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Attachment 2
Narrative
WSCF111069

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. Also attached are IRF's 11-315 dealing with missed hold time for anions, 11-321dealing with Potassium LCS failure and 11-322 dealing with the missed hold time for Silicon and Phosphorus. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-315 was created due to anions were analyzed after the 48 hour holding time expired.

- Fluoride - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.

Cyanide – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Batch QC 175434
- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-321 was created due to LCS failure of Potassium. The data is reported as is.
- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-322 was created due to Silicon and Phosphorus were analyzed after the 28 day holding time expired.
    - Potassium – LCS recovery was outside established limits.
    - Sodium and Silicon – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.
    - Calcium, Magnesium and Silicon – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
- Batch QC 175435
    - Sodium – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.
    - Calcium, Magnesium, Potassium, Silicon and Sodium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
    - All other applicable QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

TPHG-WA – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gross Alpha / Gross Beta:
  - Batch QC 174188
  - Gross Alpha - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable QC controls are within the established limits.

- Isotopic Plutonium analysis:
  - Plutonium-239/240 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Uranium-234 - The Blank is greater than two times the MDC. Sample results above the MDC were "B" Flagged.
  - Uranium-235 - The Blank is less than two times the MDC. "B" Flag not required.
  - Uranium-234 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
  - Uranium-235 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Uranium-238 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Strontium-89/90:
    - All applicable QC controls are within the established limits.
- Tritium:
  - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Technetium-99:
    - All applicable QC controls are within the established limits.

Narrative

Attachment 2
Narrative
WSCF111069

We 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 data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-321

Date: 2/7/2011 SAF No(s): X11-009, X11-016 and I11-001

SDG (s): 111346, 111040, 111060, 111063 and 111069 TEST: ICP-AES 6010

DUE DATE: 2/7/2011

LOGIN No(s): 111346006 through 111346011
111040002 and 111040003
111060007
111063004, 111063005, 111063007 through 111063012
111069005 through 111069007

Sample No(s): B28XF5, B28XF9, B28XH0, B28XF6, B28WV0 and B28WV1
B282H8 and B282H9
B29H63
B29HJ6, B29HJ7, B29HH6, B29HH7, B29HJ2, B29HK3, B29HJ1 and B29HK2
B29H52, B29HB1 and B29HB6

Submitted By: M. Avila
Phone No.: 373-1613
Fax No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
The Potassium LCS percent recovery was out of limits: Potassium LCS = 123.0% (limits– 80-120%) All other QC passed; the MS and MSD were at 108.3% and 112.3% recovery, respectively.	Accept the data as-is and note in the narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 2/7/11
Signature and Date

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Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-315

Date: 1/24/2011 SAF No. F10-208 SDGs: 111065, 111069
TEST: Anions_IC_300.0 **DUE DATE: 2/21/11**

LOGIN No.: 111065001 – 111065002
111069001 - 111069004

Sample No.(s): B29LN7, B29LP0, B29N08, B28N18, B29N17, B29N19

Submitted By: H. Medley
Phone No.: 372-1488
Fax. No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
The above samples were received late in the day on Friday 1/7/11 to be analyzed on the same day. The samples were analyzed at the next possible opportunity, which was Sunday 1/9/11. The samples missed the 48 hour regulatory hold time.	Accept analytical results (accept as-is) and note in narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 1/25/201

Signature and Date

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Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-322

Date: 2/8/20111 SAF No. X11-016

SDG: 111069, 111074, 111077, 111078 & 111081 TEST: ICP-6010 **DUE DATE: 2/7/2011 and 2/8/2011**

TEST: ICP-6010

LOGIN No.: 111069008 through 111069012
111074002 and 111074003
111077005 through 111077010
111078004 through 111078009
111081004

Sample No.(s): B29H96, B29H53, B29HB2, B29HB7 and B29H97
B29H33 and B29H34
B29H43, B29H49, B29H38, B29H44, B29H50 and B29H39
B29H86, B29H91, B29HF1, B29H87, B29H92 and B29HF2
B29H57

Submitted By: M. Avila
Phone No.:
Fax. No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
These samples were collected on: 111069 1/7/11 111074 1/9/11 111077 1/9/11 111078 1/9/11 111081 1/9/11 These samples were not analyzed until February 8th, 2011. These were analyzed outside the 28-day regulatory holding time for Silicon and Phosphorus.	Accept results as-is and document in the narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution
Sara Champoux 2/8/2011
Signature and Date

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CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-210 Page 1 of 1

Collector: Heike	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

111069

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N08	N	W	1/7/11	0945	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Heike			1520 JAN 07 2011	Victor			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-200 Page 1 of 1

Collector: Halse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104CS20
Project Title: NDURA. DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N18	2 N	W	1/7/11	1048	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Halse			510 JAN 07 2011				1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-201 Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 35/8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N17 3	N	W	1/7/11	1149	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	TB Hulse		1520 JAN 07 2011	VICTOR Bing			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-199 Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Hunsted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter *		Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N19	4	N W	1/7/11	1254	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool-4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1520 JAN 07 2011	V. Lara			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-26 Page 1 of 2

Collector: Hulke	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104E520
Project Title: NDCRA DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter *		Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H52	Y	W	1/7/11	0945	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H52	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H52	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H53	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29H53	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H53	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29H53	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29H53	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29H53	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29H53	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29H53	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29H53	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulke			1500 JAN 07 2011				1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# X11-016-26 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-4650		

Sample No.	Lab ID	*		Date	Time	No/Type Container	Sample Analysis	Preservative	
B29H53	N	W	[illegible]	11/2/11	0945	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29H53	N	W				3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29H53	N	W				4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hurke	[illegible]	[illegible]	1520 JAN 07 2011	Victor Bias		[illegible]	1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-98 Page 1 of 2

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB1 6	Y	W	1/6/11	1048	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB1	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB1	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB2 10	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HB2	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HB2	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HB2	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HB2	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HB2	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HB2	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1520 JAN 07 2011				1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-98 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-1650		

Sample No.	Lab ID	*		Date	Time	No/Type Container	Sample Analysis	Preservative	
B29HB2	N	W		1/7/11	1048	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29HB2	N	W				3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29HB2	N	W				4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hube	KB Dhalu		1520 JAN 07 2011		VICTOR Silva		1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-106 Page 1 of 2

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB6 7	Y	W	1/7/11	1256	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB6	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB6	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB7 11	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HB7	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HB7	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HB7	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HB7	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HB7	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HB7	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	KS Hulse	1520	JAN 07 2011	K Brevard	K Brevard	1520	JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

Sample Receipt

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-106
		Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-1650		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative	
B29HB7	N	W	1/7/11	1257	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29HB7	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29HB7	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	[illegible]		1520 JAN 07 2011	Victor Binkley			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-90 Page 1 of 2

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H96 8	Y	W	1/7/11	1419	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H96	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H96	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H97 12	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29H97	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H97	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29H97	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29H97	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29H97	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29H97	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29H97	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29H97	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	[illegible]	[illegible]	1520 JAN 07 2011	[illegible]	[illegible]	[illegible]	1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-90 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-4650		

Sample No	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative	
B29H97	N	W	1/3/11	1149	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29H97	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29H97	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
[illegible]	[illegible]		1520 JAN 07 2011	[illegible]			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Attachment 2
Narrative, Rev. 1
WSCF111207

P&D Correction – Case Narrative Replaces the Prior Submittal in its Entirety
Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4. Additionally, a copy of the completed P&D # WSCFX111207 is included with this case narrative.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Attachment 2
Narrative, Rev. 1
WSCF111207

- Nitrate – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.

- All other applicable QC controls are within the established limits.

Cyanide – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Sodium – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.

- Magnesium, Potassium, Sodium and Calcium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.

- All other applicable QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

PCB – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Attachment 2
Narrative, Rev. 1
WSCF111207

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):
Tracers and surrogates are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- All other applicable QC controls are within the established limits.

TPHG-WA – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gross Alpha / Gross Beta:
  - All applicable QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - All applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Uranium-238 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Uranium-235 and Uranium-238 - The Blank is less than two times the MDC. "B" Flag not required.
    - All other applicable QC controls are within the established limits.
- Strontium-89/90:
  - All applicable QC controls are within the established limits.
- Tritium:

- All applicable QC controls are within the established limits.

- Technetium-99:
  - All applicable QC controls are within the established limits.

We 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 data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

Attachment 2
Narrative, Rev. 1
WSCF111207

3/14/2011

Problem and Discrepancy Report

WSCF

SDG WSCF111207

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1. The data package has the following issues:

a) All of the electronic results are missing.

Resolution: *Provide missing results.*

Lab Response: **The electronic results have been provided.**

Please correct the issues and resubmit the electronic data packages.

5

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-192 Page 1 of 1

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA_DECEMBER_2010	Logbook No: HNF-N-506 3719	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

001 111207

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N26	N	W	01/18/11	1003	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011		VICTOR SIMS		1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-154

Page 1 of 2

Collector: J.S. Artzer CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NUURA DECEMBER 2010	Logbook No: HNF-N-506 3719	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF6 ~~007~~ 002	Y	W	01/18/11	1003	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HF6	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HF6	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HF7 COR	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HF7	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HF7	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HF7	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HF7	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HF7	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HF7	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011				1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-154
		Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters Husted	376-4650		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis		Preservative	
B29HF7	N	W	01/18/11	1003	1x1-L G/P	UISO_IE_PRECIP_AEA List-1 (3)	/	6 Months	HNO3 to pH <2
B29HF7	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	/	14/40 Days	HCl to pH <2 Cool~4C
B29HF7	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	/	14 Days	HCl to pH <2 Cool~4C
B29HF7	N	W			4x1-L aG	PCBs - 8082	/	1 yr/1 yr	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011	Victor Bins			1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Appendix 5

Data Validation Supporting Documentation

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: CERC11			DATA PACKAGE: VSR11-049		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 7-14-2011	
			SDG: WSCF111069, WSCF111207		
ANALYSES PERFORMED					
SW-846/ICP X	SW-846/GFAA	SW-846/Hg		EPA 200.8 X	

SAMPLES/MATRIX Water samples

SDG WSCF111069: B29H52, B29HB1, B29HB6, B29H96, B29H53, B29HB2, B29HB7, B29H97

SDG WSCF111207: B29HF6, B29HF7

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments: None

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:

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:

WSCF111069 MB Hits: Batch 176169 Na 15 ug/L, Si 137 ug/L
Batch 176265 Na 25 ug/L

WSCF111207 MB Hit: Na 26 ug/L

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:

WSCF111069
Batch 176169 K LCS %R = 123%
Batch 176265 (6010C) Tl MS %R = 78%, MSD %R = 78%

WSCF111207
6010C Tl MS %R = 79%

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: None

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:

7. HOLDING TIMES (all levels)

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

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

Comments: None

8. 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:

WSCF111069 and WSCF111207
Mn MDL = 6 ug/L (CRDL = 5 ug/L)
B MDL = 41 ug/L (CRDL = 20 ug/L)

Appendix 6

Additional Documentation Requested By Client

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF111069

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
173799	173799	2	BLANK	46053	BLANK		Anions by Ion Chromatography (Water)
173799	173799	3	LCS	46054	LCS		Anions by Ion Chromatography (Water)
173799	173799	4	DUP	46055	B29LN7(111065001DUP)	111065001	Anions by Ion Chromatography (Water)
173799	173799	5	MS	46056	B29LN7(111065001MS)	111065001	Anions by Ion Chromatography (Water)
173799	173799	6	MSD	46057	B29LN7(111065001MSD)	111065001	Anions by Ion Chromatography (Water)
173799	173799	8	SAMPLE	111069001	B29N08		Anions by Ion Chromatography (Water)
173799	173799	10	SAMPLE	111069002	B29N18		Anions by Ion Chromatography (Water)
173799	173799	11	SAMPLE	111069003	B29N17		Anions by Ion Chromatography (Water)
173799	173799	12	SAMPLE	111069004	B29N19		Anions by Ion Chromatography (Water)
173799	173799	13	SAMPLE	111069004	B29N19		Anions by Ion Chromatography (Water)
174483	174484	4	BLANK	46680	BLANK		ICP-2008 MS All possible metal
174483	174484	5	LCS	46681	LCS		ICP-2008 MS All possible metal
174483	174484	6	MS	46682	B29HJ1(111063011MS)	111063011	ICP-2008 MS All possible metal
174483	174484	7	MSD	46683	B29HJ1(111063011MSD)	111063011	ICP-2008 MS All possible metal
174483	174484	12	SAMPLE	111069005	B29H52		ICP-2008 MS All possible metal
174483	174484	13	SAMPLE	111069006	B29HB1		ICP-2008 MS All possible metal
174483	174484	16	SAMPLE	111069007	B29HB6		ICP-2008 MS All possible metal
174483	174484	17	SAMPLE	111069008	B29H96		ICP-2008 MS All possible metal
174483	174484	18	SAMPLE	111069009	B29H53		ICP-2008 MS All possible metal
174483	174484	19	SAMPLE	111069010	B29HB2		ICP-2008 MS All possible metal
174483	174484	20	SAMPLE	111069011	B29HB7		ICP-2008 MS All possible metal
174483	174484	21	SAMPLE	111069012	B29H97		ICP-2008 MS All possible metal
175434	176169	1	BLANK	47874	BLANK		ICP-6010 - All possible metals

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF111069

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
175434	176169	2	LCS	47875	LCS		ICP-6010 - All possible metals
175434	176169	3	MS	47876	B28XF5(111346006MS)	111346006	ICP-6010 - All possible metals
175434	176169	4	MSD	47877	B28XF5(111346006MSD)	111346006	ICP-6010 - All possible metals
175434	176169	22	SAMPLE	111069005	B29H52		ICP-6010 - All possible metals
175434	176169	23	SAMPLE	111069006	B29HB1		ICP-6010 - All possible metals
175434	176169	24	SAMPLE	111069007	B29HB6		ICP-6010 - All possible metals
175435	176265	1	BLANK	47878	BLANK		ICP-6010 - All possible metals
175435	176265	2	LCS	47879	LCS		ICP-6010 - All possible metals
175435	176265	3	MS	47880	B29H96(111069008MS)	111069008	ICP-6010 - All possible metals
175435	176265	4	MSD	47881	B29H96(111069008MSD)	111069008	ICP-6010 - All possible metals
175435	176265	5	SAMPLE	111069008	B29H96		ICP-6010 - All possible metals
175435	176265	6	SAMPLE	111069009	B29H53		ICP-6010 - All possible metals
175435	176265	7	SAMPLE	111069010	B29HB2		ICP-6010 - All possible metals
175435	176265	8	SAMPLE	111069011	B29HB7		ICP-6010 - All possible metals
175435	176265	9	SAMPLE	111069012	B29H97		ICP-6010 - All possible metals

Quality Control Report

Attention Michael Neely
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Group # WSCF111069

QC Batch 174483 **Test** ICP-2008 MS All possible metal
Associated Samples 111069005, 111069006, 111069007, 111069008, 111069009, 111069010, 111069011, 111069012

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #46680**						
Aluminum	7429-90-5		<5.0	ug/L				U	01/21/11
Silver	7440-22-4		<0.10	ug/L				U	01/21/11
Antimony	7440-36-0		<0.30	ug/L				U	01/21/11
Barium	7440-39-3		<0.20	ug/L				U	01/21/11
Beryllium	7440-41-7		<0.10	ug/L				U	01/21/11
Cadmium	7440-43-9		<0.10	ug/L				U	01/21/11
Chromium	7440-47-3		<0.50	ug/L				U	01/21/11
Cobalt	7440-48-4		<0.050	ug/L				U	01/21/11
Copper	7440-50-8		<0.10	ug/L				U	01/21/11
Lead	7439-92-1		<0.10	ug/L				U	01/21/11
Mercury	7439-97-6		<0.050	ug/L				U	01/21/11
Molybdenum	7439-98-7		<0.050	ug/L				U	01/21/11
Thallium	7440-28-0		<0.050	ug/L				U	01/21/11
Tin	7440-31-5		<0.050	ug/L				U	01/21/11
Uranium	7440-61-1		<0.050	ug/L				U	01/21/11
Arsenic	7440-38-2		<0.40	ug/L				U	01/21/11
Selenium	7782-49-2		<0.30	ug/L				U	01/21/11
LCS			**QC Sample #46681**						

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Aluminum	7429-90-5		392	ug/L	98.1	85 - 115				01/21/11
Silver	7440-22-4		41.8	ug/L	104.6	85 - 115				01/21/11
Antimony	7440-36-0		38.5	ug/L	96.4	85 - 115				01/21/11
Barium	7440-39-3		39.5	ug/L	98.8	85 - 115				01/21/11
Beryllium	7440-41-7		40.2	ug/L	100.4	85 - 115				01/21/11
Cadmium	7440-43-9		38.8	ug/L	96.9	85 - 115				01/21/11
Chromium	7440-47-3		40.2	ug/L	100.4	85 - 115				01/21/11
Cobalt	7440-48-4		39.2	ug/L	98	85 - 115				01/21/11
Copper	7440-50-8		38.9	ug/L	97.2	85 - 115				01/21/11
Lead	7439-92-1		40.8	ug/L	102.1	85 - 115				01/21/11
Mercury	7439-97-6		2.06	ug/L	102.8	85 - 115				01/21/11
Molybdenum	7439-98-7		40.2	ug/L	100.6	85 - 115				01/21/11
Thallium	7440-28-0		40.3	ug/L	100.8	85 - 115				01/21/11
Tin	7440-31-5		39.6	ug/L	99	85 - 115				01/21/11
Uranium	7440-61-1		41.2	ug/L	103	85 - 115				01/21/11
Arsenic	7440-38-2		39.2	ug/L	97.9	85 - 115				01/21/11
Selenium	7782-49-2		37.7	ug/L	94.2	85 - 115				01/21/11
MS			**QC Sample #46682**							
			Original 111063011							
Aluminum	7429-90-5		390	ug/L	97.5	70 - 130				01/21/11
Silver	7440-22-4		40.1	ug/L	100.2	70 - 130				01/21/11
Antimony	7440-36-0		40.2	ug/L	100.5	70 - 130				01/21/11
Barium	7440-39-3		38.9	ug/L	97.3	70 - 130				01/21/11
Beryllium	7440-41-7		40.9	ug/L	102.2	70 - 130				01/21/11
Cadmium	7440-43-9		39.1	ug/L	97.7	70 - 130				01/21/11

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Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chromium	7440-47-3		40.9	ug/L	102.3	70 - 130				01/21/11
Cobalt	7440-48-4		39.1	ug/L	97.7	70 - 130				01/21/11
Copper	7440-50-8		37.8	ug/L	94.5	70 - 130				01/21/11
Lead	7439-92-1		41.2	ug/L	103	70 - 130				01/21/11
Mercury	7439-97-6		2.03	ug/L	101.4	70 - 130				01/21/11
Molybdenum	7439-98-7		41.7	ug/L	104.3	70 - 130				01/21/11
Thallium	7440-28-0		41.2	ug/L	102.9	70 - 130				01/21/11
Tin	7440-31-5		40.7	ug/L	101.8	70 - 130				01/21/11
Uranium	7440-61-1		42.9	ug/L	107.3	70 - 130				01/21/11
Arsenic	7440-38-2		39.9	ug/L	99.6	70 - 130				01/21/11
Selenium	7782-49-2		42.1	ug/L	105.3	70 - 130				01/21/11
MSD			**QC Sample #46683**							
			Original	**111063011**					**Paired**	**46682**
Aluminum	7429-90-5		386	ug/L	96.6	70 - 130	0.90	20		01/21/11
Silver	7440-22-4		39.5	ug/L	98.7	70 - 130	1.50	20		01/21/11
Antimony	7440-36-0		39.5	ug/L	98.6	70 - 130	1.90	20		01/21/11
Barium	7440-39-3		37.9	ug/L	94.6	70 - 130	2.80	20		01/21/11
Beryllium	7440-41-7		39.5	ug/L	98.8	70 - 130	3.40	20		01/21/11
Cadmium	7440-43-9		38.8	ug/L	96.9	70 - 130	0.80	20		01/21/11
Chromium	7440-47-3		40.0	ug/L	100	70 - 130	2.30	20		01/21/11
Cobalt	7440-48-4		38.1	ug/L	95.3	70 - 130	2.50	20		01/21/11
Copper	7440-50-8		37.2	ug/L	93	70 - 130	1.60	20		01/21/11
Lead	7439-92-1		40.4	ug/L	101	70 - 130	2.00	20		01/21/11
Mercury	7439-97-6		2.01	ug/L	100.3	70 - 130	1.10	20		01/21/11
Molybdenum	7439-98-7		40.6	ug/L	101.6	70 - 130	2.60	20		01/21/11

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Thallium	7440-28-0		40.5	ug/L	101.2	70 - 130	1.70	20		01/21/11
Tin	7440-31-5		39.4	ug/L	98.4	70 - 130	3.40	20		01/21/11
Uranium	7440-61-1		42.3	ug/L	105.7	70 - 130	1.50	20		01/21/11
Arsenic	7440-38-2		40.2	ug/L	100.4	70 - 130	0.80	20		01/21/11
Selenium	7782-49-2		39.6	ug/L	99.1	70 - 130	6.10	20		01/21/11

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Group # WSCF111069

QC Batch 175434
Associated Samples 111069005, 111069006, 111069007

Test ICP-6010 - All possible metals

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #47874**						
Aluminum	7429-90-5		<19	ug/L				U	02/07/11
Iron	7439-89-6		<38	ug/L				U	02/07/11
Magnesium	7439-95-4		<14	ug/L				U	02/07/11
Manganese	7439-96-5		<6.0	ug/L				U	02/07/11
Nickel	7440-02-0		<4.0	ug/L				U	02/07/11
Potassium	7440-09-7		<73	ug/L				U	02/07/11
Silver	7440-22-4		<7.0	ug/L				U	02/07/11
Sodium	7440-23-5		15.0	ug/L				B	02/07/11
Antimony	7440-36-0		<47	ug/L				U	02/07/11
Barium	7440-39-3		<4.0	ug/L				U	02/07/11
Cadmium	7440-43-9		<4.0	ug/L				U	02/07/11
Chromium	7440-47-3		<14	ug/L				U	02/07/11
Cobalt	7440-48-4		<4.0	ug/L				U	02/07/11
Copper	7440-50-8		<5.0	ug/L				U	02/07/11
Vanadium	7440-62-2		<17	ug/L				U	02/07/11
Zinc	7440-66-6		<4.0	ug/L				U	02/07/11
Calcium	7440-70-2		<28	ug/L				U	02/07/11
Lead	7439-92-1		<42	ug/L				U	02/07/11
Lithium	7439-93-2		<4.0	ug/L				U	02/07/11

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Molybdenum	7439-98-7		<4.0	ug/L					U	02/07/11
Strontium	7440-24-6		<4.0	ug/L					U	02/07/11
Thallium	7440-28-0		<49	ug/L					U	02/07/11
Tin	7440-31-5		<49	ug/L					U	02/07/11
Arsenic	7440-38-2		<50	ug/L					U	02/07/11
Beryllium	7440-41-7		<4.0	ug/L					U	02/07/11
Boron	7440-42-8		<41	ug/L					U	02/07/11
Bismuth	7440-69-9		<37	ug/L					U	02/07/11
Silicon	7440-21-3		137	ug/L						02/07/11
Phosphorus	7723-14-0		<72	ug/L					U	02/07/11
Selenium	7782-49-2		<47	ug/L					U	02/07/11
LCS			**QC Sample #47875**							
Aluminum	7429-90-5		1060	ug/L	106	80 - 120				02/07/11
Iron	7439-89-6		1070	ug/L	107	80 - 120				02/07/11
Magnesium	7439-95-4		1040	ug/L	104	80 - 120				02/07/11
Manganese	7439-96-5		1060	ug/L	106	80 - 120				02/07/11
Nickel	7440-02-0		1040	ug/L	104	80 - 120				02/07/11
Potassium	7440-09-7		1230	ug/L	123	80 - 120			X	02/07/11
Silver	7440-22-4		1040	ug/L	104	80 - 120				02/07/11
Sodium	7440-23-5		1130	ug/L	113	80 - 120				02/07/11
Antimony	7440-36-0		1050	ug/L	105	80 - 120				02/07/11
Barium	7440-39-3		539	ug/L	107.8	80 - 120				02/07/11
Cadmium	7440-43-9		1060	ug/L	106	80 - 120				02/07/11
Chromium	7440-47-3		1040	ug/L	104	80 - 120				02/07/11

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Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Cobalt	7440-48-4		1060	ug/L	106	80 - 120				02/07/11
Copper	7440-50-8		1070	ug/L	107	80 - 120				02/07/11
Vanadium	7440-62-2		1030	ug/L	103	80 - 120				02/07/11
Zinc	7440-66-6		1050	ug/L	105	80 - 120				02/07/11
Calcium	7440-70-2		1050	ug/L	105	80 - 120				02/07/11
Lead	7439-92-1		1050	ug/L	105	80 - 120				02/07/11
Lithium	7439-93-2		566	ug/L	113.2	80 - 120				02/07/11
Molybdenum	7439-98-7		1050	ug/L	105	80 - 120				02/07/11
Strontium	7440-24-6		552	ug/L	110.4	80 - 120				02/07/11
Thallium	7440-28-0		840	ug/L	84	80 - 120				02/07/11
Tin	7440-31-5		1020	ug/L	102	80 - 120				02/07/11
Arsenic	7440-38-2		1050	ug/L	105	80 - 120				02/07/11
Beryllium	7440-41-7		545	ug/L	109	80 - 120				02/07/11
Boron	7440-42-8		1020	ug/L	102	80 - 120				02/07/11
Bismuth	7440-69-9		1030	ug/L	103	80 - 120				02/07/11
Silicon	7440-21-3		1050	ug/L	105	80 - 120				02/07/11
Phosphorus	7723-14-0		1080	ug/L	108	80 - 120				02/07/11
Selenium	7782-49-2		1070	ug/L	107	80 - 120				02/07/11
MS			**QC Sample #47876**							
			Original 111346006							
Aluminum	7429-90-5		1090	ug/L	109	75 - 125				02/07/11
Iron	7439-89-6		1120	ug/L	112	75 - 125				02/07/11
Magnesium	7439-95-4		920	ug/L	92	75 - 125			X	02/07/11
Manganese	7439-96-5		1070	ug/L	107	75 - 125				02/07/11
Nickel	7440-02-0		1050	ug/L	105	75 - 125				02/07/11

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Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7		1080	ug/L	108.3	75 - 125				02/07/11
Silver	7440-22-4		1040	ug/L	104	75 - 125				02/07/11
Sodium	7440-23-5		1040	ug/L	104	75 - 125				02/07/11
Antimony	7440-36-0		1060	ug/L	106	75 - 125				02/07/11
Barium	7440-39-3		543	ug/L	108.6	75 - 125				02/07/11
Cadmium	7440-43-9		1070	ug/L	107	75 - 125				02/07/11
Chromium	7440-47-3		1050	ug/L	105	75 - 125				02/07/11
Cobalt	7440-48-4		1070	ug/L	107	75 - 125				02/07/11
Copper	7440-50-8		1080	ug/L	108	75 - 125				02/07/11
Vanadium	7440-62-2		1050	ug/L	105	75 - 125				02/07/11
Zinc	7440-66-6		1070	ug/L	107	75 - 125				02/07/11
Calcium	7440-70-2		500	ug/L	50	75 - 125			X	02/07/11
Lead	7439-92-1		1030	ug/L	103	75 - 125				02/07/11
Lithium	7439-93-2		573	ug/L	114.6	75 - 125				02/07/11
Molybdenum	7439-98-7		1050	ug/L	105.4	75 - 125				02/07/11
Strontium	7440-24-6		559	ug/L	111.8	75 - 125				02/07/11
Thallium	7440-28-0		865	ug/L	86.5	75 - 125				02/07/11
Tin	7440-31-5		1030	ug/L	103	75 - 125				02/07/11
Arsenic	7440-38-2		1040	ug/L	104	75 - 125				02/07/11
Beryllium	7440-41-7		553	ug/L	110.6	75 - 125				02/07/11
Boron	7440-42-8		1050	ug/L	105	75 - 125				02/07/11
Bismuth	7440-69-9		1030	ug/L	103	75 - 125				02/07/11
Silicon	7440-21-3		950	ug/L	95	75 - 125			X	02/07/11
Phosphorus	7723-14-0		988	ug/L	98.8	75 - 125				02/07/11
Selenium	7782-49-2		1080	ug/L	108	75 - 125				02/07/11

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #47877**								
			Original	**111346006**					**Paired**	**47876**	
Aluminum	7429-90-5		1080	ug/L	108	75 - 125	0.90	20			02/07/11
Iron	7439-89-6		1090	ug/L	109	75 - 125	2.70	20			02/07/11
Magnesium	7439-95-4		970	ug/L	97	75 - 125	5.30	20		X	02/07/11
Manganese	7439-96-5		1060	ug/L	106	75 - 125	0.90	20			02/07/11
Nickel	7440-02-0		1030	ug/L	103	75 - 125	1.90	20			02/07/11
Potassium	7440-09-7		1120	ug/L	112.3	75 - 125	3.60	20			02/07/11
Silver	7440-22-4		1030	ug/L	103	75 - 125	1.00	20			02/07/11
Sodium	7440-23-5		1060	ug/L	106	75 - 125	1.90	20			02/07/11
Antimony	7440-36-0		1030	ug/L	103	75 - 125	2.90	20			02/07/11
Barium	7440-39-3		539	ug/L	107.8	75 - 125	0.70	20			02/07/11
Cadmium	7440-43-9		1050	ug/L	105	75 - 125	1.90	20			02/07/11
Chromium	7440-47-3		1040	ug/L	104	75 - 125	1.00	20			02/07/11
Cobalt	7440-48-4		1050	ug/L	105	75 - 125	1.90	20			02/07/11
Copper	7440-50-8		1070	ug/L	107	75 - 125	0.90	20			02/07/11
Vanadium	7440-62-2		1040	ug/L	104	75 - 125	1.00	20			02/07/11
Zinc	7440-66-6		1050	ug/L	105	75 - 125	1.90	20			02/07/11
Calcium	7440-70-2		1000	ug/L	100	75 - 125	66.70	20	*	X	02/07/11
Lead	7439-92-1		1020	ug/L	102	75 - 125	1.00	20			02/07/11
Lithium	7439-93-2		563	ug/L	112.6	75 - 125	1.80	20			02/07/11
Molybdenum	7439-98-7		1040	ug/L	104.4	75 - 125	1.00	20			02/07/11
Strontium	7440-24-6		551	ug/L	110.2	75 - 125	1.40	20			02/07/11
Thallium	7440-28-0		850	ug/L	85	75 - 125	1.70	20			02/07/11
Tin	7440-31-5		1030	ug/L	103	75 - 125	0.00	20			02/07/11

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Arsenic	7440-38-2		1030	ug/L	103	75 - 125	1.00	20		02/07/11
Beryllium	7440-41-7		547	ug/L	109.4	75 - 125	1.10	20		02/07/11
Boron	7440-42-8		1040	ug/L	104	75 - 125	1.00	20		02/07/11
Bismuth	7440-69-9		1010	ug/L	101	75 - 125	2.00	20		02/07/11
Silicon	7440-21-3		950	ug/L	95	75 - 125	0.00	20	X	02/07/11
Phosphorus	7723-14-0		1020	ug/L	101.8	75 - 125	3.00	20		02/07/11
Selenium	7782-49-2		1080	ug/L	108	75 - 125	0.00	20		02/07/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

QC Batch 175435
Associated Samples 111069008, 111069009, 111069010, 111069011, 111069012

Test ICP-6010 - All possible metals

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #47878**							
Aluminum	7429-90-5		<19	ug/L					U	02/08/11
Iron	7439-89-6		<38	ug/L					U	02/08/11
Magnesium	7439-95-4		<14	ug/L					U	02/08/11
Manganese	7439-96-5		<6.0	ug/L					U	02/08/11
Nickel	7440-02-0		<4.0	ug/L					U	02/08/11
Potassium	7440-09-7		<73	ug/L					U	02/08/11
Silver	7440-22-4		<7.0	ug/L					U	02/08/11
Sodium	7440-23-5		25.0	ug/L					B	02/08/11
Antimony	7440-36-0		<47	ug/L					U	02/08/11
Barium	7440-39-3		<4.0	ug/L					U	02/08/11
Cadmium	7440-43-9		<4.0	ug/L					U	02/08/11
Chromium	7440-47-3		<14	ug/L					U	02/08/11
Cobalt	7440-48-4		<4.0	ug/L					U	02/08/11
Copper	7440-50-8		<5.0	ug/L					U	02/08/11
Vanadium	7440-62-2		<17	ug/L					U	02/08/11
Zinc	7440-66-6		<4.0	ug/L					U	02/08/11
Calcium	7440-70-2		<28	ug/L					U	02/08/11
Lead	7439-92-1		<42	ug/L					U	02/08/11
Lithium	7439-93-2		<4.0	ug/L					U	02/08/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Molybdenum	7439-98-7		<4.0	ug/L					U	02/08/11
Strontium	7440-24-6		<4.0	ug/L					U	02/08/11
Thallium	7440-28-0		<49	ug/L					U	02/08/11
Tin	7440-31-5		<49	ug/L					U	02/08/11
Arsenic	7440-38-2		<50	ug/L					U	02/08/11
Beryllium	7440-41-7		<4.0	ug/L					U	02/08/11
Boron	7440-42-8		<41	ug/L					U	02/08/11
Bismuth	7440-69-9		<37	ug/L					U	02/08/11
Silicon	7440-21-3		<25	ug/L					U	02/08/11
Phosphorus	7723-14-0		<72	ug/L					U	02/08/11
Selenium	7782-49-2		<47	ug/L					U	02/08/11
LCS			**QC Sample #47879**							
Aluminum	7429-90-5		952	ug/L	95.2	80 - 120				02/08/11
Iron	7439-89-6		974	ug/L	97.4	80 - 120				02/08/11
Magnesium	7439-95-4		937	ug/L	93.7	80 - 120				02/08/11
Manganese	7439-96-5		976	ug/L	97.6	80 - 120				02/08/11
Nickel	7440-02-0		972	ug/L	97.2	80 - 120				02/08/11
Potassium	7440-09-7		1020	ug/L	102	80 - 120				02/08/11
Silver	7440-22-4		931	ug/L	93.1	80 - 120				02/08/11
Sodium	7440-23-5		1030	ug/L	103	80 - 120				02/08/11
Antimony	7440-36-0		987	ug/L	98.7	80 - 120				02/08/11
Barium	7440-39-3		484	ug/L	96.8	80 - 120				02/08/11
Cadmium	7440-43-9		988	ug/L	98.8	80 - 120				02/08/11
Chromium	7440-47-3		938	ug/L	93.8	80 - 120				02/08/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Cobalt	7440-48-4		982	ug/L	98.2	80 - 120				02/08/11
Copper	7440-50-8		959	ug/L	95.9	80 - 120				02/08/11
Vanadium	7440-62-2		934	ug/L	93.4	80 - 120				02/08/11
Zinc	7440-66-6		974	ug/L	97.4	80 - 120				02/08/11
Calcium	7440-70-2		977	ug/L	97.7	80 - 120				02/08/11
Lead	7439-92-1		991	ug/L	99.1	80 - 120				02/08/11
Lithium	7439-93-2		496	ug/L	99.2	80 - 120				02/08/11
Molybdenum	7439-98-7		973	ug/L	97.3	80 - 120				02/08/11
Strontium	7440-24-6		491	ug/L	98.2	80 - 120				02/08/11
Thallium	7440-28-0		822	ug/L	82.2	80 - 120				02/08/11
Tin	7440-31-5		975	ug/L	97.5	80 - 120				02/08/11
Arsenic	7440-38-2		967	ug/L	96.7	80 - 120				02/08/11
Beryllium	7440-41-7		494	ug/L	98.8	80 - 120				02/08/11
Boron	7440-42-8		925	ug/L	92.5	80 - 120				02/08/11
Bismuth	7440-69-9		919	ug/L	91.9	80 - 120				02/08/11
Silicon	7440-21-3		998	ug/L	99.8	80 - 120				02/08/11
Phosphorus	7723-14-0		970	ug/L	97	80 - 120				02/08/11
Selenium	7782-49-2		962	ug/L	96.2	80 - 120				02/08/11
MS			**QC Sample #47880**							
			Original 111069008							
Aluminum	7429-90-5	<19	990	ug/L	99	75 - 125				02/08/11
Iron	7439-89-6	<38	990	ug/L	99	75 - 125				02/08/11
Magnesium	7439-95-4	13800	1000	ug/L	100	75 - 125			X	02/08/11
Manganese	7439-96-5	<6.0	982	ug/L	98.2	75 - 125				02/08/11
Nickel	7440-02-0	<4.0	969	ug/L	96.9	75 - 125				02/08/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7	4130	1020	ug/L	102	75 - 125			X	02/08/11
Silver	7440-22-4	<7.0	941	ug/L	94.1	75 - 125				02/08/11
Sodium	7440-23-5	9990	910	ug/L	91	75 - 125			X	02/08/11
Antimony	7440-36-0	<47	992	ug/L	99.2	75 - 125				02/08/11
Barium	7440-39-3	36.0	494	ug/L	98.8	75 - 125				02/08/11
Cadmium	7440-43-9	<4.0	1000	ug/L	100	75 - 125				02/08/11
Chromium	7440-47-3	<14	971	ug/L	97.1	75 - 125				02/08/11
Cobalt	7440-48-4	<4.0	993	ug/L	99.3	75 - 125				02/08/11
Copper	7440-50-8	<5.0	968	ug/L	96.8	75 - 125				02/08/11
Vanadium	7440-62-2	18.0	952	ug/L	95.2	75 - 125				02/08/11
Zinc	7440-66-6	<4.0	996	ug/L	99.6	75 - 125				02/08/11
Calcium	7440-70-2	46900	1600	ug/L	160	75 - 125			X	02/08/11
Lead	7439-92-1	<42	993	ug/L	99.3	75 - 125				02/08/11
Lithium	7439-93-2	<4.0	510	ug/L	102	75 - 125				02/08/11
Molybdenum	7439-98-7	10.0	973	ug/L	97.3	75 - 125				02/08/11
Strontium	7440-24-6	335	506	ug/L	101.2	75 - 125				02/08/11
Thallium	7440-28-0	<49	776	ug/L	77.6	75 - 125				02/08/11
Tin	7440-31-5	<49	944	ug/L	94.4	75 - 125				02/08/11
Arsenic	7440-38-2	<50	999	ug/L	99.9	75 - 125				02/08/11
Beryllium	7440-41-7	<4.0	503	ug/L	100.6	75 - 125				02/08/11
Boron	7440-42-8	<41	969	ug/L	96.9	75 - 125				02/08/11
Bismuth	7440-69-9	<37	936	ug/L	93.6	75 - 125				02/08/11
Silicon	7440-21-3	15600	1000	ug/L	100	75 - 125			X	02/08/11
Phosphorus	7723-14-0	<72	998	ug/L	99.8	75 - 125				02/08/11
Selenium	7782-49-2	<47	1010	ug/L	101	75 - 125				02/08/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #47881**								
			Original	**111069008**					**Paired**	**47880**	
Aluminum	7429-90-5	<19	952	ug/L	95.2	75 - 125	3.90	20			02/08/11
Iron	7439-89-6	<38	953	ug/L	95.3	75 - 125	3.80	20			02/08/11
Magnesium	7439-95-4	13800	700	ug/L	70	75 - 125	35.30	20	*	X	02/08/11
Manganese	7439-96-5	<6.0	949	ug/L	94.9	75 - 125	3.40	20			02/08/11
Nickel	7440-02-0	<4.0	927	ug/L	92.7	75 - 125	4.40	20			02/08/11
Potassium	7440-09-7	4130	890	ug/L	89	75 - 125	13.60	20		X	02/08/11
Silver	7440-22-4	<7.0	911	ug/L	91.1	75 - 125	3.20	20			02/08/11
Sodium	7440-23-5	9990	810	ug/L	81	75 - 125	11.60	20		X	02/08/11
Antimony	7440-36-0	<47	968	ug/L	96.8	75 - 125	2.40	20			02/08/11
Barium	7440-39-3	36.0	473	ug/L	94.6	75 - 125	4.30	20			02/08/11
Cadmium	7440-43-9	<4.0	962	ug/L	96.2	75 - 125	3.90	20			02/08/11
Chromium	7440-47-3	<14	925	ug/L	92.5	75 - 125	4.90	20			02/08/11
Cobalt	7440-48-4	<4.0	950	ug/L	95	75 - 125	4.40	20			02/08/11
Copper	7440-50-8	<5.0	927	ug/L	92.7	75 - 125	4.30	20			02/08/11
Vanadium	7440-62-2	18.0	918	ug/L	91.8	75 - 125	3.60	20			02/08/11
Zinc	7440-66-6	<4.0	958	ug/L	95.8	75 - 125	3.90	20			02/08/11
Calcium	7440-70-2	46900	900	ug/L	90	75 - 125	56.00	20	*	X	02/08/11
Lead	7439-92-1	<42	964	ug/L	96.4	75 - 125	3.00	20			02/08/11
Lithium	7439-93-2	<4.0	485	ug/L	97	75 - 125	5.00	20			02/08/11
Molybdenum	7439-98-7	10.0	940	ug/L	94	75 - 125	3.50	20			02/08/11
Strontium	7440-24-6	335	479	ug/L	95.8	75 - 125	5.50	20			02/08/11
Thallium	7440-28-0	<49	777	ug/L	77.7	75 - 125	0.10	20			02/08/11
Tin	7440-31-5	<49	930	ug/L	93	75 - 125	1.50	20			02/08/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
Arsenic	7440-38-2	<50	947	ug/L	94.7	75 - 125	5.30	20			02/08/11
Beryllium	7440-41-7	<4.0	484	ug/L	96.8	75 - 125	3.90	20			02/08/11
Boron	7440-42-8	<41	940	ug/L	94	75 - 125	3.00	20			02/08/11
Bismuth	7440-69-9	<37	905	ug/L	90.5	75 - 125	3.40	20			02/08/11
Silicon	7440-21-3	15600	600	ug/L	60	75 - 125	50.00	20	*	X	02/08/11
Phosphorus	7723-14-0	<72	943	ug/L	94.3	75 - 125	5.70	20			02/08/11
Selenium	7782-49-2	<47	931	ug/L	93.1	75 - 125	8.10	20			02/08/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

QC Batch 176168
Associated Samples 111207002, 111207003

Test ICP-6010 - All possible metals

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #48496**						
Aluminum	7429-90-5		<19	ug/L				U	02/16/11
Iron	7439-89-6		<38	ug/L				U	02/16/11
Magnesium	7439-95-4		<14	ug/L				U	02/16/11
Manganese	7439-96-5		<6.0	ug/L				U	02/16/11
Nickel	7440-02-0		<4.0	ug/L				U	02/16/11
Potassium	7440-09-7		<73	ug/L				U	02/16/11
Silver	7440-22-4		<7.0	ug/L				U	02/16/11
Sodium	7440-23-5		26.0	ug/L				B	02/16/11
Antimony	7440-36-0		<47	ug/L				U	02/16/11
Barium	7440-39-3		<4.0	ug/L				U	02/16/11
Cadmium	7440-43-9		<4.0	ug/L				U	02/16/11
Chromium	7440-47-3		<14	ug/L				U	02/16/11
Cobalt	7440-48-4		<4.0	ug/L				U	02/16/11
Copper	7440-50-8		<5.0	ug/L				U	02/16/11
Vanadium	7440-62-2		<17	ug/L				U	02/16/11
Zinc	7440-66-6		<4.0	ug/L				U	02/16/11
Calcium	7440-70-2		<28	ug/L				U	02/16/11
Lead	7439-92-1		<42	ug/L				U	02/16/11
Lithium	7439-93-2		<4.0	ug/L				U	02/16/11

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Molybdenum	7439-98-7		<4.0	ug/L					U	02/16/11
Strontium	7440-24-6		<4.0	ug/L					U	02/16/11
Thallium	7440-28-0		<49	ug/L					U	02/16/11
Tin	7440-31-5		<49	ug/L					U	02/16/11
Arsenic	7440-38-2		<50	ug/L					U	02/16/11
Beryllium	7440-41-7		<4.0	ug/L					U	02/16/11
Boron	7440-42-8		<41	ug/L					U	02/16/11
Bismuth	7440-69-9		<37	ug/L					U	02/16/11
Silicon	7440-21-3		<25	ug/L					U	02/16/11
Phosphorus	7723-14-0		<72	ug/L					U	02/16/11
Selenium	7782-49-2		<47	ug/L					U	02/16/11
LCS			**QC Sample #48497**							
Aluminum	7429-90-5		990	ug/L	99	80 - 120				02/16/11
Iron	7439-89-6		987	ug/L	98.7	80 - 120				02/16/11
Magnesium	7439-95-4		984	ug/L	98.4	80 - 120				02/16/11
Manganese	7439-96-5		1000	ug/L	100	80 - 120				02/16/11
Nickel	7440-02-0		965	ug/L	96.5	80 - 120				02/16/11
Potassium	7440-09-7		1060	ug/L	106	80 - 120				02/16/11
Silver	7440-22-4		996	ug/L	99.6	80 - 120				02/16/11
Sodium	7440-23-5		1030	ug/L	103	80 - 120				02/16/11
Antimony	7440-36-0		975	ug/L	97.5	80 - 120				02/16/11
Barium	7440-39-3		514	ug/L	102.8	80 - 120				02/16/11
Cadmium	7440-43-9		962	ug/L	96.2	80 - 120				02/16/11
Chromium	7440-47-3		1010	ug/L	101	80 - 120				02/16/11

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Cobalt	7440-48-4		979	ug/L	97.9	80 - 120				02/16/11
Copper	7440-50-8		1010	ug/L	101	80 - 120				02/16/11
Vanadium	7440-62-2		989	ug/L	98.9	80 - 120				02/16/11
Zinc	7440-66-6		972	ug/L	97.2	80 - 120				02/16/11
Calcium	7440-70-2		988	ug/L	98.8	80 - 120				02/16/11
Lead	7439-92-1		991	ug/L	99.1	80 - 120				02/16/11
Lithium	7439-93-2		516	ug/L	103.2	80 - 120				02/16/11
Molybdenum	7439-98-7		967	ug/L	96.7	80 - 120				02/16/11
Strontium	7440-24-6		508	ug/L	101.6	80 - 120				02/16/11
Thallium	7440-28-0		808	ug/L	80.8	80 - 120				02/16/11
Tin	7440-31-5		964	ug/L	96.4	80 - 120				02/16/11
Arsenic	7440-38-2		968	ug/L	96.8	80 - 120				02/16/11
Beryllium	7440-41-7		493	ug/L	98.6	80 - 120				02/16/11
Boron	7440-42-8		979	ug/L	97.9	80 - 120				02/16/11
Bismuth	7440-69-9		939	ug/L	93.9	80 - 120				02/16/11
Silicon	7440-21-3		1000	ug/L	100	80 - 120				02/16/11
Phosphorus	7723-14-0		1010	ug/L	101	80 - 120				02/16/11
Selenium	7782-49-2		959	ug/L	95.9	80 - 120				02/16/11
MS			**QC Sample #48498**							
			Original 111204004							
Aluminum	7429-90-5		972	ug/L	97.2	75 - 125				02/16/11
Iron	7439-89-6		986	ug/L	98.6	75 - 125				02/16/11
Magnesium	7439-95-4		840	ug/L	84	75 - 125			X	02/16/11
Manganese	7439-96-5		1010	ug/L	100.9	75 - 125				02/16/11
Nickel	7440-02-0		974	ug/L	97.4	75 - 125				02/16/11

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7		710	ug/L	71	75 - 125			X	02/16/11
Silver	7440-22-4		999	ug/L	99.9	75 - 125				02/16/11
Sodium	7440-23-5		700	ug/L	70	75 - 125			X	02/16/11
Antimony	7440-36-0		1000	ug/L	100	75 - 125				02/16/11
Barium	7440-39-3		518	ug/L	103.6	75 - 125				02/16/11
Cadmium	7440-43-9		977	ug/L	97.7	75 - 125				02/16/11
Chromium	7440-47-3		1020	ug/L	102	75 - 125				02/16/11
Cobalt	7440-48-4		994	ug/L	99.4	75 - 125				02/16/11
Copper	7440-50-8		1000	ug/L	100	75 - 125				02/16/11
Vanadium	7440-62-2		998	ug/L	99.8	75 - 125				02/16/11
Zinc	7440-66-6		991	ug/L	99.1	75 - 125				02/16/11
Calcium	7440-70-2		700	ug/L	70	75 - 125			X	02/16/11
Lead	7439-92-1		996	ug/L	99.6	75 - 125				02/16/11
Lithium	7439-93-2		514	ug/L	102.8	75 - 125				02/16/11
Molybdenum	7439-98-7		991	ug/L	99.1	75 - 125				02/16/11
Strontium	7440-24-6		511	ug/L	102.2	75 - 125				02/16/11
Thallium	7440-28-0		785	ug/L	78.5	75 - 125				02/16/11
Tin	7440-31-5		980	ug/L	98	75 - 125				02/16/11
Arsenic	7440-38-2		980	ug/L	98	75 - 125				02/16/11
Beryllium	7440-41-7		498	ug/L	99.6	75 - 125				02/16/11
Boron	7440-42-8		999	ug/L	99.9	75 - 125				02/16/11
Bismuth	7440-69-9		944	ug/L	94.4	75 - 125				02/16/11
Silicon	7440-21-3		1010	ug/L	101	75 - 125				02/16/11
Phosphorus	7723-14-0		1060	ug/L	106	75 - 125				02/16/11
Selenium	7782-49-2		997	ug/L	99.7	75 - 125				02/16/11

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #48499**								
			Original	**111204004**					**Paired**	**48498**	
Aluminum	7429-90-5		1000	ug/L	100.2	75 - 125	3.00	20			02/16/11
Iron	7439-89-6		1030	ug/L	102.6	75 - 125	4.00	20			02/16/11
Magnesium	7439-95-4		1020	ug/L	102	75 - 125	19.40	20		X	02/16/11
Manganese	7439-96-5		1030	ug/L	102.9	75 - 125	2.00	20			02/16/11
Nickel	7440-02-0		993	ug/L	99.3	75 - 125	1.90	20			02/16/11
Potassium	7440-09-7		750	ug/L	75	75 - 125	5.50	20		X	02/16/11
Silver	7440-22-4		1010	ug/L	101	75 - 125	1.10	20			02/16/11
Sodium	7440-23-5		1100	ug/L	110	75 - 125	44.40	20	*	X	02/16/11
Antimony	7440-36-0		1010	ug/L	101	75 - 125	1.00	20			02/16/11
Barium	7440-39-3		527	ug/L	105.4	75 - 125	1.70	20			02/16/11
Cadmium	7440-43-9		993	ug/L	99.3	75 - 125	1.60	20			02/16/11
Chromium	7440-47-3		1030	ug/L	103	75 - 125	1.00	20			02/16/11
Cobalt	7440-48-4		1010	ug/L	101	75 - 125	1.60	20			02/16/11
Copper	7440-50-8		1020	ug/L	102	75 - 125	2.00	20			02/16/11
Vanadium	7440-62-2		1020	ug/L	102	75 - 125	2.20	20			02/16/11
Zinc	7440-66-6		1010	ug/L	101	75 - 125	1.90	20			02/16/11
Calcium	7440-70-2		1100	ug/L	110	75 - 125	44.40	20	*	X	02/16/11
Lead	7439-92-1		1020	ug/L	102	75 - 125	2.40	20			02/16/11
Lithium	7439-93-2		521	ug/L	104.2	75 - 125	1.40	20			02/16/11
Molybdenum	7439-98-7		1010	ug/L	101	75 - 125	1.90	20			02/16/11
Strontium	7440-24-6		520	ug/L	104	75 - 125	1.70	20			02/16/11
Thallium	7440-28-0		839	ug/L	83.9	75 - 125	6.70	20			02/16/11
Tin	7440-31-5		1000	ug/L	100	75 - 125	2.00	20			02/16/11

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Arsenic	7440-38-2		997	ug/L	99.7	75 - 125	1.70	20		02/16/11
Beryllium	7440-41-7		507	ug/L	101.4	75 - 125	1.80	20		02/16/11
Boron	7440-42-8		1020	ug/L	102	75 - 125	2.10	20		02/16/11
Bismuth	7440-69-9		960	ug/L	96	75 - 125	1.70	20		02/16/11
Silicon	7440-21-3		1050	ug/L	105	75 - 125	3.90	20		02/16/11
Phosphorus	7723-14-0		1080	ug/L	108	75 - 125	1.90	20		02/16/11
Selenium	7782-49-2		997	ug/L	99.7	75 - 125	0.00	20		02/16/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

QC Batch 175966
Associated Samples 111207002, 111207003

Test ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #48280**						
Aluminum	7429-90-5		<5.0	ug/L				U	02/07/11
Silver	7440-22-4		<0.10	ug/L				U	02/07/11
Antimony	7440-36-0		<0.30	ug/L				U	02/07/11
Barium	7440-39-3		<0.20	ug/L				U	02/07/11
Beryllium	7440-41-7		<0.10	ug/L				U	02/07/11
Cadmium	7440-43-9		<0.10	ug/L				U	02/07/11
Chromium	7440-47-3		<0.50	ug/L				U	02/07/11
Cobalt	7440-48-4		<0.050	ug/L				U	02/07/11
Copper	7440-50-8		<0.10	ug/L				U	02/07/11
Lead	7439-92-1		<0.10	ug/L				U	02/07/11
Mercury	7439-97-6		<0.050	ug/L				U	02/07/11
Molybdenum	7439-98-7		<0.050	ug/L				U	02/07/11
Thallium	7440-28-0		<0.050	ug/L				U	02/07/11
Tin	7440-31-5		<0.050	ug/L				U	02/07/11
Uranium	7440-61-1		<0.050	ug/L				U	02/07/11
Arsenic	7440-38-2		<0.40	ug/L				U	02/07/11
Selenium	7782-49-2		<0.30	ug/L				U	02/07/11
LCS			**QC Sample #48281**						

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Aluminum	7429-90-5		400	ug/L	100.1	85 - 115				02/07/11
Silver	7440-22-4		41.8	ug/L	104.6	85 - 115				02/07/11
Antimony	7440-36-0		38.8	ug/L	96.9	85 - 115				02/07/11
Barium	7440-39-3		39.7	ug/L	99.2	85 - 115				02/07/11
Beryllium	7440-41-7		39.5	ug/L	98.8	85 - 115				02/07/11
Cadmium	7440-43-9		39.0	ug/L	97.6	85 - 115				02/07/11
Chromium	7440-47-3		40.1	ug/L	100.2	85 - 115				02/07/11
Cobalt	7440-48-4		40.4	ug/L	101	85 - 115				02/07/11
Copper	7440-50-8		39.6	ug/L	99	85 - 115				02/07/11
Lead	7439-92-1		40.8	ug/L	102.1	85 - 115				02/07/11
Mercury	7439-97-6		1.84	ug/L	92	85 - 115				02/07/11
Molybdenum	7439-98-7		40.2	ug/L	100.6	85 - 115				02/07/11
Thallium	7440-28-0		40.6	ug/L	101.6	85 - 115				02/07/11
Tin	7440-31-5		39.9	ug/L	99.7	85 - 115				02/07/11
Uranium	7440-61-1		39.8	ug/L	99.4	85 - 115				02/07/11
Arsenic	7440-38-2		39.0	ug/L	97.5	85 - 115				02/07/11
Selenium	7782-49-2		37.5	ug/L	93.7	85 - 115				02/07/11
MS			**QC Sample #48282**							
			Original 111167005							
Aluminum	7429-90-5		388	ug/L	97	70 - 130				02/07/11
Silver	7440-22-4		39.6	ug/L	98.9	70 - 130				02/07/11
Antimony	7440-36-0		39.6	ug/L	99.1	70 - 130				02/07/11
Barium	7440-39-3		39.9	ug/L	99.8	70 - 130				02/07/11
Beryllium	7440-41-7		39.7	ug/L	99.4	70 - 130				02/07/11
Cadmium	7440-43-9		37.8	ug/L	94.6	70 - 130				02/07/11

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chromium	7440-47-3		39.3	ug/L	98.3	70 - 130				02/07/11
Cobalt	7440-48-4		38.2	ug/L	95.6	70 - 130				02/07/11
Copper	7440-50-8		35.0	ug/L	87.6	70 - 130				02/07/11
Lead	7439-92-1		41.1	ug/L	102.8	70 - 130				02/07/11
Mercury	7439-97-6		2.05	ug/L	102.4	70 - 130				02/07/11
Molybdenum	7439-98-7		41.8	ug/L	104.5	70 - 130				02/07/11
Thallium	7440-28-0		42.2	ug/L	105.6	70 - 130				02/07/11
Tin	7440-31-5		40.2	ug/L	100.6	70 - 130				02/07/11
Uranium	7440-61-1		41.5	ug/L	103.7	70 - 130				02/07/11
Arsenic	7440-38-2		40.5	ug/L	101.2	70 - 130				02/07/11
Selenium	7782-49-2		39.7	ug/L	99.2	70 - 130				02/07/11
MSD			**QC Sample #48283**							
			Original 111167005						**Paired 48282**	
Aluminum	7429-90-5		388	ug/L	97	70 - 130	0.00	20		02/07/11
Silver	7440-22-4		39.1	ug/L	97.8	70 - 130	1.10	20		02/07/11
Antimony	7440-36-0		39.4	ug/L	98.5	70 - 130	0.60	20		02/07/11
Barium	7440-39-3		40.7	ug/L	101.8	70 - 130	2.00	20		02/07/11
Beryllium	7440-41-7		41.0	ug/L	102.4	70 - 130	3.00	20		02/07/11
Cadmium	7440-43-9		37.6	ug/L	94	70 - 130	0.60	20		02/07/11
Chromium	7440-47-3		39.3	ug/L	98.4	70 - 130	0.10	20		02/07/11
Cobalt	7440-48-4		38.4	ug/L	96	70 - 130	0.40	20		02/07/11
Copper	7440-50-8		35.6	ug/L	89	70 - 130	1.60	20		02/07/11
Lead	7439-92-1		40.8	ug/L	102.1	70 - 130	0.70	20		02/07/11
Mercury	7439-97-6		2.01	ug/L	100.5	70 - 130	1.90	20		02/07/11
Molybdenum	7439-98-7		41.2	ug/L	103.1	70 - 130	1.30	20		02/07/11

REVISED111207 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Thallium	7440-28-0		41.6	ug/L	104	70 - 130	1.50	20		02/07/11
Tin	7440-31-5		39.8	ug/L	99.5	70 - 130	1.10	20		02/07/11
Uranium	7440-61-1		42.0	ug/L	104.9	70 - 130	1.20	20		02/07/11
Arsenic	7440-38-2		40.0	ug/L	100.1	70 - 130	1.10	20		02/07/11
Selenium	7782-49-2		37.0	ug/L	92.6	70 - 130	6.90	20		02/07/11

Date: 14 July 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: CERC11
Subject: General Chemistry - Sample Data Groups (SDGs) WSCF111069, WSCF111070, WSCF111206 and WSCF111207

INTRODUCTION

This memorandum presents the results of data validation for SDGs WSCF111069, WSCF111070, WSCF111206 and WSCF111207 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B29N08	1-07-2011	Water	C	300.0
B29N18	1-07-2011	Water	C	300.0
B29N17	1-07-2011	Water	C	300.0
B29N19	1-07-2011	Water	C	300.0
B29H53	1-07-2011	Water	C	310.1, 335.2
B29HB2	1-07-2011	Water	C	310.1, 335.2
B29HB7	1-07-2011	Water	C	310.1, 335.2
B29H97	1-07-2011	Water	C	310.1, 335.2
B29N53	1-07-2011	Water	C	7196A
B29N54	1-07-2011	Water	C	7196A
B29N55	1-07-2011	Water	C	7196A
B29N56	1-07-2011	Water	C	7196A
B29N57	1-07-2011	Water	C	7196A
B29N58	1-07-2011	Water	C	7196A
B29N75	1-07-2011	Water	C	7196A
B29N76	1-07-2011	Water	C	7196A
B29N39	1-18-2011	Water	C	7196A
B29N40	1-18-2011	Water	C	7196A
B29N26	1-18-2011	Water	C	300.0
B29HF7	1-18-2011	Water	C	310.1, 335.2

Data validation was conducted in accordance with the CHPRC validation statement of work and the Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study, DOE/RL-2009-42, Rev. 0 (SAP). 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 OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements are as follows:

- All anions except nitrate, nitrite, and phosphate – analysis within 28 days of sample collection
- Nitrate, nitrite, and phosphate – analysis within 48 hours of sample collection
- Alkalinity – analysis within 14 days of sample collection
- Hexavalent chromium – analysis within 24 hours of sample collection
- Total cyanide – analysis within 14 days of sample collection

Sample preservation for the above analyses requires chilling to 4 degrees Celsius. In addition, total cyanide is brought to pH>12 with sodium hydroxide.

The samples were analyzed within the prescribed holding times and properly preserved with the following exceptions.

For SDG WSCF111069, samples B29N08, B29N17, B29N18 and B29N19 were analyzed for nitrate, nitrite and phosphate beyond the holding time but well within 2X the holding time. The nitrite and phosphate results for the four samples were non-detects and, based on professional judgment, should be qualified as estimates and flagged "UJ." The nitrate results for the four samples were detects and should be qualified as estimates and flagged "J."

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable.

Trip Blanks

No trip blanks were submitted for validation.

Field Blanks

No field blanks were submitted for validation.

Equipment Blanks

No equipment blanks were submitted for validation.

- **Accuracy**

Accuracy is evaluated by reviewing matrix spike sample results and laboratory control sample results. According to the SAP, the matrix spike sample and laboratory control sample accuracy limits are 80% to 120% for anions. For remaining general chemistry analytes, the matrix spike sample accuracy limits are 80% to 120% and the laboratory control sample accuracy limits are ones specified by the DV procedure. The limits for reported analytes not listed in the SAP are specified by the DV procedure.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

All MS/MSD recoveries were acceptable.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

- **Precision**

Precision is evaluated by reviewing MS/MSD results, laboratory duplicate sample results, field duplicate sample results, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limits are ±20%. The RPD limits for reported analytes not listed in the SAP are specified by the DV procedure. When duplicate RPDs exceed the limits and have associated results <5X the reporting limits with differences <1X the reporting limits no precision infraction occurred.

MS/MSD Samples

All MS/MSD RPD values were acceptable.

Laboratory Duplicate Samples

All laboratory duplicate results were acceptable.

Field Duplicate Samples

No field duplicates were submitted for validation.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs with associated non-detected sample results were below the CRDLs.

- **Completeness**

SDGs WSCF111069, WSCF111070, WSCF111206 and WSCF111207 were 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

GRP-GD-003, Rev. 0, Change 0, *Data Validation for Chemical Analyses*, August 2010.

DOE/RL-2009-42, Rev. 0, *Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study*, December 2010.

Appendix 1

Glossary of Data Reporting Qualifiers

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

- **U** — The constituent was analyzed for, but was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the RL. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J+** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J-** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **N** — The analysis indicates the presence of an analyte that has been tentatively identified.

- **NJ** — The analysis indicates the presence of an analyte that has been tentatively identified and the associated numerical value represents its approximate concentration.

- **NJ+** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation.

- **NJ-** — The analysis indicates the presence of an analyte that has been tentatively identified. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

General Chemistry Data Qualification Summary			
SDGs: WSCF111069, WSCF111070, WSCF111206, WSCF111207	Reviewer: AQA	Project: CERC11	Page 1 of 1
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
Nitrite Phosphate	UJ	B29N08, B29N17, B29N18, B29N19	Analysis beyond the holding time but within 2X the holding time
Nitrate	J	B29N08, B29N17, B29N18, B29N19	Analysis beyond the holding time but within 2X the holding time

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069001
SAF# X11-016
Sample ID B29N08

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**01/09/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UD	<0.088		ug/mL	2	0.088	0.40	01/09/11
Chloride	16887-00-6	LA-533-410	D	19.9		ug/mL	2	0.084	0.80	01/09/11
Nitrite-N	NO2-N	LA-533-410	UD	<0.036 UJ		ug/mL	2	0.036	0.20	01/09/11
Bromide	24959-67-9	LA-533-410	BD	0.140		ug/mL	2	0.11	1.0	01/09/11
Nitrate-N	NO3-N	LA-533-410	D	11.8 J		ug/mL	2	0.019	0.20	01/09/11
Phosphate-P	PO4-P	LA-533-410	UD	<0.14 UJ		ug/mL	2	0.14	0.80	01/09/11
Sulfate	14808-79-8	LA-533-410	D	79.7		ug/mL	2	0.17	2.0	01/09/11

LS
8-02-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069002
SAF# X11-016
Sample ID B29N18

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**01/09/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	BD	0.112		ug/mL	2	0.088	0.40	01/09/11
Chloride	16887-00-6	LA-533-410	D	5.37		ug/mL	2	0.084	0.80	01/09/11
Nitrite-N	NO2-N	LA-533-410	UD	<0.036 UJ		ug/mL	2	0.036	0.20	01/09/11
Bromide	24959-67-9	LA-533-410	UD	<0.11		ug/mL	2	0.11	1.0	01/09/11
Nitrate-N	NO3-N	LA-533-410	D	1.89 J		ug/mL	2	0.019	0.20	01/09/11
Phosphate-P	PO4-P	LA-533-410	UD	<0.14 UJ		ug/mL	2	0.14	0.80	01/09/11
Sulfate	14808-79-8	LA-533-410	D	24.6		ug/mL	2	0.17	2.0	01/09/11

LS
8-02-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069003
SAF# X11-016
Sample ID B29N17

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**01/09/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	BD	0.0913		ug/mL	2	0.088	0.40	01/09/11
Chloride	16887-00-6	LA-533-410	D	16.9		ug/mL	2	0.084	0.80	01/09/11
Nitrite-N	NO2-N	LA-533-410	UD	<0.036 UJ		ug/mL	2	0.036	0.20	01/09/11
Bromide	24959-67-9	LA-533-410	UD	<0.11		ug/mL	2	0.11	1.0	01/09/11
Nitrate-N	NO3-N	LA-533-410	D	6.06 J		ug/mL	2	0.019	0.20	01/09/11
Phosphate-P	PO4-P	LA-533-410	UD	<0.14 UJ		ug/mL	2	0.14	0.80	01/09/11
Sulfate	14808-79-8	LA-533-410	D	72.3		ug/mL	2	0.17	2.0	01/09/11

LS
8-02-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Sample # 111069004
SAF# X11-016
Sample ID B29N19

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**01/09/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UD	<0.088		ug/mL	2	0.088	0.40	01/09/11
Chloride	16887-00-6	LA-533-410	D	18.7		ug/mL	2	0.084	0.80	01/09/11
Nitrite-N	NO2-N	LA-533-410	UD	<0.036 UJ		ug/mL	2	0.036	0.20	01/09/11
Bromide	24959-67-9	LA-533-410	BD	0.493		ug/mL	2	0.11	1.0	01/09/11
Nitrate-N	NO3-N	LA-533-410	D	89.1 J		ug/mL	51	0.49	5.1	01/09/11
Phosphate-P	PO4-P	LA-533-410	UD	<0.14 UJ		ug/mL	2	0.14	0.80	01/09/11
Sulfate	14808-79-8	LA-533-410	D	74.7		ug/mL	2	0.17	2.0	01/09/11

LS
8-02-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111069

Sample # 111069009
SAF# X11-016
Sample ID B29H53

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										**01/10/11**
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		67		mg/L	1	1	10	01/10/11
Cyanide Prep										**01/12/11**
Cyanide										
Cyanide	57-12-5	LA-695-402	U	<4.0		ug/L	1	4.0	20	01/12/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111069

Sample # 111069010
SAF# X11-016
Sample ID B29HB2

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										**01/10/11**
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		79		mg/L	1	1	10	01/10/11
Cyanide Prep										**01/12/11**
Cyanide										
Cyanide	57-12-5	LA-695-402	U	<4.0		ug/L	1	4.0	20	01/12/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111069

Sample # 111069011
SAF# X11-016
Sample ID B29HB7

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										**01/10/11**
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		120		mg/L	1	1	10	01/10/11
Cyanide Prep										**01/12/11**
Cyanide										
Cyanide	57-12-5	LA-695-402	U	<4.0		ug/L	1	4.0	20	01/12/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111069

Sample # 111069012
SAF# X11-016
Sample ID B29H97

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										**01/10/11**
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		86		mg/L	1	1	10	01/10/11
Cyanide Prep										**01/12/11**
Cyanide										
Cyanide	57-12-5	LA-695-402	U	<4.0		ug/L	1	4.0	20	01/12/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111070

Sample # 111070001
SAF# X11-016
Sample ID B29N53

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										**01/07/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.00310		mg/L	1	0.0020	0.0050	01/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111070

Sample # 111070002
SAF# X11-016
Sample ID B29N54

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										**01/07/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	01/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111070

Sample # 111070003
SAF# X11-016
Sample ID B29N55

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										**01/07/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.00260		mg/L	1	0.0020	0.0050	01/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111070

Sample # 111070004
SAF# X11-016
Sample ID B29N56

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										**01/07/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	B	0.00230		mg/L	1	0.0020	0.0050	01/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111070

Sample # 111070005
SAF# X11-016
Sample ID B29N57

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										**01/07/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403		0.0108		mg/L	1	0.0020	0.0050	01/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111070

Sample # 111070006
SAF# X11-016
Sample ID B29N58

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										**01/07/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403		0.0103		mg/L	1	0.0020	0.0050	01/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111070

Sample # 111070007
SAF# X11-016
Sample ID B29N75

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										**01/07/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	01/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111070

Sample # 111070008
SAF# X11-016
Sample ID B29N76

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										**01/07/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	01/07/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111206

Sample # 111206001
SAF# X11-016
Sample ID B29N39

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										**01/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403		0.00590		mg/L	1	0.0020	0.0050	01/18/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF111206

Sample # 111206002
SAF# X11-016
Sample ID B29N40

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI)										**01/18/11**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403		0.00610		mg/L	1	0.0020	0.0050	01/18/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Sample # 111207001
SAF# X11-016
Sample ID B29N26

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**01/19/11**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	UD	<0.088		ug/mL	2	0.088	0.40	01/19/11
Chloride	16887-00-6	LA-533-410	D	21.9		ug/mL	2	0.084	0.80	01/19/11
Nitrite-N	NO2-N	LA-533-410	UD	<0.036		ug/mL	2	0.036	0.20	01/19/11
Bromide	24959-67-9	LA-533-410	BD	0.122		ug/mL	2	0.11	1.0	01/19/11
Nitrate-N	NO3-N	LA-533-410	D	2.97		ug/mL	2	0.019	0.20	01/19/11
Phosphate-P	PO4-P	LA-533-410	UD	<0.14		ug/mL	2	0.14	0.80	01/19/11
Sulfate	14808-79-8	LA-533-410	D	54.6		ug/mL	2	0.17	2.0	01/19/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED111207 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111207

Sample # 111207003
SAF# X11-016
Sample ID B29HF7

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										**01/25/11**
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		280		mg/L	1	1	10	01/25/11
Cyanide Prep										**01/24/11**
Cyanide										
Cyanide	57-12-5	LA-695-402	U	<4.0		ug/L	1	4.0	20	01/24/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED111207 -

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Attachment 2
Narrative
WSCF111069

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. Also attached are IRF's 11-315 dealing with missed hold time for anions, 11-321dealing with Potassium LCS failure and 11-322 dealing with the missed hold time for Silicon and Phosphorus. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-315 was created due to anions were analyzed after the 48 hour holding time expired.

- Fluoride - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.

Cyanide – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Batch QC 175434
- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-321 was created due to LCS failure of Potassium. The data is reported as is.
- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-322 was created due to Silicon and Phosphorus were analyzed after the 28 day holding time expired.
    - Potassium – LCS recovery was outside established limits.
    - Sodium and Silicon – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.
    - Calcium, Magnesium and Silicon – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
- Batch QC 175435
    - Sodium – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.
    - Calcium, Magnesium, Potassium, Silicon and Sodium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
    - All other applicable QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

TPHG-WA – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gross Alpha / Gross Beta:
  - Batch QC 174188
  - Gross Alpha - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable QC controls are within the established limits.

- Isotopic Plutonium analysis:
  - Plutonium-239/240 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Uranium-234 - The Blank is greater than two times the MDC. Sample results above the MDC were "B" Flagged.
  - Uranium-235 - The Blank is less than two times the MDC. "B" Flag not required.
  - Uranium-234 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
  - Uranium-235 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Uranium-238 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Strontium-89/90:
    - All applicable QC controls are within the established limits.
- Tritium:
  - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Technetium-99:
    - All applicable QC controls are within the established limits.

Narrative

Attachment 2
Narrative
WSCF111069

We 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 data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-321

Date: 2/7/2011 SAF No(s): X11-009, X11-016 and I11-001

SDG (s): 111346, 111040, 111060, 111063 and 111069 TEST: ICP-AES 6010

DUE DATE: 2/7/2011

LOGIN No(s): 111346006 through 111346011
111040002 and 111040003
111060007
111063004, 111063005, 111063007 through 111063012
111069005 through 111069007

Sample No(s): B28XF5, B28XF9, B28XH0, B28XF6, B28WV0 and B28WV1
B282H8 and B282H9
B29H63
B29HJ6, B29HJ7, B29HH6, B29HH7, B29HJ2, B29HK3, B29HJ1 and B29HK2
B29H52, B29HB1 and B29HB6

Submitted By: M. Avila
Phone No.: 373-1613
Fax No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
The Potassium LCS percent recovery was out of limits: Potassium LCS = 123.0% (limits– 80-120%) All other QC passed; the MS and MSD were at 108.3% and 112.3% recovery, respectively.	Accept the data as-is and note in the narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 2/7/11
Signature and Date

6

Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-315

Date: 1/24/2011 SAF No. F10-208 SDGs: 111065, 111069
TEST: Anions_IC_300.0 **DUE DATE: 2/21/11**

LOGIN No.: 111065001 – 111065002
111069001 - 111069004

Sample No.(s): B29LN7, B29LP0, B29N08, B28N18, B29N17, B29N19

Submitted By: H. Medley
Phone No.: 372-1488
Fax. No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
The above samples were received late in the day on Friday 1/7/11 to be analyzed on the same day. The samples were analyzed at the next possible opportunity, which was Sunday 1/9/11. The samples missed the 48 hour regulatory hold time.	Accept analytical results (accept as-is) and note in narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 1/25/201

Signature and Date

7

Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-322

Date: 2/8/20111 SAF No. X11-016

SDG: 111069, 111074, 111077, 111078 & 111081 TEST: ICP-6010 **DUE DATE: 2/7/2011 and 2/8/2011**

TEST: ICP-6010

LOGIN No.: 111069008 through 111069012
111074002 and 111074003
111077005 through 111077010
111078004 through 111078009
111081004

Sample No.(s): B29H96, B29H53, B29HB2, B29HB7 and B29H97
B29H33 and B29H34
B29H43, B29H49, B29H38, B29H44, B29H50 and B29H39
B29H86, B29H91, B29HF1, B29H87, B29H92 and B29HF2
B29H57

Submitted By: M. Avila
Phone No.:
Fax. No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
These samples were collected on: 111069 1/7/11 111074 1/9/11 111077 1/9/11 111078 1/9/11 111081 1/9/11 These samples were not analyzed until February 8th, 2011. These were analyzed outside the 28-day regulatory holding time for Silicon and Phosphorus.	Accept results as-is and document in the narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution
Sara Champoux 2/8/2011
Signature and Date

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CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-210 Page 1 of 1

Collector: Heike	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

111069

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N08	N	W	1/7/11	0945	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Heike			1520 JAN 07 2011	Victor			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-200 Page 1 of 1

Collector: Halse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104CS20
Project Title: NDURA. DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N18	2 N	W	1/7/11	1048	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Halse			510 JAN 07 2011				1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-201 Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 35/8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N17 3	N	W	1/7/11	1149	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	TB Hulse		1520 JAN 07 2011	VICTOR Bing			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-199 Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Hunsted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No.: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N19 4	N W	1/7/11	1254	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool-4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
Hulse	Hulse	1520 JAN 07 2011	V. Lin	Singh	1520 JAN 07 2011
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-26 Page 1 of 2

Collector: Hulke	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104E520
Project Title: NDCRA DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter *		Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H52 5	Y	W	1/7/11	0945	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H52	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H52	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H53 9	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29H53	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H53	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29H53	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29H53	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29H53	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29H53	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29H53	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29H53	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulke			1500 JAN 07 2011				1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-26 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-4650		

Sample No.	Lab ID	*		Date	Time	No/Type Container	Sample Analysis	Preservative	
B29H53	N	W	[illegible]	11/2/11	0945	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29H53	N	W				3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29H53	N	W				4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hurke	[illegible]	[illegible]	1520 JAN 07 2011	Victor Bibb		[illegible]	1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-98 Page 1 of 2

Collector: Hake	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB1 6	Y	W	1/6/11	1048	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB1	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB1	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB2 10	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HB2	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HB2	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HB2	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HB2	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HB2	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HB2	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hake	[illegible]	[illegible]	1520 JAN 07 2011	[illegible]			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-98 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-1650		

Sample No.	Lab ID	*		Date	Time	No/Type Container	Sample Analysis	Preservative	
B29HB2	N	W		1/7/11	1048	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29HB2	N	W		↓		3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29HB2	N	W		↓	↓	4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hube	KB Dhalu		1520 JAN 07 2011	VICTOR Silva			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-106 Page 1 of 2

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB6	Y	W	1/7/11	1256	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB6	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB6	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB7	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HB7	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HB7	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HB7	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HB7	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HB7	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HB7	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	KS Hulse	1520	JAN 07 2011	K Brevard	K Brevard	1520	JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-106
		Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-1650		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis		Preservative
B29HB7	N	W	1/7/11	1257	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29HB7	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29HB7	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	[illegible]		1520 JAN 07 2011	Victor Binkley			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-90 Page 1 of 2

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H96 8	Y	W	1/7/11	1419	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H96	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H96	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H97 12	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29H97	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H97	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29H97	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29H97	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29H97	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29H97	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29H97	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29H97	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	[illegible]	[illegible]	1520 JAN 07 2011	[illegible]	[illegible]	[illegible]	1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-90 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-4650		

Sample No	Lab ID	*	Date	Time	No/Type Container	Sample Analysis		Preservative
B29H97	N	W	1/3/11	1149	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29H97	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29H97	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hatton	[illegible]		1520 JAN 07 2011	Victor Bing			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Attachment 2
Narrative
WSCF111070

Introduction

Eight (8) groundwater samples were received at the WSCF Laboratory on January 7, 2011. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Hexavalent Chromium – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Batch QC 173595 analyzed on sample# B29N53 (111070001)

All applicable QC controls are within the established limits.

Narrative

Attachment 2
Narrative
WSCF111070

We 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 data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-231 Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 / 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
"*" Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

111D7D

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N53	Y	W	1/7/11	1524	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C
B29N54 2	N	W	1	1	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	Hulse		1520 JAN 07 2011	Victor	Bing		1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-230 Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No.: HNF-N-506 39 / 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No

Sample No	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N55 3	Y	W	1/7/11	1048	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C
B29N56 4	N	W	↓	↓	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1520 JAN 07 2011				1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-229 Page 1 of 1

Collector Hulse	Contact/Requester Karen Waters-Husted	Telephone No. 376-4650
SAF No. X11-016	Sampling Origin Hanford Site	Purchase Order/Charge Code 300104ES20
Project Title NDURA, DECEMBER 2010	Logbook No: HNF-N-506 371 8	Ice Chest No. N/A
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Government Vehicle	Bill of Lading/Air Bill No. N/A
Protocol CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No. N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N57 5	Y	W	1/7/11	1149	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C
B29N58 6	N	W	6	6	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1520 JAN 07 2011		Victor Sims Jr		1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-220 Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 37 / 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N75 7	Y	W	1/7/11	0945	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C
B29N75 8	N	W			1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1520 JAN 07 2011	VILTON			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Attachment 2
Narrative
WSCF111206

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Hexavalent Chromium – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Narrative

Attachment 2
Narrative
WSCF111206

We 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 data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-238 Page 1 of 1

Collector: J.S. Artzer CHRPC	Contact/Requester: Karen Waters-Hustad	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104US20
Project Title: NDIURA DECEMBER 2010	Logbook No: HNF-N-506 37 / 9	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

111206

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

	Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
001	B29N39	Y	W	01/18/11	1003	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C
002	B29N40	N	W	↓	↓	1x500-mL aG	7196_CR6: Hexavalent Chromium (1)	24 Hours	Cool~4C

Mas 1/18/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011				1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Attachment 2
Narrative, Rev. 1
WSCF111207

P&D Correction – Case Narrative Replaces the Prior Submittal in its Entirety
Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4. Additionally, a copy of the completed P&D # WSCFX111207 is included with this case narrative.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Attachment 2
Narrative, Rev. 1
WSCF111207

- Nitrate – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.

- All other applicable QC controls are within the established limits.

Cyanide – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Sodium – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.

- Magnesium, Potassium, Sodium and Calcium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.

- All other applicable QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

PCB – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Attachment 2
Narrative, Rev. 1
WSCF111207

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):
Tracers and surrogates are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- All other applicable QC controls are within the established limits.

TPHG-WA – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gross Alpha / Gross Beta:
  - All applicable QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - All applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Uranium-238 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Uranium-235 and Uranium-238 - The Blank is less than two times the MDC. "B" Flag not required.
    - All other applicable QC controls are within the established limits.
- Strontium-89/90:
  - All applicable QC controls are within the established limits.
- Tritium:

- All applicable QC controls are within the established limits.

- Technetium-99:
  - All applicable QC controls are within the established limits.

We 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 data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

Attachment 2
Narrative, Rev. 1
WSCF111207

3/14/2011

Problem and Discrepancy Report

WSCF

SDG WSCF111207

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1. The data package has the following issues:

a) All of the electronic results are missing.

Resolution: *Provide missing results.*

Lab Response: **The electronic results have been provided.**

Please correct the issues and resubmit the electronic data packages.

5

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-192 Page 1 of 1

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 3719	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

001 111207

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N26	N	W	01/18/11	1003	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011		VICTOR SIMS		1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-154

Page 1 of 2

Collector: J.S. Artzer CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NUURA DECEMBER 2010	Logbook No: HNF-N-506 3719	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF6 ~~007~~ 002	Y	W	01/18/11	1003	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HF6	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HF6	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HF7 COR	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HF7	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HF7	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HF7	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HF7	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HF7	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HF7	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011				1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-154 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters Husted	376-4650		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis		Preservative	
B29HF7	N	W	01/18/11	1003	1x1-L G/P	UISO_IE_PRECIP_AEA List-1 (3)	/	6 Months	HNO3 to pH <2
B29HF7	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	/	14/40 Days	HCl to pH <2 Cool~4C
B29HF7	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	/	14 Days	HCl to pH <2 Cool~4C
B29HF7	N	W			4x1-L aG	PCBs - 8082	/	1 yr/1 yr	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011	Victor Bins			1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Appendix 5

Data Validation Supporting Documentation

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: CERC11			DATA PACKAGE: VSR11-049		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 7-14-2011	
			SDG: WSCF-111069, -111070, -111206, -111207		
ANALYSES PERFORMED					
Anions/IC X	TOC	TOX	TPH-418.1	Oil and Grease	Alkalinity X
Ammonia	BOD/COD	Chloride	Chromium-VI X	pH	NO_3/NO_2
Sulfate	TDS	TKN	Phosphate	Cyanide X	

SAMPLES/MATRIX Water samples

SDG WSCF111069: B29N08, B29N18, B29N17, B29N19, B29H53, B29HB2, B29HB7, B29H97
SDG WSCF111070: B29N53, B29N54, B29N55, B29N56, B29N57, B29N58, B29N75, B29N76
SDG WSCF111206: B29N39, B29N40
SDG WSCF111207: B29N26, B29HF7

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments: None

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:

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: None

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

Spike samples analyzed? ..... Yes No N/A

Spike recoveries acceptable? ..... Yes No N/A

Spike 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: None

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: None

6. HOLDING TIMES (all levels)

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

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

Comments:

Samples B29N08, B29N17, B29N18 and B29N19 were collected on 1-07-11 and analyzed on 1-09-11 for nitrate, nitrite and phosphate. The lab narrative states that the 48-hour holding time was exceeded, but analysis time data is not provided to confirm.

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: None

Appendix 6

Additional Documentation Requested By Client

Quality Control Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111069

QC Batch 173793
Associated Samples 111069009, 111069010, 111069011, 111069012

Test Total Alkalinity as mg/L CaCO3 (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #46019**							
Total Alkalinity as CaCO3	ALKALINITY		100	mg/L	102.9	80 - 120				01/10/11
DUP			**QC Sample #46020**							
			Original 111067002							
Total Alkalinity as CaCO3	ALKALINITY		160	mg/L			0.00	20		01/10/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

QC Batch 173799
Associated Samples 111069001, 111069002, 111069003, 111069004

Test Anions by Ion Chromatography (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #46053**								
Fluoride	16984-48-8		<0.044	ug/mL						U	01/09/11
Chloride	16887-00-6		<0.042	ug/mL						U	01/09/11
Nitrite-N	NO2-N		<0.018	ug/mL						U	01/09/11
Bromide	24959-67-9		<0.054	ug/mL						U	01/09/11
Nitrate-N	NO3-N		<9.7E-3	ug/mL						U	01/09/11
Phosphate-P	PO4-P		<0.072	ug/mL						U	01/09/11
Sulfate	14808-79-8		<0.083	ug/mL						U	01/09/11
LCS			**QC Sample #46054**								
Fluoride	16984-48-8		0.924	ug/mL	93.3	90 - 110					01/09/11
Chloride	16887-00-6		2.01	ug/mL	101.4	90 - 110					01/09/11
Nitrite-N	NO2-N		0.921	ug/mL	94.1	90 - 110					01/09/11
Bromide	24959-67-9		4.01	ug/mL	102.2	90 - 110					01/09/11
Nitrate-N	NO3-N		0.965	ug/mL	109	90 - 110					01/09/11
Phosphate-P	PO4-P		1.95	ug/mL	102.2	90 - 110					01/09/11
Sulfate	14808-79-8		4.04	ug/mL	103	90 - 110					01/09/11
DUP			**QC Sample #46055**								
			Original	**111065001**							
Fluoride	16984-48-8		0.0955	ug/mL			49.20	20	*	BXD	01/09/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chloride	16887-00-6		8.48	ug/mL			0.50	20	D	01/09/11
Nitrite-N	NO2-N		<0.036	ug/mL			0.00	20	UD	01/09/11
Bromide	24959-67-9		<0.11	ug/mL			0.00	20	UD	01/09/11
Nitrate-N	NO3-N		0.239	ug/mL			9.20	20	D	01/09/11
Phosphate-P	PO4-P		<0.14	ug/mL			0.00	20	UD	01/09/11
Sulfate	14808-79-8		9.79	ug/mL			4.10	20	D	01/09/11
MS			**QC Sample #46056**							
			Original 111065001							
Fluoride	16984-48-8		1.08	ug/mL	107.7	80 - 120			D	01/09/11
Chloride	16887-00-6		2.22	ug/mL	110.8	80 - 120			D	01/09/11
Nitrite-N	NO2-N		0.870	ug/mL	88	80 - 120			D	01/09/11
Bromide	24959-67-9		4.24	ug/mL	107	80 - 120			D	01/09/11
Nitrate-N	NO3-N		0.957	ug/mL	107.1	80 - 120			D	01/09/11
Phosphate-P	PO4-P		2.01	ug/mL	104.3	80 - 120			D	01/09/11
Sulfate	14808-79-8		3.86	ug/mL	97.5	80 - 120			D	01/09/11
MSD			**QC Sample #46057**							
			Original 111065001					**Paired**	**46056**	
Fluoride	16984-48-8		1.08	ug/mL	107.7	80 - 120	0.00	20	D	01/09/11
Chloride	16887-00-6		2.13	ug/mL	106.6	80 - 120	3.90	20	D	01/09/11
Nitrite-N	NO2-N		0.863	ug/mL	87.3	80 - 120	0.80	20	D	01/09/11
Bromide	24959-67-9		4.23	ug/mL	106.9	80 - 120	0.10	20	D	01/09/11
Nitrate-N	NO3-N		0.979	ug/mL	109.5	80 - 120	2.20	20	D	01/09/11
Phosphate-P	PO4-P		2.02	ug/mL	104.7	80 - 120	0.40	20	D	01/09/11
Sulfate	14808-79-8		3.60	ug/mL	90.8	80 - 120	7.10	20	D	01/09/11

Quality Control Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111069

QC Batch 174211
Associated Samples 111069009, 111069010, 111069011, 111069012

Test Cyanide by Midi/Spectrophotometer

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #46460**							
Cyanide	57-12-5		<4.0	ug/L					U	01/12/11
LCS			**QC Sample #46462**							
Cyanide	57-12-5		44.8	ug/L	89.5	85 - 115				01/12/11
MS			**QC Sample #46463**							
			Original 111063008							
Cyanide	57-12-5		33.6	ug/L	84	75 - 125				01/12/11
MSD			**QC Sample #46464**							
			Original 111063008					**Paired**	**46463**	
Cyanide	57-12-5		36.2	ug/L	90.5	75 - 125	7.40	20		01/12/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111070

QC Batch 173595 **Test** Hexavalent chromium Discrete Analyzer
Associated Samples 111070001, 111070002, 111070003, 111070004, 111070005, 111070006, 111070007, 111070008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #45859**							
Hexavalent chromium	18540-29-9		<0.0020	mg/L					U	01/07/11
LCS			**QC Sample #45861**							
Hexavalent chromium	18540-29-9		0.0512	mg/L	102.4	90 - 110				01/07/11
DUP			**QC Sample #45862**							
			Original 111070001							
Hexavalent chromium	18540-29-9	0.00310	0.00260	mg/L			17.50	20	B	01/07/11
MS			**QC Sample #45863**							
			Original 111070001							
Hexavalent chromium	18540-29-9	0.00310	0.0424	mg/L	106	85 - 115				01/07/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111206

QC Batch 174585
Associated Samples 111206001, 111206002

Test Hexavalent chromium Discrete Analyzer

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #46849**							
Hexavalent chromium	18540-29-9		0.0524	mg/L	104.8	90 - 110				01/18/11
BLANK			**QC Sample #46850**							
Hexavalent chromium	18540-29-9		<0.0020	mg/L					U	01/18/11
DUP			**QC Sample #46851**							
			Original 111195002							
Hexavalent chromium	18540-29-9		0.00340	mg/L			8.50	20	B	01/18/11
MS			**QC Sample #46852**							
			Original 111195002							
Hexavalent chromium	18540-29-9		0.0418	mg/L	104.5	85 - 115				01/18/11

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

QC Batch 174794
Associated Samples 111207001

Test Anions by Ion Chromatography (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #47000**							
Fluoride	16984-48-8		<0.044	ug/mL					U	01/19/11
Chloride	16887-00-6		<0.042	ug/mL					U	01/19/11
Nitrite-N	NO2-N		<0.018	ug/mL					U	01/19/11
Bromide	24959-67-9		<0.054	ug/mL					U	01/19/11
Nitrate-N	NO3-N		<9.7E-3	ug/mL					U	01/19/11
Phosphate-P	PO4-P		<0.072	ug/mL					U	01/19/11
Sulfate	14808-79-8		<0.083	ug/mL					U	01/19/11
LCS			**QC Sample #47001**							
Fluoride	16984-48-8		0.908	ug/mL	91.6	90 - 110				01/19/11
Chloride	16887-00-6		2.00	ug/mL	101.1	90 - 110				01/19/11
Nitrite-N	NO2-N		0.888	ug/mL	90.8	90 - 110				01/19/11
Bromide	24959-67-9		3.97	ug/mL	101.3	90 - 110				01/19/11
Nitrate-N	NO3-N		0.915	ug/mL	103.4	90 - 110				01/19/11
Phosphate-P	PO4-P		1.92	ug/mL	100.4	90 - 110				01/19/11
Sulfate	14808-79-8		4.04	ug/mL	103.1	90 - 110				01/19/11
DUP			**QC Sample #47002**							
			Original 111204001							
Fluoride	16984-48-8		<0.088	ug/mL			14.40	20	UD	01/19/11

REVISED111207 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF111207

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
Chloride	16887-00-6		11.2	ug/mL			0.90	20		D	01/19/11
Nitrite-N	NO2-N		<0.036	ug/mL			0.00	20		UD	01/19/11
Bromide	24959-67-9		<0.11	ug/mL			200.00	20	*	UXD	01/19/11
Nitrate-N	NO3-N		0.0315	ug/mL			106.60	20	*	BXD	01/19/11
Phosphate-P	PO4-P		<0.14	ug/mL			0.00	20		UD	01/19/11
Sulfate	14808-79-8		<0.17	ug/mL			16.60	20		UD	01/19/11
MS			**QC Sample #47003**								
			Original 111204001								
Fluoride	16984-48-8		1.06	ug/mL	105.6	80 - 120				D	01/19/11
Chloride	16887-00-6		2.07	ug/mL	103.3	80 - 120				D	01/19/11
Nitrite-N	NO2-N		0.875	ug/mL	88.5	80 - 120				D	01/19/11
Bromide	24959-67-9		4.15	ug/mL	104.7	80 - 120				D	01/19/11
Nitrate-N	NO3-N		0.938	ug/mL	104.9	80 - 120				D	01/19/11
Phosphate-P	PO4-P		1.91	ug/mL	98.7	80 - 120				D	01/19/11
Sulfate	14808-79-8		4.20	ug/mL	106	80 - 120				D	01/19/11
MSD			**QC Sample #47004**								
			Original 111204001						**Paired**	**47003**	
Fluoride	16984-48-8		0.968	ug/mL	96.8	80 - 120	8.70	20		D	01/19/11
Chloride	16887-00-6		2.34	ug/mL	117	80 - 120	12.40	20		D	01/19/11
Nitrite-N	NO2-N		0.874	ug/mL	88.4	80 - 120	0.10	20		D	01/19/11
Bromide	24959-67-9		4.24	ug/mL	107	80 - 120	2.20	20		D	01/19/11
Nitrate-N	NO3-N		0.959	ug/mL	107.3	80 - 120	2.30	20		D	01/19/11
Phosphate-P	PO4-P		2.04	ug/mL	105.9	80 - 120	7.00	20		D	01/19/11
Sulfate	14808-79-8		4.16	ug/mL	105.1	80 - 120	0.90	20		D	01/19/11

REVISION 1

Quality Control Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111207

QC Batch 175015
Associated Samples 111207003

Test Cyanide by Midi/Spectrophotometer

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #47322**							
Cyanide	57-12-5		<4.0	ug/L					U	01/24/11
LCS			**QC Sample #47324**							
Cyanide	57-12-5		47.6	ug/L	95.2	85 - 115				01/24/11
MS			**QC Sample #47325**							
			Original 111085003							
Cyanide	57-12-5		35.5	ug/L	88.8	75 - 125				01/24/11
MSD			**QC Sample #47326**							
			Original 111085003					**Paired**	**47325**	
Cyanide	57-12-5		35.7	ug/L	89.2	75 - 125	0.40	20		01/24/11

Quality Control Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF111207

QC Batch 175130
Associated Samples 111207003

Test Total Alkalinity as mg/L CaCO3 (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #47478**							
Total Alkalinity as CaCO3	ALKALINITY		100	mg/L	103.2	80 - 120				01/25/11
DUP			**QC Sample #47479**							
			Original 111191006							
Total Alkalinity as CaCO3	ALKALINITY		110	mg/L			0.00	20		01/25/11

Date: 14 July 2011
To: CH2M Hill (technical representative)
From: Analytical Quality Associates, Inc.
Project: CERC11
Subject: Radiochemical - Sample Data Groups (SDGs) W06103, WSCF111069 and WSCF111207

INTRODUCTION

This memorandum presents the results of data validation for SDG W06103 prepared by TestAmerica, and SDGs WSCF111069 and WSCF111207 prepared by WSCF. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B29H99	1-07-2011	Water	C	Gamma
B29HB4	1-07-2011	Water	C	Gamma
B29HJ4	1-07-2011	Water	C	Gamma
B29HH9	1-07-2011	Water	C	Gamma
B29HJ8	1-07-2011	Water	C	Gamma
B29HJ9	1-07-2011	Water	C	Gamma
B29HB9	1-07-2011	Water	C	Gamma
B29H55	1-07-2011	Water	C	Gamma
B29H69	1-07-2011	Water	C	Gamma
B29HD4	1-07-2011	Water	C	Gamma
B29H70	1-07-2011	Water	C	Gamma
B29HC9	1-07-2011	Water	C	Gamma
B29HD9	1-07-2011	Water	C	Gamma
B29HH4	1-07-2011	Water	C	Gamma
B29H46	1-09-2011	Water	C	Gamma
B29H65	1-07-2011	Water	C	Gamma
B29H84	1-09-2011	Water	C	Gamma
B29HC4	1-09-2011	Water	C	Gamma
B29H60	1-09-2011	Water	C	Gamma
B29H41	1-09-2011	Water	C	Gamma
B29H53	1-07-2011	Water	C	See note 1
B29HB2	1-07-2011	Water	C	See note 1
B29HB7	1-07-2011	Water	C	See note 1
B29H97	1-07-2011	Water	C	See note 1
B29HF7	1-18-2011	Water	C	See note 1

1 – Isotopic-Pu, Isotopic-U, Sr-89/90, Tc-99, Tritium, Gross alpha beta

Data validation was conducted in accordance with the CHPRC validation statement of work and the Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study, DOE/RL-2009-42, Rev. 0 (SAP). 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 OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The maximum holding time for radiochemical analysis is 180 days. Sample preservation for water samples for all analyses except tritium requires acid preservation with nitric acid to pH <2.

The samples were analyzed within the prescribed holding time and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable with the following exceptions.

For SDG WSCF111069, the U-234 and U-238 laboratory blank results were > the minimum detectable concentrations (MDCs). The U-234 results for samples B29H53 and B29HB2, and the U-238 result for sample B29H53 were detects <5X the blank results and should be qualified as estimates and flagged "J." The U-234 and U-238 results for the remaining associated samples were detects ≥5X the blank results and should not be qualified for the blank infractions.

For SDG WSCF111207, the U-235 and U-238 laboratory blank results were > the MDCs. The U-235 result for sample B29HF7 was a detect <5X the blank result and should be qualified as an estimate and flagged "J." The U-238 result for sample B29HF7 was a detect >5X the blank result and should not be qualified for the blank infraction.

Trip Blanks

All trip blank results were acceptable.

Field Blanks

No field blanks were submitted for validation.

Equipment Blanks

No equipment blanks were submitted for validation.

- **Accuracy**

Accuracy is evaluated by reviewing matrix spike sample results, laboratory control sample results, and chemical recovery factors. Chemical recovery factors are determined through use of a carrier or tracer and provide assessment of the chemical separation process that is affected by the laboratory procedure, sample matrix, and/or interference. Chemical recovery factors are used to correct sample concentration, uncertainty, and MDC results. According to the SAP, the matrix spike sample and laboratory control sample accuracy limits are 70% to 130%. The limits for reported analytes not listed in the SAP are specified by the DV procedure.

Matrix Spike (MS) Samples

All MS recoveries were acceptable.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

Carrier/Tracer Recovery Factors

All carrier/tracer recovery factors were acceptable.

- **Precision**

Precision is evaluated by reviewing laboratory duplicate, field duplicate, and field split sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, the relative percent difference (RPD) limits are ±30%. The RPD limits for reported analytes not listed in the SAP are specified by the DV procedure. When duplicate RPDs exceed the limits and have associated results <5X the MDCs the precision limits are ones specified by the DV procedure.

Laboratory Duplicate Samples

All laboratory duplicate results were acceptable with the following exceptions.

For SDG WSCF111069, the tritium (batch 173934), U-234 and U-238 RPDs were > the acceptance limit, and the Pu-239/240 difference was > the MDC. The tritium results for samples B29H53, B29HB2 and B29HB7 were detects and should be qualified as estimates and flagged "J." The U-234 and U-238 results for samples B29H53, B29HB2, B29HB7 and B29H97 were detects and should be qualified as estimates and flagged "J." The Pu-239/240 results for samples

B29H53 and B29HB7 were detects and should be qualified as estimates and flagged "J." The Pu-239/240 results for samples B29HB2 and B29H97 were non-detects and should be qualified as estimates and flagged "UJ."

For SDG WSCF111207, the U-238 RPD was > the acceptance limit. The U-238 result for sample B29HF7 was a detect and should be qualified as an estimate and flagged "J."

Field Duplicate Samples

All field duplicate results were acceptable.

Field Split Samples

No field splits were submitted for validation.

- **Detection Limits**

Reported MDCs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDCs with associated non-detected sample results were below the CRDLs with the following exception. The Be-7 MDC for sample B29H65 was > the CRDL due to insufficient volume.

- **Completeness**

SDGs W06103, WSCF111069 and WSCF111207 were 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

Minor deficiencies leading to qualification of sample results as estimates were due to laboratory blank and duplicate infractions. See the table in Appendix 2 for a listing of all affected sample results.

REFERENCES

GRP-GD-002, Rev. 0, Change 0, *Data Validation for Radiochemical Analyses*, August 2010.

DOE/RL-2009-42, Rev. 0, *Sampling and Analysis Plan for the 100-NR-1 and 100-NR-2 Operable Units Remedial Investigation/Feasibility Study*, December 2010.

Appendix 1

Glossary of Data Reporting Qualifiers

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

- **U** — The constituent was analyzed for and was not detected. The data should be considered usable for decision-making purposes.

- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the MDC. The data should be considered usable for decision-making purposes.

- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J+** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected positive bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **J-** — Indicates the constituent was analyzed for and detected. The associated value is estimated with a suspected negative bias due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.

- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2

Summary of Data Qualification

Radiochemical Data Qualification Summary			
SDGs: W06103, WSCF111069 & WSCF111207	Reviewer: AQA	Project: CERC11	Page 1 of 1
Analyte(s)	**DV Flag**	**Samples Affected**	**Reason**
U-234	J	B29H53, B29HB2	Lab blank contamination and poor lab duplicate precision
U-234	J	B29HB7, B29H97	Poor lab duplicate precision
U-238	J	B29H53	Lab blank contamination and poor lab duplicate precision
U-238	J	B29HB2, B29HB7, B29H97	Poor lab duplicate precision
Tritium	J	B29H53, B29HB2, B29HB7	Poor lab duplicate precision
Pu-239/240	UJ	B29HB2, B29H97	Poor lab duplicate precision
Pu-239/240	J	B29H53, B29HB7	Poor lab duplicate precision
U-235	J	B29HF7	Lab blank contamination
U-238	J	B29HF7	Poor lab duplicate precision

Comments: None

Appendix 3

Annotated Laboratory Reports

2/18/2011 1:34:00 PM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 45812 File Name: h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFT010	B29H99		MW6-SBB-A1	X11-016	W06103					01/07/2011 11:49

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	-4.72E-01	pCi/L	1.7E+00	1.7E+00	U	2.89E+00		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I
1026204	BE-7	13966-02-4	4.52E+00	pCi/L	2.3E+01	2.3E+01	U	4.09E+01		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I
1026204	CO-60	10198-40-0	-1.79E-01	pCi/L	2.1E+00	2.1E+00	U	3.85E+00		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I
1026204	CS-134	13967-70-9	-1.07E+00	pCi/L	2.2E+00	2.2E+00	U	3.76E+00		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I
1026204	CS-137	10045-97-3	9.35E-01	pCi/L	2.2E+00	2.2E+00	U	4.00E+00		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I
1026204	EU-152	14683-23-9	1.17E+00	pCi/L	5.5E+00	5.5E+00	U	9.78E+00		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I
1026204	EU-154	15585-10-1	6.13E-01	pCi/L	6.4E+00	6.4E+00	U	1.17E+01		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I
1026204	EU-155	14391-16-3	-3.51E+00	pCi/L	3.6E+00	3.6E+00	U	5.81E+00		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I
1026204	K-40	13966-00-2	-2.95E+01	pCi/L	5.2E+01	5.2E+01	U	1.07E+02		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I
1026204	NB-94	14681-63-1	3.12E-01	pCi/L	2.0E+00	2.0E+00	U	3.55E+00		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I
1026204	RU-106	13967-48-1	3.14E+00	pCi/L	1.9E+01	1.9E+01	U	3.43E+01		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I
1026204	SB-125	14234-35-6	1.64E+00	pCi/L	5.0E+00	5.0E+00	U	9.02E+00		GAMMALL_GS	2.0011E+00	L	02/10/2011 19:28	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFT510	B29HB4		MW6-SBB-A1	X11-016	W06103					01/07/2011 10:48

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	-1.45E-01	pCi/L	6.9E-01	6.9E-01	U	1.21E+00		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I
1026204	BE-7	13966-02-4	-5.62E+00	pCi/L	1.2E+01	1.2E+01	U	1.99E+01		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I
1026204	CO-60	10198-40-0	-3.96E-01	pCi/L	1.0E+00	1.0E+00	U	1.75E+00		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I
1026204	CS-134	13967-70-9	7.38E-01	pCi/L	1.0E+00	1.0E+00	U	2.01E+00		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I
1026204	CS-137	10045-97-3	1.48E-01	pCi/L	1.3E+00	1.3E+00	U	2.24E+00		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I
1026204	EU-152	14683-23-9	-2.90E+00	pCi/L	2.4E+00	2.4E+00	U	3.65E+00		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I
1026204	EU-154	15585-10-1	2.29E+00	pCi/L	3.3E+00	3.3E+00	U	6.60E+00		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I
1026204	EU-155	14391-16-3	-5.44E-01	pCi/L	2.0E+00	2.0E+00	U	3.48E+00		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I
1026204	K-40	13966-00-2	-1.27E+01	pCi/L	2.2E+01	2.2E+01	U	4.24E+01		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I
1026204	NB-94	14681-63-1	-7.37E-01	pCi/L	9.4E-01	9.4E-01	U	1.52E+00		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I
1026204	RU-106	13967-48-1	-4.35E-02	pCi/L	9.1E+00	9.1E+00	U	1.63E+01		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I
1026204	SB-125	14234-35-6	-1.10E+00	pCi/L	2.3E+00	2.3E+00	U	3.97E+00		GAMMALL_GS	2.0003E+00	L	02/10/2011 19:29	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:

TestAmerica

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/18/2011 1:34:00 PM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 45812 File Name: h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

9MDFT810 B29HJ4 MW6-SBB-A1 X11-016 W06103 01/07/2011 10:41

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	1.06E+00	pCi/L	1.3E+00	1.3E+00	U	2.36E+00		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I
1026204	BE-7	13966-02-4	-4.49E+00	pCi/L	1.8E+01	1.8E+01	U	3.05E+01		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I
1026204	CO-60	10198-40-0	-5.51E-01	pCi/L	1.7E+00	1.7E+00	U	3.08E+00		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I
1026204	CS-134	13967-70-9	-7.55E-01	pCi/L	1.9E+00	1.9E+00	U	3.15E+00		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I
1026204	CS-137	10045-97-3	-1.12E+00	pCi/L	1.5E+00	1.5E+00	U	2.46E+00		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I
1026204	EU-152	14683-23-9	2.07E+00	pCi/L	3.8E+00	3.8E+00	U	6.95E+00		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I
1026204	EU-154	15585-10-1	5.37E+00	pCi/L	5.0E+00	5.0E+00	U	1.04E+01		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I
1026204	EU-155	14391-16-3	8.81E-01	pCi/L	2.7E+00	2.7E+00	U	4.84E+00		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I
1026204	K-40	13966-00-2	-4.33E+01	pCi/L	3.6E+01	3.6E+01	U	7.28E+01		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I
1026204	NB-94	14681-63-1	-7.61E-01	pCi/L	1.4E+00	1.4E+00	U	2.34E+00		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I
1026204	RU-106	13967-48-1	-8.14E+00	pCi/L	1.5E+01	1.5E+01	U	2.50E+01		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I
1026204	SB-125	14234-35-6	-5.05E-01	pCi/L	3.6E+00	3.6E+00	U	6.27E+00		GAMMALL_GS	2.0042E+00	L	02/10/2011 19:29	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFVA10	B29HH9		MW6-SBB-A1	X11-016	W06103					01/07/2011 09:18

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	-1.64E-01	pCi/L	1.0E+00	1.0E+00	U	1.80E+00		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I
1026204	BE-7	13966-02-4	-8.19E+00	pCi/L	1.5E+01	1.5E+01	U	2.52E+01		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I
1026204	CO-60	10198-40-0	4.47E-01	pCi/L	1.5E+00	1.5E+00	U	2.72E+00		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I
1026204	CS-134	13967-70-9	-2.71E-02	pCi/L	1.4E+00	1.4E+00	U	2.49E+00		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I
1026204	CS-137	10045-97-3	-2.80E-01	pCi/L	1.3E+00	1.3E+00	U	2.27E+00		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I
1026204	EU-152	14683-23-9	1.24E+00	pCi/L	3.3E+00	3.3E+00	U	5.93E+00		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I
1026204	EU-154	15585-10-1	-9.23E-01	pCi/L	3.4E+00	3.4E+00	U	5.93E+00		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I
1026204	EU-155	14391-16-3	-2.01E+00	pCi/L	3.0E+00	3.0E+00	U	4.99E+00		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I
1026204	K-40	13966-00-2	8.80E+00	pCi/L	2.2E+01	2.2E+01	U	4.23E+01		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I
1026204	NB-94	14681-63-1	-3.94E-02	pCi/L	1.2E+00	1.2E+00	U	2.19E+00		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I
1026204	RU-106	13967-48-1	4.03E+00	pCi/L	1.2E+01	1.2E+01	U	2.16E+01		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I
1026204	SB-125	14234-35-6	4.44E-01	pCi/L	3.3E+00	3.3E+00	U	5.88E+00		GAMMALL_GS	2.0018E+00	L	02/10/2011 19:31	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFVJ10	B29HJ8		MW6-SBB-A1	X11-016	W06103					01/07/2011 12:24

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/18/2011 1:34:00 PM

TestAmerica Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 45812 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	8.96E-01	pCi/L	1.4E+00	1.4E+00	U	2.54E+00		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I
1026204	BE-7	13966-02-4	-1.89E+00	pCi/L	2.0E+01	2.0E+01	U	3.45E+01		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I
1026204	CO-60	10198-40-0	-2.38E-01	pCi/L	1.5E+00	1.5E+00	U	2.74E+00		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I
1026204	CS-134	13967-70-9	-1.78E+00	pCi/L	1.9E+00	1.9E+00	U	2.98E+00		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I
1026204	CS-137	10045-97-3	-1.44E+00	pCi/L	1.8E+00	1.8E+00	U	2.86E+00		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I
1026204	EU-152	14683-23-9	2.29E+00	pCi/L	4.2E+00	4.2E+00	U	7.72E+00		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I
1026204	EU-154	15585-10-1	3.04E+00	pCi/L	5.3E+00	5.3E+00	U	1.06E+01		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I
1026204	EU-155	14391-16-3	-5.90E-01	pCi/L	3.1E+00	3.1E+00	U	5.32E+00		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I
1026204	K-40	13966-00-2	-3.65E+01	pCi/L	4.0E+01	4.0E+01	U	8.13E+01		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I
1026204	NB-94	14681-63-1	-5.14E-01	pCi/L	1.7E+00	1.7E+00	U	2.99E+00		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I
1026204	RU-106	13967-48-1	-1.49E+01	pCi/L	1.6E+01	1.6E+01	U	2.59E+01		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I
1026204	SB-125	14234-35-6	5.51E-01	pCi/L	3.8E+00	3.8E+00	U	6.90E+00		GAMMALL_GS	2.0029E+00	L	02/10/2011 19:31	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFVK10	B29HJ9		MW6-SBB-A1	X11-016	W06103					01/07/2011 12:24

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	1.99E-01	pCi/L	1.1E+00	1.1E+00	U	1.88E+00		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I
1026204	BE-7	13966-02-4	2.91E+00	pCi/L	1.5E+01	1.5E+01	U	2.69E+01		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I
1026204	CO-60	10198-40-0	8.87E-01	pCi/L	1.5E+00	1.5E+00	U	2.85E+00		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I
1026204	CS-134	13967-70-9	-1.19E+00	pCi/L	1.5E+00	1.5E+00	U	2.52E+00		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I
1026204	CS-137	10045-97-3	6.90E-01	pCi/L	1.4E+00	1.4E+00	U	2.52E+00		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I
1026204	EU-152	14683-23-9	3.37E-01	pCi/L	3.5E+00	3.5E+00	U	6.15E+00		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I
1026204	EU-154	15585-10-1	1.75E-01	pCi/L	4.1E+00	4.1E+00	U	7.42E+00		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I
1026204	EU-155	14391-16-3	-3.51E+00	pCi/L	3.0E+00	3.0E+00	U	4.86E+00		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I
1026204	K-40	13966-00-2	2.05E+00	pCi/L	2.2E+01	2.2E+01	U	4.10E+01		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I
1026204	NB-94	14681-63-1	-4.75E-01	pCi/L	1.3E+00	1.3E+00	U	2.29E+00		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I
1026204	RU-106	13967-48-1	6.67E+00	pCi/L	1.3E+01	1.3E+01	U	2.31E+01		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I
1026204	SB-125	14234-35-6	-2.14E-01	pCi/L	3.5E+00	3.5E+00	U	6.07E+00		GAMMALL_GS	2.0036E+00	L	02/10/2011 23:16	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFVN10	B29HB9		MW6-SBB-A1	X11-016	W06103					01/07/2011 12:56

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	5.30E-01	pCi/L	1.6E+00	1.6E+00	U	2.80E+00		GAMMALL_GS	2.0004E+00	L	02/10/2011 23:16	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/18/2011 1:34:00 PM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 45812 File Name: h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

1026204	BE-7	13966-02-4	-8.40E+00	pCi/L	2.2E+01	2.2E+01	U	3.77E+01	GAMMALL_GS	2.0004E+00	L	02/10/2011	23:16	I
1026204	CO-60	10198-40-0	9.64E+00	pCi/L	3.5E+00	3.5E+00		2.54E+00	GAMMALL_GS	2.0004E+00	L	02/10/2011	23:16	I
1026204	CS-134	13967-70-9	-2.91E-01	pCi/L	2.0E+00	2.0E+00	U	3.61E+00	GAMMALL_GS	2.0004E+00	L	02/10/2011	23:16	I
1026204	CS-137	10045-97-3	7.16E+00	pCi/L	3.8E+00	3.8E+00		3.01E+00	GAMMALL_GS	2.0004E+00	L	02/10/2011	23:16	I
1026204	EU-152	14683-23-9	5.15E+00	pCi/L	5.2E+00	5.2E+00	U	9.53E+00	GAMMALL_GS	2.0004E+00	L	02/10/2011	23:16	I
1026204	EU-154	15585-10-1	-4.22E+00	pCi/L	4.8E+00	4.8E+00	U	7.79E+00	GAMMALL_GS	2.0004E+00	L	02/10/2011	23:16	I
1026204	EU-155	14391-16-3	-1.62E+00	pCi/L	6.1E+00	6.1E+00	U	1.03E+01	GAMMALL_GS	2.0004E+00	L	02/10/2011	23:16	I
1026204	K-40	13966-00-2	-3.77E+01	pCi/L	4.2E+01	4.2E+01	U	8.40E+01	GAMMALL_GS	2.0004E+00	L	02/10/2011	23:16	I
1026204	NB-94	14681-63-1	-2.22E-01	pCi/L	1.7E+00	1.7E+00	U	3.07E+00	GAMMALL_GS	2.0004E+00	L	02/10/2011	23:16	I
1026204	RU-106	13967-48-1	5.80E+00	pCi/L	1.8E+01	1.8E+01	U	3.27E+01	GAMMALL_GS	2.0004E+00	L	02/10/2011	23:16	I
1026204	SB-125	14234-35-6	-3.32E+00	pCi/L	4.6E+00	4.6E+00	U	7.48E+00	GAMMALL_GS	2.0004E+00	L	02/10/2011	23:16	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFVT10	B29H55		MW6-SBB-A1	X11-016	W06103					01/07/2011 09:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	-2.52E+00	pCi/L	1.8E+00	1.8E+00	U	2.83E+00		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I
1026204	BE-7	13966-02-4	1.79E+00	pCi/L	2.5E+01	2.5E+01	U	4.40E+01		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I
1026204	CO-60	10198-40-0	-3.83E-01	pCi/L	2.1E+00	2.1E+00	U	3.82E+00		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I
1026204	CS-134	13967-70-9	-1.60E+00	pCi/L	2.3E+00	2.3E+00	U	3.81E+00		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I
1026204	CS-137	10045-97-3	-8.05E-01	pCi/L	2.2E+00	2.2E+00	U	3.76E+00		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I
1026204	EU-152	14683-23-9	2.86E+00	pCi/L	5.3E+00	5.3E+00	U	9.60E+00		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I
1026204	EU-154	15585-10-1	1.27E+00	pCi/L	5.2E+00	5.2E+00	U	9.93E+00		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I
1026204	EU-155	14391-16-3	1.00E+00	pCi/L	4.3E+00	4.3E+00	U	7.28E+00		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I
1026204	K-40	13966-00-2	-6.48E+01	pCi/L	5.1E+01	5.1E+01	U	1.02E+02		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I
1026204	NB-94	14681-63-1	-1.21E+00	pCi/L	2.0E+00	2.0E+00	U	3.38E+00		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I
1026204	RU-106	13967-48-1	1.51E+00	pCi/L	2.1E+01	2.1E+01	U	3.68E+01		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I
1026204	SB-125	14234-35-6	5.31E+00	pCi/L	5.7E+00	5.7E+00	U	1.04E+01		GAMMALL_GS	2.0028E+00	L	02/10/2011 23:17	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWG10	B29H69		MW6-SBB-A1	X11-016	W06103					01/07/2011 09:13

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	-8.63E-01	pCi/L	1.2E+00	1.2E+00	U	2.03E+00		GAMMALL_GS	2.0045E+00	L	02/10/2011 23:18	I
1026204	BE-7	13966-02-4	7.11E-01	pCi/L	1.7E+01	1.7E+01	U	3.01E+01		GAMMALL_GS	2.0045E+00	L	02/10/2011 23:18	I

TestAmerica

rptFeadRadSummaryEdd v3.48

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/18/2011 1:34:00 PM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 45812 File Name: h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

1026204	CO-60	10198-40-0	1.20E+00	pCi/L	1.5E+00	1.5E+00	U	3.22E+00	GAMMALL_GS	2.0045E+00	L	02/10/2011	23:18	I
1026204	CS-134	13967-70-9	-7.75E-01	pCi/L	1.7E+00	1.7E+00	U	2.93E+00	GAMMALL_GS	2.0045E+00	L	02/10/2011	23:18	I
1026204	CS-137	10045-97-3	-7.33E-01	pCi/L	1.5E+00	1.5E+00	U	2.62E+00	GAMMALL_GS	2.0045E+00	L	02/10/2011	23:18	I
1026204	EU-152	14683-23-9	2.15E-01	pCi/L	4.0E+00	4.0E+00	U	7.03E+00	GAMMALL_GS	2.0045E+00	L	02/10/2011	23:18	I
1026204	EU-154	15585-10-1	-8.51E-01	pCi/L	4.6E+00	4.6E+00	U	8.33E+00	GAMMALL_GS	2.0045E+00	L	02/10/2011	23:18	I
1026204	EU-155	14391-16-3	1.05E+00	pCi/L	2.7E+00	2.7E+00	U	4.73E+00	GAMMALL_GS	2.0045E+00	L	02/10/2011	23:18	I
1026204	K-40	13966-00-2	-3.42E+01	pCi/L	3.9E+01	3.9E+01	U	7.83E+01	GAMMALL_GS	2.0045E+00	L	02/10/2011	23:18	I
1026204	NB-94	14681-63-1	-1.24E+00	pCi/L	1.4E+00	1.4E+00	U	2.33E+00	GAMMALL_GS	2.0045E+00	L	02/10/2011	23:18	I
1026204	RU-106	13967-48-1	7.70E+00	pCi/L	1.3E+01	1.3E+01	U	2.47E+01	GAMMALL_GS	2.0045E+00	L	02/10/2011	23:18	I
1026204	SB-125	14234-35-6	-2.08E+00	pCi/L	3.8E+00	3.8E+00	U	6.33E+00	GAMMALL_GS	2.0045E+00	L	02/10/2011	23:18	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWH10	B29HD4		MW6-SBB-A1	X11-016 SKS2/18/11	W06103					01/07/2011 10:12

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	-7.73E-01	pCi/L	1.5E+00	1.5E+00	U	2.47E+00		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I
1026204	BE-7	13966-02-4	1.41E+01	pCi/L	2.1E+01	2.1E+01	U	3.91E+01		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I
1026204	CO-60	10198-40-0	4.29E-01	pCi/L	2.1E+00	2.1E+00	U	3.98E+00		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I
1026204	CS-134	13967-70-9	1.44E+00	pCi/L	1.9E+00	1.9E+00	U	3.67E+00		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I
1026204	CS-137	10045-97-3	7.43E-01	pCi/L	2.0E+00	2.0E+00	U	3.63E+00		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I
1026204	EU-152	14683-23-9	1.78E+00	pCi/L	5.3E+00	5.3E+00	U	9.15E+00		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I
1026204	EU-154	15585-10-1	6.89E+00	pCi/L	5.7E+00	5.7E+00	U	1.17E+01		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I
1026204	EU-155	14391-16-3	-3.77E-01	pCi/L	4.0E+00	4.0E+00	U	6.79E+00		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I
1026204	K-40	13966-00-2	-6.74E+01	pCi/L	4.9E+01	4.9E+01	U	1.02E+02		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I
1026204	NB-94	14681-63-1	4.46E-01	pCi/L	1.8E+00	1.8E+00	U	3.23E+00		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I
1026204	RU-106	13967-48-1	-2.09E+01	pCi/L	1.8E+01	1.8E+01	U	2.77E+01		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I
1026204	SB-125	14234-35-6	2.16E+00	pCi/L	4.4E+00	4.4E+00	U	8.09E+00		GAMMALL_GS	2.0023E+00	L	02/11/2011 02:17	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWJ10	B29H70		MW6-SBB-A1	X11-016	W06103					01/07/2011 07:30

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	9.29E-01	pCi/L	1.3E+00	1.3E+00	U	2.49E+00		GAMMALL_GS	2.0025E+00	L	02/11/2011 03:12	I
1026204	BE-7	13966-02-4	7.83E+00	pCi/L	1.6E+01	1.6E+01	U	3.02E+01		GAMMALL_GS	2.0025E+00	L	02/11/2011 03:12	I
1026204	CO-60	10198-40-0	3.61E-01	pCi/L	1.6E+00	1.6E+00	U	3.02E+00		GAMMALL_GS	2.0025E+00	L	02/11/2011 03:12	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/18/2011 1:34:00 PM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 45812 File Name: h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

1026204	CS-134	13967-70-9	-3.85E-01	pCi/L	1.7E+00	1.7E+00	U	2.94E+00		GAMMALL_GS	2.0025E+00	L	02/11/2011	03:12	I
1026204	CS-137	10045-97-3	1.08E+00	pCi/L	1.6E+00	1.6E+00	U	3.03E+00		GAMMALL_GS	2.0025E+00	L	02/11/2011	03:12	I
1026204	EU-152	14683-23-9	1.83E+00	pCi/L	3.8E+00	3.8E+00	U	6.98E+00		GAMMALL_GS	2.0025E+00	L	02/11/2011	03:12	I
1026204	EU-154	15585-10-1	2.53E+00	pCi/L	4.4E+00	4.4E+00	U	8.84E+00		GAMMALL_GS	2.0025E+00	L	02/11/2011	03:12	I
1026204	EU-155	14391-16-3	-1.58E-01	pCi/L	2.6E+00	2.6E+00	U	4.54E+00		GAMMALL_GS	2.0025E+00	L	02/11/2011	03:12	I
1026204	K-40	13966-00-2	-4.56E+01	pCi/L	3.6E+01	3.6E+01	U	7.25E+01		GAMMALL_GS	2.0025E+00	L	02/11/2011	03:12	I
1026204	NB-94	14681-63-1	-2.07E-01	pCi/L	1.5E+00	1.5E+00	U	2.69E+00		GAMMALL_GS	2.0025E+00	L	02/11/2011	03:12	I
1026204	RU-106	13967-48-1	-5.17E-01	pCi/L	1.4E+01	1.4E+01	U	2.47E+01		GAMMALL_GS	2.0025E+00	L	02/11/2011	03:12	I
1026204	SB-125	14234-35-6	-1.07E+00	pCi/L	4.1E+00	4.1E+00	U	7.00E+00		GAMMALL_GS	2.0025E+00	L	02/11/2011	03:12	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWK10	B29HC9		MW6-SBB-A1	X11-016	W06103					01/07/2011 11:13

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time		Act
1026204	AG-108M	14391-65-2	1.48E+00	pCi/L	1.8E+00	1.8E+00	U	3.29E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I
1026204	BE-7	13966-02-4	-4.55E+00	pCi/L	2.4E+01	2.4E+01	U	4.12E+01		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I
1026204	CO-60	10198-40-0	1.19E+00	pCi/L	1.9E+00	1.9E+00	U	3.78E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I
1026204	CS-134	13967-70-9	2.93E-01	pCi/L	2.5E+00	2.5E+00	U	4.52E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I
1026204	CS-137	10045-97-3	1.20E-01	pCi/L	2.1E+00	2.1E+00	U	3.75E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I
1026204	EU-152	14683-23-9	4.97E-02	pCi/L	5.4E+00	5.4E+00	U	9.33E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I
1026204	EU-154	15585-10-1	1.74E+00	pCi/L	6.6E+00	6.6E+00	U	1.23E+01		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I
1026204	EU-155	14391-16-3	-6.27E-01	pCi/L	3.7E+00	3.7E+00	U	6.12E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I
1026204	K-40	13966-00-2	-2.12E+01	pCi/L	5.1E+01	5.1E+01	U	1.07E+02		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I
1026204	NB-94	14681-63-1	-2.31E+00	pCi/L	2.1E+00	2.1E+00	U	3.24E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I
1026204	RU-106	13967-48-1	-1.74E+01	pCi/L	1.9E+01	1.9E+01	U	3.08E+01		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I
1026204	SB-125	14234-35-6	7.85E-01	pCi/L	5.5E+00	5.5E+00	U	9.56E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:12	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWL10	B29HD9		MW6-SBB-A1	X11-016	W06103					01/07/2011 12:10

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time		Act
1026204	AG-108M	14391-65-2	-1.13E-02	pCi/L	1.4E+00	1.4E+00	U	2.45E+00		GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I
1026204	BE-7	13966-02-4	9.65E-01	pCi/L	1.9E+01	1.9E+01	U	3.44E+01		GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I
1026204	CO-60	10198-40-0	5.46E-02	pCi/L	1.5E+00	1.5E+00	U	2.79E+00		GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I
1026204	CS-134	13967-70-9	-5.12E-01	pCi/L	1.8E+00	1.8E+00	U	3.18E+00		GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/18/2011 1:34:00 PM **TestAmerica Report** **Lab Code:** TARL

FormNbr: R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 45812 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

1026204	CS-137	10045-97-3	-5.08E-01	pCi/L	1.7E+00	1.7E+00	U	3.02E+00	GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I
1026204	EU-152	14683-23-9	-5.86E-01	pCi/L	4.2E+00	4.2E+00	U	7.46E+00	GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I
1026204	EU-154	15585-10-1	1.06E+00	pCi/L	4.9E+00	4.9E+00	U	9.39E+00	GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I
1026204	EU-155	14391-16-3	2.06E+00	pCi/L	3.3E+00	3.3E+00	U	5.96E+00	GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I
1026204	K-40	13966-00-2	-5.14E+01	pCi/L	3.9E+01	3.9E+01	U	7.85E+01	GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I
1026204	NB-94	14681-63-1	-9.60E-01	pCi/L	1.7E+00	1.7E+00	U	2.90E+00	GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I
1026204	RU-106	13967-48-1	1.82E+01	pCi/L	1.6E+01	1.6E+01	U	3.14E+01	GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I
1026204	SB-125	14234-35-6	1.47E+00	pCi/L	4.2E+00	4.2E+00	U	7.63E+00	GAMMALL_GS	2.0008E+00	L	02/11/2011	03:12	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWM10	B29HH4		MW6-SBB-A1	X11-016	W06103					01/07/2011 11:57

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time		Act
1026204	AG-108M	14391-65-2	2.07E-01	pCi/L	1.1E+00	1.1E+00	U	1.97E+00		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I
1026204	BE-7	13966-02-4	3.49E+00	pCi/L	1.5E+01	1.5E+01	U	2.64E+01		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I
1026204	CO-60	10198-40-0	-4.05E-01	pCi/L	1.4E+00	1.4E+00	U	2.44E+00		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I
1026204	CS-134	13967-70-9	-1.79E-01	pCi/L	1.5E+00	1.5E+00	U	2.65E+00		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I
1026204	CS-137	10045-97-3	-1.03E+00	pCi/L	1.4E+00	1.4E+00	U	2.35E+00		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I
1026204	EU-152	14683-23-9	6.68E-01	pCi/L	3.4E+00	3.4E+00	U	6.06E+00		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I
1026204	EU-154	15585-10-1	-3.04E+00	pCi/L	4.0E+00	4.0E+00	U	6.70E+00		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I
1026204	EU-155	14391-16-3	7.20E-01	pCi/L	3.9E+00	3.9E+00	U	6.80E+00		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I
1026204	K-40	13966-00-2	6.13E+00	pCi/L	2.6E+01	2.6E+01	U	2.38E+01		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I
1026204	NB-94	14681-63-1	-6.29E-01	pCi/L	1.3E+00	1.3E+00	U	2.14E+00		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I
1026204	RU-106	13967-48-1	5.20E+00	pCi/L	1.2E+01	1.2E+01	U	2.24E+01		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I
1026204	SB-125	14234-35-6	2.96E-01	pCi/L	3.2E+00	3.2E+00	U	5.68E+00		GAMMALL_GS	2.0014E+00	L	02/11/2011	03:13	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWN10	B29H46		MW6-SBB-A1	X11-016	W06103					01/09/2011 11:00

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time		Act
1026204	AG-108M	14391-65-2	-6.98E-01	pCi/L	7.3E-01	7.3E-01	U	1.17E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I
1026204	BE-7	13966-02-4	-1.02E+00	pCi/L	9.9E+00	9.9E+00	U	1.75E+01		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I
1026204	CO-60	10198-40-0	-1.83E-01	pCi/L	9.7E-01	9.7E-01	U	1.77E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I
1026204	CS-134	13967-70-9	-5.51E-01	pCi/L	1.1E+00	1.1E+00	U	1.84E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I
1026204	CS-137	10045-97-3	-6.63E-01	pCi/L	1.3E+00	1.3E+00	U	2.12E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/18/2011 1:34:00 PM

TestAmerica Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 45812 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

1026204	EU-152	14683-23-9	-2.50E-01	pCi/L	2.3E+00	2.3E+00	U	3.97E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I
1026204	EU-154	15585-10-1	-1.06E+00	pCi/L	3.2E+00	3.2E+00	U	5.68E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I
1026204	EU-155	14391-16-3	-1.26E+00	pCi/L	1.9E+00	1.9E+00	U	3.17E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I
1026204	K-40	13966-00-2	1.42E+01	pCi/L	2.4E+01	2.4E+01	U	1.67E+01		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I
1026204	NB-94	14681-63-1	-8.60E-01	pCi/L	9.1E-01	9.1E-01	U	1.42E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I
1026204	RU-106	13967-48-1	9.41E-01	pCi/L	8.7E+00	8.7E+00	U	1.57E+01		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I
1026204	SB-125	14234-35-6	-2.37E+00	pCi/L	2.6E+00	2.6E+00	U	4.14E+00		GAMMALL_GS	2.0039E+00	L	02/11/2011	03:13	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWP10	B29H65		MW6-SBB-A1	X11-016	W06103					01/07/2011 08:45

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time		Act
1026204	AG-108M	14391-65-2	1.38E+00	pCi/L	3.4E+00	3.4E+00	U	6.16E+00		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I
1026204	BE-7	13966-02-4	2.30E+00	pCi/L	4.8E+01	4.8E+01	U	8.37E+01		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I
1026204	CO-60	10198-40-0	-3.51E+00	pCi/L	4.4E+00	4.4E+00	U	7.30E+00		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I
1026204	CS-134	13967-70-9	3.28E+00	pCi/L	4.8E+00	4.8E+00	U	8.97E+00		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I
1026204	CS-137	10045-97-3	1.49E-02	pCi/L	4.2E+00	4.2E+00	U	7.55E+00		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I
1026204	EU-152	14683-23-9	1.85E+00	pCi/L	1.2E+01	1.2E+01	U	2.01E+01		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I
1026204	EU-154	15585-10-1	1.90E+00	pCi/L	1.2E+01	1.2E+01	U	2.27E+01		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I
1026204	EU-155	14391-16-3	4.34E+00	pCi/L	8.9E+00	8.9E+00	U	1.55E+01		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I
1026204	K-40	13966-00-2	-6.79E+01	pCi/L	1.1E+02	1.1E+02	U	2.29E+02		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I
1026204	NB-94	14681-63-1	1.70E+00	pCi/L	3.7E+00	3.7E+00	U	6.97E+00		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I
1026204	RU-106	13967-48-1	3.62E+01	pCi/L	4.0E+01	4.0E+01	U	7.34E+01		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I
1026204	SB-125	14234-35-6	5.43E+00	pCi/L	1.0E+01	1.0E+01	U	1.90E+01		GAMMALL_GS	9.32E-01	L	02/11/2011	05:41	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWR10	B29H84		MW6-SBB-A1	X11-016	W06103					01/09/2011 08:54

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time		Act
1026204	AG-108M	14391-65-2	8.85E-01	pCi/L	1.2E+00	1.2E+00	U	2.23E+00		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I
1026204	BE-7	13966-02-4	-7.99E+00	pCi/L	1.7E+01	1.7E+01	U	2.85E+01		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I
1026204	CO-60	10198-40-0	-6.05E-01	pCi/L	1.5E+00	1.5E+00	U	2.70E+00		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I
1026204	CS-134	13967-70-9	5.04E-01	pCi/L	1.8E+00	1.8E+00	U	3.29E+00		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I
1026204	CS-137	10045-97-3	5.12E-01	pCi/L	1.7E+00	1.7E+00	U	3.07E+00		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I
1026204	EU-152	14683-23-9	-1.13E+00	pCi/L	4.0E+00	4.0E+00	U	6.92E+00		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/18/2011 1:34:00 PM

TestAmerica Report

Lab Code: TARL

FormNbr: R FormatType: FEAD Version: 05 Rpt Nbr: 45812 File Name: h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

1026204	EU-154	15585-10-1	-3.44E+00	pCi/L	5.0E+00	5.0E+00	U	8.24E+00		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I
1026204	EU-155	14391-16-3	6.98E-02	pCi/L	2.6E+00	2.6E+00	U	4.50E+00		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I
1026204	K-40	13966-00-2	-4.32E+01	pCi/L	3.7E+01	3.7E+01	U	7.49E+01		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I
1026204	NB-94	14681-63-1	7.04E-01	pCi/L	1.3E+00	1.3E+00	U	2.61E+00		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I
1026204	RU-106	13967-48-1	3.55E+00	pCi/L	1.3E+01	1.3E+01	U	2.34E+01		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I
1026204	SB-125	14234-35-6	2.58E+00	pCi/L	3.7E+00	3.7E+00	U	6.98E+00		GAMMALL_GS	2.0031E+00	L	02/11/2011	06:38	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWT10	B29HC4		MW6-SBB-A1	X11-016	W06103					01/09/2011 10:43

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	2.80E-01	pCi/L	7.3E-01	7.3E-01	U	1.35E+00		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I
1026204	BE-7	13966-02-4	-4.90E+00	pCi/L	1.1E+01	1.1E+01	U	1.90E+01		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I
1026204	CO-60	10198-40-0	-6.87E-01	pCi/L	1.1E+00	1.1E+00	U	1.87E+00		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I
1026204	CS-134	13967-70-9	-1.81E-01	pCi/L	1.1E+00	1.1E+00	U	1.94E+00		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I
1026204	CS-137	10045-97-3	-4.56E-01	pCi/L	1.3E+00	1.3E+00	U	2.17E+00		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I
1026204	EU-152	14683-23-9	-8.79E-02	pCi/L	2.5E+00	2.5E+00	U	4.34E+00		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I
1026204	EU-154	15585-10-1	9.22E-01	pCi/L	2.8E+00	2.8E+00	U	5.50E+00		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I
1026204	EU-155	14391-16-3	1.66E-01	pCi/L	2.0E+00	2.0E+00	U	3.51E+00		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I
1026204	K-40	13966-00-2	1.59E+01	pCi/L	2.5E+01	2.5E+01	U	1.67E+01		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I
1026204	NB-94	14681-63-1	2.07E-01	pCi/L	8.9E-01	8.9E-01	U	1.66E+00		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I
1026204	RU-106	13967-48-1	-3.80E+00	pCi/L	8.8E+00	8.8E+00	U	1.51E+01		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I
1026204	SB-125	14234-35-6	-1.90E+00	pCi/L	2.4E+00	2.4E+00	U	3.85E+00		GAMMALL_GS	2.0057E+00	L	02/11/2011 06:39	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWV10	B29H60		MW6-SBB-A1	X11-016	W06103					01/09/2011 12:55

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time	Act
1026204	AG-108M	14391-65-2	5.99E-01	pCi/L	1.7E+00	1.7E+00	U	3.00E+00		GAMMALL_GS	2.0042E+00	L	02/11/2011 06:40	I
1026204	BE-7	13966-02-4	3.01E+00	pCi/L	2.3E+01	2.3E+01	U	4.16E+01		GAMMALL_GS	2.0042E+00	L	02/11/2011 06:40	I
1026204	CO-60	10198-40-0	-1.12E+00	pCi/L	2.1E+00	2.1E+00	U	3.53E+00		GAMMALL_GS	2.0042E+00	L	02/11/2011 06:40	I
1026204	CS-134	13967-70-9	2.33E-01	pCi/L	2.1E+00	2.1E+00	U	3.89E+00		GAMMALL_GS	2.0042E+00	L	02/11/2011 06:40	I
1026204	CS-137	10045-97-3	0.00E+00	pCi/L	2.2E+00	2.2E+00	U	3.89E+00		GAMMALL_GS	2.0042E+00	L	02/11/2011 06:40	I
1026204	EU-152	14683-23-9	3.81E+00	pCi/L	5.2E+00	5.2E+00	U	9.41E+00		GAMMALL_GS	2.0042E+00	L	02/11/2011 06:40	I
1026204	EU-154	15585-10-1	-2.80E+00	pCi/L	6.6E+00	6.6E+00	U	1.13E+01		GAMMALL_GS	2.0042E+00	L	02/11/2011 06:40	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

2/18/2011 1:34:00 PM

TestAmerica Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **Version:** 05 **Rpt Nbr:** 45812 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

1026204	EU-155	14391-16-3	8.49E-02	pCi/L	3.8E+00	3.8E+00	U	6.38E+00		GAMMALL_GS	2.0042E+00	L	02/11/2011	06:40	I
1026204	K-40	13966-00-2	-2.76E+01	pCi/L	5.2E+01	5.2E+01	U	1.07E+02		GAMMALL_GS	2.0042E+00	L	02/11/2011	06:40	I
1026204	NB-94	14681-63-1	-8.08E-01	pCi/L	2.0E+00	2.0E+00	U	3.45E+00		GAMMALL_GS	2.0042E+00	L	02/11/2011	06:40	I
1026204	RU-106	13967-48-1	-7.78E-01	pCi/L	1.8E+01	1.8E+01	U	3.12E+01		GAMMALL_GS	2.0042E+00	L	02/11/2011	06:40	I
1026204	SB-125	14234-35-6	-3.39E+00	pCi/L	5.4E+00	5.4E+00	U	8.90E+00		GAMMALL_GS	2.0042E+00	L	02/11/2011	06:40	I

Lab Sample Id:	Client Id:	Test User	Contract Nbr	SAF Nbr	Sdg Nbr:	QC Type:	Moisture/ Solids%*:	Distilled Volume	Sample On Date:	Collection Date:
9MDFWX10	B29H41		MW6-SBB-A1	X11-016	W06103					01/09/2011 09:30

SBS 2/18/11

Batch	Analyte	CAS#	Result	Unit	CntU 2S	TotU 2S	Qual	MDA	TrcYield	Method	Alq Size	Unit	Analy Date/Time		Act
1026204	AG-108M	14391-65-2	4.46E-01	pCi/L	1.4E+00	1.4E+00	U	2.45E+00		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I
1026204	BE-7	13966-02-4	-8.81E+00	pCi/L	1.6E+01	1.6E+01	U	2.73E+01		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I
1026204	CO-60	10198-40-0	1.46E+00	pCi/L	1.7E+00	1.7E+00	U	3.55E+00		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I
1026204	CS-134	13967-70-9	1.10E+00	pCi/L	1.8E+00	1.8E+00	U	3.44E+00		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I
1026204	CS-137	10045-97-3	-3.82E-01	pCi/L	1.7E+00	1.7E+00	U	3.02E+00		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I
1026204	EU-152	14683-23-9	1.42E+00	pCi/L	4.0E+00	4.0E+00	U	7.31E+00		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I
1026204	EU-154	15585-10-1	1.54E+00	pCi/L	5.2E+00	5.2E+00	U	9.97E+00		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I
1026204	EU-155	14391-16-3	-2.41E+00	pCi/L	3.0E+00	3.0E+00	U	4.99E+00		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I
1026204	K-40	13966-00-2	-5.71E+01	pCi/L	3.9E+01	3.9E+01	U	7.84E+01		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I
1026204	NB-94	14681-63-1	-3.22E-01	pCi/L	1.4E+00	1.4E+00	U	2.43E+00		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I
1026204	RU-106	13967-48-1	1.34E+01	pCi/L	1.6E+01	1.6E+01	U	3.01E+01		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I
1026204	SB-125	14234-35-6	-9.36E-01	pCi/L	3.8E+00	3.8E+00	U	6.60E+00		GAMMALL_GS	2.005E+00	L	02/11/2011	06:40	I

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

Sample # 111069009
SAF# X11-016
Sample ID B29H53

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep											**01/19/11**
Gross Alpha/Beta											
Gross Alpha	12587-46-1	LA-508-415	U	1.3		1.1	pCi/L	1	1.5		01/26/11
Gross Beta	12587-47-2	LA-508-415		2800		290	pCi/L	1	2.8		01/26/11
H3 EICHROM											**01/10/11**
TRI-CARB LSC											
Tritium	10028-17-8	LA-508-421		1.3E4	J	2600	pCi/L	1	180		01/31/11
SR-89/90											**01/14/11**
SR-89/90											
Strontium-89/90	SR-RAD	LA-220-406		1300		160	pCi/L	1	1.8		01/27/11
Tc-99											**01/10/11**
TRI-CARB LSC											
Technetium-99	14133-76-7	LA-508-421	U	-1.3		4.5	pCi/L	1	7.5		01/24/11
Th/Pu/Am/U Teva											**01/26/11**
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	-0.023			pCi/L	1	0.10		01/27/11
Plutonium-239/240	PU-239/240	LA-508-471		0.023	J		pCi/L	1	0.021		01/27/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471	B	0.28	J		pCi/L	1	0.024		01/27/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

LS
7-14-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

Sample # 111069009
SAF# X11-016
Sample ID B29H53

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium-235	15117-96-1	LA-508-471	U	0.039		pCi/L	1	0.072		01/27/11
Uranium-238	U-238	LA-508-471		0.21 J		pCi/L	1	0.024		01/27/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

Sample # 111069010
SAF# X11-016
Sample ID B29HB2

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep											**01/19/11**
Gross Alpha/Beta											
Gross Alpha	12587-46-1	LA-508-415		1.3		.96	pCi/L	1	1.3		01/26/11
Gross Beta	12587-47-2	LA-508-415		5.8		2	pCi/L	1	2.7		01/26/11
H3 EICHROM											**01/10/11**
TRI-CARB LSC											
Tritium	10028-17-8	LA-508-421		2100	J	440	pCi/L	1	180		01/31/11
SR-89/90											**01/14/11**
SR-89/90											
Strontium-89/90	SR-RAD	LA-220-406	U	0.65		2.5	pCi/L	1	1.7		01/27/11
Tc-99											**01/10/11**
TRI-CARB LSC											
Technetium-99	14133-76-7	LA-508-421	U	-7.5		4.6	pCi/L	1	7.5		01/24/11
Th/Pu/Am/U Teva											**01/26/11**
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	7.9E-3			pCi/L	1	0.073		01/27/11
Plutonium-239/240	PU-239/240	LA-508-471	U	0.016	UJ		pCi/L	1	0.021		01/27/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471	B	0.42	J		pCi/L	1	0.097		01/27/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

LS
7-14-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

Sample # 111069010
SAF# X11-016
Sample ID B29HB2

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium-235	15117-96-1	LA-508-471		0.049		pCi/L	1	0.027		01/27/11
Uranium-238	U-238	LA-508-471		0.43 J		pCi/L	1	0.024		01/27/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

Sample # 111069011
SAF# X11-016
Sample ID B29HB7

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep											**01/19/11**
Gross Alpha/Beta											
Gross Alpha	12587-46-1	LA-508-415		21		7.3	pCi/L	1	5.8		01/26/11
Gross Beta	12587-47-2	LA-508-415		2.1E4		2100	pCi/L	1	11		01/26/11
H3 EICHROM											**01/10/11**
TRI-CARB LSC											
Tritium	10028-17-8	LA-508-421		1.6E4	J	3300	pCi/L	1	200		01/31/11
SR-89/90											**01/14/11**
SR-89/90											
Strontium-89/90	SR-RAD	LA-220-406		8700		1000	pCi/L	1	1.6		01/27/11
Tc-99											**01/10/11**
TRI-CARB LSC											
Technetium-99	14133-76-7	LA-508-421		57		13	pCi/L	1	7.5		01/24/11
Th/Pu/Am/U Teva											**01/26/11**
AEA Pu-Np											
Plutonium-238	13981-16-3	LA-508-471	U	8.3E-3			pCi/L	1	0.10		01/27/11
Plutonium-239/240	PU-239/240	LA-508-471		0.058	J		pCi/L	1	0.023		01/27/11
Uranium Iso											
Uranium-234	U-233/234	LA-508-471	B	1.4	J		pCi/L	1	0.023		01/27/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

LS
7-14-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

Sample # 111069011
SAF# X11-016
Sample ID B29HB7

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium-235	15117-96-1	LA-508-471		0.12		pCi/L	1	0.069		01/27/11
Uranium-238	U-238	LA-508-471		1.1 J		pCi/L	1	0.023		01/27/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

Sample # 111069012
SAF# X11-016
Sample ID B29H97

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**01/19/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		2.0	1.2	pCi/L	1	1.4		01/26/11
Gross Beta	12587-47-2	LA-508-415		9.8	2.4	pCi/L	1	2.8		01/26/11
H3 EICHROM										**01/10/11**
TRI-CARB LSC										
Tritium	10028-17-8	LA-508-421		6700	1400	pCi/L	1	210		01/29/11
SR-89/90										**01/14/11**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406	U	-3.4	2.3	pCi/L	1	1.5		01/27/11
Tc-99										**01/10/11**
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	-2.1	4.5	pCi/L	1	7.5		01/24/11
Th/Pu/Am/U Teva										**01/26/11**
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	8.2E-3		pCi/L	1	0.060		01/27/11
Plutonium-239/240	PU-239/240	LA-508-471	U	8.2E-3 UJ		pCi/L	1	0.022		01/27/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471	B	0.83 J		pCi/L	1	0.083		01/27/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

LS
7-14-2011

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

Sample # 111069012
SAF# X11-016
Sample ID B29H97

Matrix WATER
Sampled 01/07/11
Received 01/07/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium-235	15117-96-1	LA-508-471		0.059		pCi/L	1	0.027		01/27/11
Uranium-238	U-238	LA-508-471		0.72 J		pCi/L	1	0.024		01/27/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Radiochemistry

Group # WSCF111207

Sample # 111207003
SAF# X11-016
Sample ID B29HF7

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**01/26/11**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415	U	1.7	1.9	pCi/L	1	3.1		02/10/11
Gross Beta	12587-47-2	LA-508-415		14	3	pCi/L	1	3.2		02/10/11
H3 EICHROM										**01/27/11**
TRI-CARB LSC										
Tritium	10028-17-8	LA-508-421		3000	630	pCi/L	1	180		02/04/11
SR-89/90										**01/27/11**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406	U	-5.0	2.8	pCi/L	1	1.6		02/03/11
Tc-99										**01/19/11**
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	5.4	3.9	pCi/L	1	6.1		01/26/11
Th/Pu/Am/U Teva										**01/30/11**
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.016	.045	pCi/L	1	0.085		01/31/11
Plutonium-239/240	PU-239/240	LA-508-471	U	7.9E-3	.016	pCi/L	1	0.021		01/31/11
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		1.4	.43	pCi/L	1	0.061		01/31/11

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

REVISED111207 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
Department Radiochemistry

Group # WSCF111207

Sample # 111207003
SAF# X11-016
Sample ID B29HF7

Matrix WATER
Sampled 01/18/11
Received 01/18/11

Test Performed	CAS #	Method	RQ	Result		TP Err	Units	DF	MDL	PQL	Analyzed
Uranium-235	15117-96-1	LA-508-471		0.11	J	.074	pCi/L	1	0.067		01/31/11
Uranium-238	U-238	LA-508-471		0.99	J	.31	pCi/L	1	0.023		01/31/11

LS
7-14-2011

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

REVISED111207 -

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

TestAmerica Laboratories, Inc.

CH2M Hill Plateau Remediation Company
P.O. Box 1600
Mail Stop – R3-60
Richland, WA 99352

February 18, 2011

Attention: Mike Neely

SAF Number	:	X11-016
Date SDG Closed	:	January 10, 2011
Number of Samples	:	Twenty (20)
Sample Type	:	Water
SDG Number	:	W06103
Data Deliverable	:	30-Day / Summary

CASE NARRATIVE

I. Introduction

On January 10, 2011 twenty water samples were received at TestAmerica (TARL). Upon receipt, the samples were assigned the following laboratory ID numbers to correspond with the CH2M specific IDs:

CH2M ID#	TARL ID#	DATE OF RECEIPT	MATRIX
B29H99	MDFT0	01/10/11	WATER
B29HB4	MDFT5	01/10/11	WATER
B29HJ4	MDFT8	01/10/11	WATER
B29HH9	MDFVA	01/10/11	WATER
B29HJ8	MDFVJ	01/10/11	WATER
B29HJ9	MDFVK	01/10/11	WATER
B29HB9	MDFVN	01/10/11	WATER
B29H55	MDFVT	01/10/11	WATER
B29H69	MDFWG	01/10/11	WATER
B29HD4	MDFWH	01/10/11	WATER
B29H70	MDFWJ	01/10/11	WATER
B29HC9	MDFWK	01/10/11	WATER
B29HD9	MDFWL	01/10/11	WATER
B29HH4	MDFWM	01/10/11	WATER
B29H46	MDFWN	01/10/11	WATER

B29H65	MDFWP	01/10/11	WATER
B29H84	MDFWR	01/10/11	WATER
B29HC4	MDFWT	01/10/11	WATER
B29H60	MDFWV	01/10/11	WATER
B29H41	MDFWX	01/10/11	WATER

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:

Gamma Spectroscopy
Gamma Spec (LL) by method RL-GAM-001 (RICH-RC-5017)*

*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

Gamma Spectroscopy
Gamma Spec (LL) by method RL-GAM-001 (RICH-RC-5017):
Additional gamma isotopes were requested. The additional isotopes requested are: Cs-137, Be-7, Eu-152, Eu-154, Eu-155, K-40, Sb-125, Co-60, Ru-106, Cs-134, Ag-108, Ni-94.

There was approximately 1 L of sample volume received for sample B29H65. TARL proposed to analyze sample B29H65 with a reduced aliquot. The proposed resolution (CHPRC TRACKING NUMBER: 11-332) was accpted on 2/16/11. The CRDL was not met for sample B29H65 due to the reduced aliquot.

There was insufficient volume for a duplicate. Sample B29H99 was recounted on a different detector for the duplicate (B29H99 DUP). Except as noted, the LCS, batch blank, samples and sample duplicate (B29H99) results are within contractual requirements.

CH2M Hill Plateau Remediation Company
February 18, 2011

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

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-332

Date : February 16, 2011 SAF No. X11-016

SDG: W06103 TEST: GAMMALL_GS: LIST-1 (9); GAMMALL_GS (Add-on)

Sample No.(s) B29H65

Submitted By:	Sandra Seger	Submitted To:	Mike Neely
Phone No.	509-375-3131 x 158	Phone No.	509-373-5869
Fax No.	509-375-5590	Fax No.	866-252-5816

ISSUE	PROPOSED RESOLUTION
There was only 1L of sample received instead of the usual 4L for sample B29H65.	Use a reduced aliquot size to analyze the sample for GAMMALL_GS: LIST-1 (9); GAMMALL_GS (Add-on).

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 2/16/2011

Signature and Date

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-86
		Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H99	N	W	1/7/11	1149	1x20-mL P	Activity Scan MDFTO	6 Months	None
B29H99	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

W06103
JIA180521
Due 2/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1130 JAN 10 2011	ANGEL Garcia			1130 JAN 10 2011

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-94
		Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB4	N	W	1/7/11	1048	1x20-mL P	Activity Scan MDFT5	6 Months	None
B29HB4	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WO 61603
JIA 180501
Due 2/9/11

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Hulse	JAN 07 2011 1540	SSU-1	JAN 07 2011 1540
SSU-1	JAN 10 2011 0800	SE Hamaker CHPRC	JAN 10 2011 0800
SE Hamaker CHPRC	JAN 10 2011 1130	TAL	JAN 10 2011 1130

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-174
		Page 1 of 1

Collector: J.S. Artzer CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 33 / 96	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time — Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HJ4	N	W	01/07/11	1041	1x20-mL P	Activity Scan MOFT8	6 Months	None
B29HJ4	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

W06103
J1A180521
Due 2/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1407 JAN 07 2011	SSU-1			1407 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHRPC			0800 JAN 10 2011
SE Hamaker CHRPC			1130 JAN 10 2011				1130 JAN 10 2011

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-166
		Page 1 of 1

Collector: J.S. Artzer CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 33 196	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated_Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time — Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HH9	N	W	01/07/11	0918	1x20-mL P	Activity Scan MOFVA	6 Months	None
B29HH9	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WOL103
J1A180521
Due 2/9/11

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
J.S. Artzer CHRPC	1407 JAN 07 2011	SSU-1	1407 JAN 07 2011
SSU-1	0800 JAN 10 2011	SE Hamaker CHRPC	0800 JAN 10 2011
SE Hamaker CHRPC	1130 JAN 10 2011	ANGEL Garcia	1130 JAN 10 2011

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-182
		Page 1 of 1

Collector J.S. Artzer CHRPC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 33196	**Ice Chest No.** N/A
Shipped To (Lab) TestAmerica Incorporated, Richland	**Method of Shipment** Government Vehicle	**Bill of Lading/Air Bill No.** N/A
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HJ8	N	W	01/07/11	1224	1x20-mL P	Activity Scan MDFVS	6 Months	None
B29HJ8	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WOE103
JIA180521
Due 2/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1407 JAN 07 2011	SSU-1			1407 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1130 JAN 10 2011	Angel Garcia			1130 JAN 10 2011
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqu	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-183
		Page 1 of 1

Collector J.S. Artzer CHRPC	Contact/Requester Karen Waters-Husted	Telephone No. 376-4650
SAF No. X11-016	Sampling Origin Hanford Site	Purchase Order/Charge Code 300104ES20
Project Title NDURA DECEMBER 2010	Logbook No: HNF-N-506 33 / 96	Ice Chest No. N/A
Shipped To (Lab) TestAmerica Incorporated Richland	Method of Shipment Government Vehicle	Bill of Lading/Air Bill No. N/A
Protocol CERCLA	Priority: 30 Days PRIORITY	Offsite Property No. N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HJ9	N	W	01/07/11	1224	1x20-mL P	Activity Scan MFVK	6 Months	None
B29HJ9	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WOE103
J1A180501
Due 01/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1407 JAN 07 2011	SSU-1			1407 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1130 JAN 10 2011				1130 JAN 10 2011
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-102
		Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time — Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB9	N	W	1/7/11	1252	1x20-mL P	Activity Scan MOFN	6 Months	None
B29HB9	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WOL103
J1A180501
Due 2/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			154 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1130 JAN 10 2011	Angel Garcia			1130 JAN 10 2011

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-22
		Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H55	N	W	1/7/11	0945	1x20-mL P	Activity Scan mOFUT	6 Months	None
B29H55	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

W0L103
J1A180521
Due 2/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1540 JAN 07 2011	SSU-1			1540 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1130 JAN 10 2011	Angel Garcia			1130 JAN 10 2011
			Date/Time				Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-46
		Page 1 of 1

Collector CA Snyder CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA DECEMBER 2010	**Logbook No:** HNF-N-506 3716	**Ice Chest No.** N/A
Shipped To (Lab) TestAmerica Incorporated, Richland	**Method of Shipment** Government Vehicle	**Bill of Lading/Air Bill No.** N/A
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H69	N	W	1/7/11	0913	1x20-mL P	Activity Scan mDEWG	6 Months	None
B29H69	N	W	1/7/11	0913	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WDE103
J1A180521
Due 01/9/11

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
CA Snyder CHPRC	1300 JAN 07 2011	SSU- 1 SSU #1	1300 JAN 07 2011
SSU- 1 SSU #1	0800 JAN 10 2011	SE Hamaker CHPRC	0800 JAN 10 2011
SE Hamaker CHPRC	1130 JAN 10 2011	Angel Garcia	1130 JAN 10 2011

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-126
		Page 1 of 1

Collector CA Snyder CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 37/6	**Ice Chest No.** N/A
Shipped To (Lab) TestAmerica Incorporated_Richland	**Method of Shipment** Government Vehicle	**Bill of Lading/Air Bill No.** N/A
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HD4	N	W	1/7/11	1012	1x20-mL P	Activity Scan MDFWH	6 Months	None
B29HD4	N	W	1/7/11	1012	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WDE103
J1A180521
Due 2/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	CA Snyder CHPRC		JAN 07 2011 1300	SSU #1			JAN 07 2011 1306
SSU #1		0800	JAN 10 2011	SE Hamaker CHPRC		0800	JAN 10 2011
SE Hamaker CHPRC			JAN 10 2011 1130				JAN 10 2011 1130
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-47
		Page 1 of 1

Collector CA Snyder CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 37/6	**Ice Chest No.** N/A
Shipped To (Lab) TestAmerica Incorporated, Richland	**Method of Shipment** Government Vehicle	**Bill of Lading/Air Bill No.** N/A
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H70	N	W	1/7/11	0730	1x20-mL P	Activity Scan MDFWJ	6 Months	None
B29H70	N	W	1/7/11	0730	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WO 6103
JIA 180521
Due 01/9/11

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
CA Snyder CHPRC	JAN 07 2011 1300	SSU-1 SSU#1	JAN 07 2011 1300
SSU-1 SSU#1 0800	JAN 10 2011	SE Hamaker CHPRC 0800	JAN 10 2011
SE Hamaker CHPRC	JAN 10 2011 1130	Angel Garcia	JAN 10 2011 1130

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-118
		Page 1 of 1

Collector CA Snyder CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA DECEMBER 2010	**Logbook No:** HNF-N-506 3716	**Ice Chest No.** N/A
Shipped To (Lab) TestAmerica Incorporated Richland	**Method of Shipment** Government Vehicle	**Bill of Lading/Air Bill No.** N/A
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HC9	N	W	1/7/11	1113	1x20-mL P	Activity Scan MOFWK	6 Months	None
B29HC9	N	W	1/7/11	1113	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WDE103
JIA180521
Due 2/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1300 JAN 07 2011	SSU-1	SSU#1		1300 JAN 07 2011
SSU-1	SSU#1 0800		JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1130 JAN 10 2011	ANGEL GARCIA			THUR 1130 JAN 10 2011

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-134
		Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 3716	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HD9	N	W	1/7/11	1210	1x20-mL P	Activity Scan MDFWL	6 Months	None
B29HD9	N	W	1/7/11	1210	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WO 6103
J1A180521
Due 2/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			JAN 07 2011 1300	SSU-1	SSU #1		JAN 07 2011 1300
SSU-1 SSU #1 0800			JAN 10 2011	1/10/11 ~~JAN 10 2011~~	SE Hamaker CHPRC		JAN 10 2011 0800
SE Hamaker CHPRC			JAN 10 2011 1130				JAN 10 2011 1130
				Angel Garcia			
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-158
		Page 1 of 1

Collector FM Hall CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 381 9	**Ice Chest No.** N/A
Shipped To (Lab) TestAmerica Incorporated, Richland	**Method of Shipment** Government Vehicle	**Bill of Lading/Air Bill No.** N/A
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HH4	N	W	JAN 07 2011	1157	1x20-mL P	Activity Scan mpfwm	6 Months	None
B29HH4	N	W	JAN 07 2011	1157	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

W0L103
J1A980501
Due 2/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC			1340 JAN 07 2011	SS 4#1			1340 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1130 JAN 10 2011	ANGEL Garcia			1130 JAN 10 2011

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-15
		Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 39 / 9	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time — Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H46	N	W	1-9-11	1100	1x20-mL P	Activity Scan MDFWN	6 Months	None
B29H46	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WOE1303
JIA180521
Due 2/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			1230 JAN 09 2011	SSU-1			1230 JAN 09 2011
CA Snyder CHPRC SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1130 JAN 10 2011	Angel Garcia			1130 JAN 10 2011
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-38
		Page 1 of 1

Collector FM Hall CHPRC	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650
SAF No. X11-016	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300104ES20
Project Title NDURA, DECEMBER 2010	**Logbook No:** HNF-N-506 38 / 9	**Ice Chest No.** N/A
Shipped To (Lab) TestAmerica Incorporated, Richland	**Method of Shipment** Government Vehicle	**Bill of Lading/Air Bill No.** N/A
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.** N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993) well was pulling out very low volume of water. Talked to Angel and get permission to go from 4LP to 1LP. DS 1-7-11

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H65	N	W	JAN 07 2011	0845	1x20-mL P	Activity Scan MOFWP	6 Months	None
B29H65	N	W	JAN 07 2011	0845	1x~~4L~~ 1L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

DS 1-7-11

W0E103
J1A180S01
Due 01/19/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall			1340 JAN 07 2011				1340 JAN 07 2011
SSU-1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1130 JAN 10 2011	Angel Garcia			1130 JAN 10 2011
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-62 Page 1 of 1

Collector: SE Hamaker CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No.: HNF-N-506 32 / 93	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H84	N	W	01/09/11	0854	1x20-mL P	Activity Scan mDFWR	6 Months	None
B29H84	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WO 6103 11/8/11 UMA
J1A180852D1
Due 2/9/11

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
SE Hamaker CHPRC			1400 JAN 09 2011	SSU #1			1400 JAN 09 2011
SSU- 1			0800 JAN 10 2011	SE Hamaker CHPRC			0800 JAN 10 2011
SE Hamaker CHPRC			1130 JAN 10 2011				1130 JAN 10 2011

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-110
		Page 1 of 1

Collector: SE Hamaker CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No.: HNF-N-506 32/93	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time — Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HC4	N	W	01/09/11	1043	1x20-mL P	Activity Scan MOFWT	6 Months	None
B29HC4	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WO 6103
J1A180521
Due 2/9/11

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
SE Hamaker CHPRC	Scott Hamaker	1400 JAN 09 2011	SSU #1		1400 JAN 09 2011
SSU- 1		0800 JAN 10 2011	SE Hamaker CHPRC	Scott Hamaker	0800 JAN 10 2011
SE Hamaker CHPRC	Scott Hamaker	1130 JAN 10 2011	Angel Garcia		1130 JAN 10 2011
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-30 Page 1 of 1

Collector: SE Hamaker ~~CHPRC~~	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 32 / 93	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H60	N	W	01/09/11	1255	1x20-mL P	Activity Scan MOFWV	6 Months	None
B29H60	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WOLe103
JIA180521
Due 2/9/11

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
SE Hamaker CHPRC / Scott Hamaker	1400 JAN 09 2011	SSU #1	1400 JAN 09 2011
SSU-1	0800 JAN 10 2011	SE Hamaker CHPRC / Scott Hamaker	0800 JAN 10 2011
SE Hamaker CHPRC / Scott Hamaker	1130 JAN 10 2011	Angel Garcia / Angel Garcia	1130 JAN 10 2011
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-10
		Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 9	Ice Chest No.: N/A
Shipped To (Lab): TestAmerica Incorporated, Richland	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H41	N	W	1-9-11	0930	1x20-mL P	Activity Scan MOFWX	6 Months	None
B29H41	N	W	↓	↓	1x4-L G/P	GAMMALL_GS: List-1 (9); GAMMALL_GS (Add-on)	6 Months	HNO3 to pH <2

WOL103
J1A180521
Due 2/9/11

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
CA Snyder CHPRC	1230 JAN 09 2011	SSU-1	1230 JAN 09 2011
SSU-1	0800 JAN 10 2011	SE Hamaker CHPRC	0800 JAN 10 2011
SE Hamaker CHPRC	1130 JAN 10 2011	Angel Garcia	1130 JAN 10 2011

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Attachment 2
Narrative
WSCF111069

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. Also attached are IRF's 11-315 dealing with missed hold time for anions, 11-321dealing with Potassium LCS failure and 11-322 dealing with the missed hold time for Silicon and Phosphorus. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-315 was created due to anions were analyzed after the 48 hour holding time expired.

- Fluoride - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.

Cyanide – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Batch QC 175434
- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-321 was created due to LCS failure of Potassium. The data is reported as is.
- Issue Resolution Form **CHPRC TRACKING NUMBER**: 11-322 was created due to Silicon and Phosphorus were analyzed after the 28 day holding time expired.
    - Potassium – LCS recovery was outside established limits.
    - Sodium and Silicon – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.
    - Calcium, Magnesium and Silicon – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
- Batch QC 175435
    - Sodium – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.
    - Calcium, Magnesium, Potassium, Silicon and Sodium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
    - All other applicable QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

TPHG-WA – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gross Alpha / Gross Beta:
  - Batch QC 174188
  - Gross Alpha - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable QC controls are within the established limits.

- Isotopic Plutonium analysis:
  - Plutonium-239/240 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Uranium-234 - The Blank is greater than two times the MDC. Sample results above the MDC were "B" Flagged.
  - Uranium-235 - The Blank is less than two times the MDC. "B" Flag not required.
  - Uranium-234 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
  - Uranium-235 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Uranium-238 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Strontium-89/90:
    - All applicable QC controls are within the established limits.
- Tritium:
  - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. No flags issued on sample results. The quality control report was flagged for RPD failure.
    - All other applicable QC controls are within the established limits.
- Technetium-99:
    - All applicable QC controls are within the established limits.

Narrative

Attachment 2
Narrative
WSCF111069

We 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 data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-321

Date: 2/7/2011 SAF No(s): X11-009, X11-016 and I11-001

SDG (s): 111346, 111040, 111060, 111063 and 111069 TEST: ICP-AES 6010

DUE DATE: 2/7/2011

LOGIN No(s): 111346006 through 111346011
111040002 and 111040003
111060007
111063004, 111063005, 111063007 through 111063012
111069005 through 111069007

Sample No(s): B28XF5, B28XF9, B28XH0, B28XF6, B28WV0 and B28WV1
B282H8 and B282H9
B29H63
B29HJ6, B29HJ7, B29HH6, B29HH7, B29HJ2, B29HK3, B29HJ1 and B29HK2
B29H52, B29HB1 and B29HB6

Submitted By: M. Avila
Phone No.: 373-1613
Fax No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
The Potassium LCS percent recovery was out of limits: Potassium LCS = 123.0% (limits– 80-120%) All other QC passed; the MS and MSD were at 108.3% and 112.3% recovery, respectively.	Accept the data as-is and note in the narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 2/7/11
Signature and Date

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Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-315

Date: 1/24/2011 SAF No. F10-208 SDGs: 111065, 111069
TEST: Anions_IC_300.0 **DUE DATE: 2/21/11**

LOGIN No.: 111065001 – 111065002
111069001 - 111069004

Sample No.(s): B29LN7, B29LP0, B29N08, B28N18, B29N17, B29N19

Submitted By: H. Medley
Phone No.: 372-1488
Fax. No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
The above samples were received late in the day on Friday 1/7/11 to be analyzed on the same day. The samples were analyzed at the next possible opportunity, which was Sunday 1/9/11. The samples missed the 48 hour regulatory hold time.	Accept analytical results (accept as-is) and note in narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 1/25/201

Signature and Date

7

Attachment 2
Narrative
WSCF111069

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 11-322

Date: 2/8/20111 SAF No. X11-016

SDG: 111069, 111074, 111077, 111078 & 111081 TEST: ICP-6010 **DUE DATE: 2/7/2011 and 2/8/2011**

TEST: ICP-6010

LOGIN No.: 111069008 through 111069012
111074002 and 111074003
111077005 through 111077010
111078004 through 111078009
111081004

Sample No.(s): B29H96, B29H53, B29HB2, B29HB7 and B29H97
B29H33 and B29H34
B29H43, B29H49, B29H38, B29H44, B29H50 and B29H39
B29H86, B29H91, B29HF1, B29H87, B29H92 and B29HF2
B29H57

Submitted By: M. Avila
Phone No.:
Fax. No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE	PROPOSED RESOLUTION
These samples were collected on: 111069 1/7/11 111074 1/9/11 111077 1/9/11 111078 1/9/11 111081 1/9/11 These samples were not analyzed until February 8th, 2011. These were analyzed outside the 28-day regulatory holding time for Silicon and Phosphorus.	Accept results as-is and document in the narrative.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution
Sara Champoux 2/8/2011
Signature and Date

8

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-210 Page 1 of 1

Collector: Heike	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

111069

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N08	N	W	1/7/11	0945	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Heike			1520 JAN 07 2011	Victor			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-200 Page 1 of 1

Collector: Halse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104CS20
Project Title: NDURA. DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N18	2 N	W	1/7/11	1048	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Halse			510 JAN 07 2011				1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-201 Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 3918	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N17 3	N	W	1/7/11	1149	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	TB Hulse		1520 JAN 07 2011	VICTOR Bing			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-199 Page 1 of 1

Collector: Hulse	Contact/Requester: Karen Waters-Hunsted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter *		Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N19	4	N	W	1/7/11	1254	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool-4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse			1520 JAN 07 2011	V. Lira			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-26 Page 1 of 2

Collector: Hulke	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104E520
Project Title: NDCRA DECEMBER 2010	Logbook No: HNF-N-506 39 / 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H52	Y	W	1/7/11	0945	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H52	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H52	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H53	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29H53	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H53	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H53	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29H53	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29H53	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29H53	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29H53	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29H53	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29H53	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulke			1500 JAN 07 2011				1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# X11-016-26 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-4650		

Sample No.	Lab ID	*		Date	Time	No/Type Container	Sample Analysis	Preservative	
B29H53	N	W		11/7/11	0945	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29H53	N	W				3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29H53	N	W				4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hurke	[illegible]	[illegible]	1520 JAN 07 2011	Victor Bibb		[illegible]	1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil	DS = Drum Solid		
SE = Sediment	DL = Drum Liqui		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wine		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-98 Page 1 of 2

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB1 6	Y	W	1/6/11	1048	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB1	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB1	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB2 10	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HB2	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HB2	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HB2	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HB2	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HB2	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HB2	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HB2	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	[illegible]	[illegible]	1520 JAN 07 2011	[illegible]		[illegible]	1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-98 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-1650		

Sample No.	Lab ID	*		Date	Time	No/Type Container	Sample Analysis	Preservative	
B29HB2	N	W		1/7/11	1048	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29HB2	N	W				3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29HB2	N	W				4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hube	KB Dhalia		1520 JAN 07 2011		VICTOR Silva		1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-106 Page 1 of 2

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HB6 7	Y	W	1/7/11	1256	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB6	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB6	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB7 11	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HB7	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HB7	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HB7	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HB7	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HB7	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HB7	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HB7	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	KS Hulse	1520	JAN 07 2011	K Brevard	K Brevard	1520	JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

A-6004-842 (REV 2)

Sample Receipt

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-106
		Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-1650		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative	
B29HB7	N	W	1/7/11	1257	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29HB7	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29HB7	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	[illegible]	[illegible]	1520 JAN 07 2011	Victor	Binkley	[illegible]	1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-90 Page 1 of 2

Collector: Hulse	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA, DECEMBER 2010	Logbook No: HNF-N-506 391 8	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29H96 8	Y	W	1/7/11	1419	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H96	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H96	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H97 12	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29H97	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29H97	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29H97	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29H97	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29H97	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29H97	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29H97	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29H97	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29H97	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Hulse	[illegible]	[illegible]	1520 JAN 07 2011	[illegible]	[illegible]	[illegible]	1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-90 Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters-Husted	376-4650		

Sample No	Lab ID	*	Date	Time	No/Type Container	Sample Analysis		Preservative
B29H97	N	W	1/3/11	1149	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B29H97	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C
B29H97	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
[illegible]	[illegible]		1520 JAN 07 2011	[illegible]			1520 JAN 07 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Attachment 2
Narrative, Rev. 1
WSCF111207

P&D Correction – Case Narrative Replaces the Prior Submittal in its Entirety
Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4. Additionally, a copy of the completed P&D # WSCFX111207 is included with this case narrative.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, D, U and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Attachment 2
Narrative, Rev. 1
WSCF111207

- Nitrate – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.

- All other applicable QC controls are within the established limits.

Cyanide – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Sodium – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.

- Magnesium, Potassium, Sodium and Calcium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.

- All other applicable QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

PCB – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Attachment 2
Narrative, Rev. 1
WSCF111207

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):
Tracers and surrogates are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- All other applicable QC controls are within the established limits.

TPHG-WA – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Gross Alpha / Gross Beta:
  - All applicable QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - All applicable QC controls are within the established limits.
- Isotopic Uranium analysis:
  - Uranium-238 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
  - Uranium-235 and Uranium-238 - The Blank is less than two times the MDC. "B" Flag not required.
    - All other applicable QC controls are within the established limits.
- Strontium-89/90:
  - All applicable QC controls are within the established limits.
- Tritium:

- All applicable QC controls are within the established limits.

- Technetium-99:
  - All applicable QC controls are within the established limits.

We 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 data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

Attachment 2
Narrative, Rev. 1
WSCF111207

3/14/2011

Problem and Discrepancy Report

WSCF

SDG WSCF111207

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1. The data package has the following issues:

a) All of the electronic results are missing.

Resolution: *Provide missing results.*

Lab Response: **The electronic results have been provided.**

Please correct the issues and resubmit the electronic data packages.

5

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-192 Page 1 of 1

Collector: J.S. Artzer, CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104ES20
Project Title: NDURA_DECEMBER_2010	Logbook No: HNF-N-506 3719	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

001 111207

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29N26	N	W	01/18/11	1003	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011		VICTOR SIMS		1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-016-154 Page 1 of 2

Collector: J.S. Artzer CHRPC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650
SAF No.: X11-016	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300104FS20
Project Title: NUURA DECEMBER 2010	Logbook No: HNF-N-506 3719	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time
100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 402057.
Please report all TICs.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B29HF6 ~~007~~ 002	Y	W	01/18/11	1003	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HF6	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HF6	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HF7 COR	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015	14/40 Days	Cool~6C
B29HF7	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B29HF7	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B29HF7	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B29HF7	N	W			1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2
B29HF7	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B29HF7	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B29HF7	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011				1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Chain of Custody

CHPRC

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # X11-016-154

Page 2 of 2

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
X11-016	Karen Waters Husted	376-4650		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis		Preservative	
B29HF7	N	W	01/18/11	1003	1x1-L G/P	UISO_IE_PRECIP_AEA List-1 (3)	/	6 Months	HNO3 to pH <2
B29HF7	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	/	14/40 Days	HCl to pH <2 Cool~4C
B29HF7	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	/	14 Days	HCl to pH <2 Cool~4C
B29HF7	N	W			4x1-L aG	PCBs - 8082	/	1 yr/1 yr	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
J.S. Artzer CHRPC			1530 JAN 18 2011	Victor Bins			1530 JAN 18 2011
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

A-6004-842 (REV 2)

Appendix 5

Data Validation Supporting Documentation

Appendix B - Radiochemical Data Validation Checklist

RADIOCHEMICAL DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	(C)	D	E
PROJECT: CERC11			DATA PACKAGE: VSR11-049		
VALIDATOR: Carl Schloesslin		LAB: TestAmerica, WSCF		DATE: 7-14-2011	
			SDG: W06103, WSCF111069, WSCF111207		
ANALYSES PERFORMED					
Gross Alpha/Beta X	Strontium-90 X	Technetium-99 X	Alpha Spectroscopy X	Gamma Spectroscopy X	
Total Uranium	Radium-22	Tritium X	C-14	I-129	

SAMPLES/MATRIX Water samples

SDG W06103: B29H99, B29HB4, B29HJ4, B29HH9, B29HJ8, B29HJ9, B29HB9, B29H55, B29H69, B29HD4, B29H70, B29HC9, B29HD9, B29HH4, B29H46, B29H65, B29H84, B29HC4, B29H60, B29H41

SDG WSCF111069: B29H53, B29HB2, B29HB7, B29H97

SDG WSCF111207: B29HF7

1. Completeness ..... ☐ N/A

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

Comments: None

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:

WSCF111069 MB Hits: U-234 0.15 pCi/L, U-238 0.086 pCi/L

WSCF111207 MB Hits: U-235 0.039 pCi/L, U-238 0.027 pCi/L

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: None

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: None

More

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: None

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: None

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:

WSCF111069 lab dup infractions
Tritium (batch 173934) RPD = 35%
Pu-239/240 difference (0.029 pCi/L) > the MDC (0.021 pCi/L)
U-234 RPD = 40%
U-238 RPD = 44%

WSCF111207 lab dup infraction
U-238 RPD = 31%

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: None

12. Holding Times (All levels)

Are sample holding times acceptable? ..... (Yes) No N/A

Comments: None

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:

MDCs > CRDLs for associated non-detect sample results
W06103: Be-7 CRDL = 50 pCi/L, B29H65 MDC = 84 pCi/L due to insufficient volume

Appendix 6

Additional Documentation Requested By Client

Friday, February 18, 2011

TestAmerica QC Blank Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadI\\Rad\W06103.Edd, h:\Reportdb\edd\FeadI\\Rad\45812.Edd

Lab Sample Id: MDP6Q1AB **Sdg/Rept Nbr:** W06103 45812 **Collection Date:** 01/07/2011 11:49

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BLK **Received Date:** 01/10/2011

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AV	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
1026204	AG-108M	-1.51E-01	pCi/L	1.0E+00	U	1.74E+00			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	14391-65-2			1.0E+00						L	06:41				
1026204	BE-7	5.02E+00	pCi/L	1.2E+01	U	2.09E+01			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	13966-02-4			1.2E+01						L	06:41				
1026204	CO-60	-4.07E-01	pCi/L	1.3E+00	U	2.33E+00			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	10198-40-0			1.3E+00						L	06:41				
1026204	CS-134	-9.19E-01	pCi/L	1.5E+00	U	2.43E+00			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	13967-70-9			1.5E+00						L	06:41				
1026204	CS-137	4.55E-01	pCi/L	1.3E+00	U	2.41E+00			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	10045-97-3			1.3E+00						L	06:41				
1026204	EU-152	-1.54E+00	pCi/L	3.4E+00	U	5.83E+00			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	14683-23-9			3.4E+00						L	06:41				
1026204	EU-154	3.78E+00	pCi/L	3.7E+00	U	7.57E+00			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	15585-10-1			3.7E+00						L	06:41				
1026204	EU-155	-1.82E+00	pCi/L	3.0E+00	U	4.98E+00			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	14391-16-3			3.0E+00						L	06:41				
1026204	K-40	-8.95E+00	pCi/L	2.0E+01	U	3.70E+01			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	13966-00-2			2.0E+01						L	06:41				
1026204	NB-94	1.59E+00	pCi/L	1.3E+00	U	2.49E+00			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	14681-63-1			1.3E+00						L	06:41				
1026204	RU-106	1.97E+00	pCi/L	1.2E+01	U	2.12E+01			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	13967-48-1			1.2E+01						L	06:41				
1026204	SB-125	7.81E-01	pCi/L	3.2E+00	U	5.67E+00			GAMMALL_GS	2.0005E+00	02/11/2011				D
BLK	14234-35-6			3.2E+00						L	06:41				

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, February 18, 2011

TestAmerica QC Control Sample Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

Lab Sample Id: MDP6Q1CS **Sdg/Rept Nbr:** W06103 45812 **Collection Date:** 01/07/2011 11:49

Client Id: NA **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** BS **Received Date:** 01/10/2011

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
	MW6-SBB-A19981								AW	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
1026204	CO-60	3.82E+01	pCi/L	7.0E+00		3.68E+00		3.77E+01	GAMMALL_GS	2.0009E+00	02/11/2011			70	D
BS	10198-40-0			7.0E+00				101.4		L	09:10			130	
1026204	CS-137	5.30E+01	pCi/L	9.3E+00		4.16E+00		4.95E+01	GAMMALL_GS	2.0009E+00	02/11/2011			70	D
BS	10045-97-3			9.3E+00				107.1		L	09:10			130	
1026204	EU-152	7.71E+01	pCi/L	2.4E+01		9.25E+00		7.62E+01	GAMMALL_GS	2.0009E+00	02/11/2011			70	D
BS	14683-23-9			2.4E+01				101.2		L	09:10			130	

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Friday, February 18, 2011

TestAmerica QC Duplicate Report

Lab Code: TARL

FormNbr: R **FormatType:** FEAD **VersionNbr:** 05 **File Name:** h:\Reportdb\edd\FeadIV\Rad\W06103.Edd, h:\Reportdb\edd\FeadIV\Rad\45812.Edd

Lab Sample Id: MDFT01CR **Sdg/Rept Nbr:** W06103 45812 **Collection Date:** 01/07/2011 11:49

Client Id: B29H99 **Matrix:** WATER WATER **Sample On Date:**

Moisture/Solids%*: **QC Type:** DUP **Received Date:** 01/10/2011

SAF Nbr	Contract Nbr	Test User	Case Nbr	SAS Nbr	Suffix	Decant	Distilled Volume	File Id	FSuffix	RTyp
X11-016	MW6-SBB-A19981								AU	H

Batch # / Qc Type	Analyt/ CAS#	Result/ Orig Rst	Unit	Tot/Cnt Uncert 2S	Qu-al	MDC	Tracer Yield	Spk Conc/ %Rec	Analy Method	Aliq Size/	Date/Time Analyzed	RPD/ UCL	RER/ UCL	LCS LCL/UCL	R Typ
1026204	AG-108M	4.46E-01	pCi/L	6.6E-01	U	1.28E+00			GAMMALL_GS	2.0011E+00	02/10/2011	0.0	2.		D
DUP	14391-65-2	-4.72E-01		6.6E-01						L	23:15	20.0	3		
1026204	BE-7	9.68E+00	pCi/L	1.1E+01	U	2.04E+01			GAMMALL_GS	2.0011E+00	02/10/2011	72.6	0.7		D
DUP	13966-02-4	4.52E+00		1.1E+01						L	23:15	20.0	3		
1026204	CO-60	8.81E-01	pCi/L	1.2E+00	U	2.49E+00			GAMMALL_GS	2.0011E+00	02/10/2011	301.7	1.2		D
DUP	10198-40-0	-1.79E-01		1.2E+00						L	23:15	20.0	3		
1026204	CS-134	1.79E-01	pCi/L	1.2E+00	U	2.18E+00			GAMMALL_GS	2.0011E+00	02/10/2011	0.0	1.5		D
DUP	13967-70-9	-1.07E+00		1.2E+00						L	23:15	20.0	3		
1026204	CS-137	-4.33E-02	pCi/L	1.3E+00	U	2.15E+00			GAMMALL_GS	2.0011E+00	02/10/2011	219.4	1.1		D
DUP	10045-97-3	9.35E-01		1.3E+00						L	23:15	20.0	3		
1026204	EU-152	-7.77E-01	pCi/L	2.2E+00	U	3.79E+00			GAMMALL_GS	2.0011E+00	02/10/2011	985.6	1.2		D
DUP	14683-23-9	1.17E+00		2.2E+00						L	23:15	20.0	3		
1026204	EU-154	9.51E-02	pCi/L	2.8E+00	U	5.32E+00			GAMMALL_GS	2.0011E+00	02/10/2011	146.3	0.3		D
DUP	15585-10-1	6.13E-01		2.8E+00						L	23:15	20.0	3		
1026204	EU-155	1.10E+00	pCi/L	2.0E+00	U	3.75E+00			GAMMALL_GS	2.0011E+00	02/10/2011	0.0	3.2		D
DUP	14391-16-3	-3.51E+00		2.0E+00						L	23:15	20.0	3		
1026204	K-40	-1.72E+01	pCi/L	2.1E+01	U	4.03E+01			GAMMALL_GS	2.0011E+00	02/10/2011	0.0	0.8		D
DUP	13966-00-2	-2.95E+01		2.1E+01						L	23:15	20.0	3		
1026204	NB-94	7.43E-01	pCi/L	1.0E+00	U	1.96E+00			GAMMALL_GS	2.0011E+00	02/10/2011	81.8	0.6		D
DUP	14681-63-1	3.12E-01		1.0E+00						L	23:15	20.0	3		
1026204	RU-106	2.30E-01	pCi/L	8.0E+00	U	1.45E+01			GAMMALL_GS	2.0011E+00	02/10/2011	172.7	0.5		D
DUP	13967-48-1	3.14E+00		8.0E+00						L	23:15	20.0	3		
1026204	SB-125	-3.21E-01	pCi/L	2.5E+00	U	4.46E+00			GAMMALL_GS	2.0011E+00	02/10/2011	297.5	1.1		D
DUP	14234-35-6	1.64E+00		2.5E+00						L	23:15	20.0	3		

U Qual - Analyzed for, but the result is less than the Mdc or gamma scan did not identify the nuclide.
J Qual - No U qualifier has been assigned and the result is below the Reporting Limit (CRDL).
B Qual- Analyte was found in the associated laboratory blank above the MDC.

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
173633	174921	1	BLANK	45968	BLANK		Strontium 89/90 (GPC/GEA)
173633	174921	2	LCS	45969	LCS		Strontium 89/90 (GPC/GEA)
173633	174921	3	DUP	45970	B29HJ2(111063009DUP)	111063009	Strontium 89/90 (GPC/GEA)
173633	174921	6	SAMPLE	111069009	B29H53		Strontium 89/90 (GPC/GEA)
173633	174921	7	SAMPLE	111069010	B29HB2		Strontium 89/90 (GPC/GEA)
173633	174921	8	SAMPLE	111069011	B29HB7		Strontium 89/90 (GPC/GEA)
173633	174921	9	SAMPLE	111069012	B29H97		Strontium 89/90 (GPC/GEA)
173639	173934	1	BLANK	45980	BLANK		Tritium by LSC
173639	173934	2	LCS	45981	LCS		Tritium by LSC
173639	173934	4	DUP	45982	B29HD2(111059011DUP)	111059011	Tritium by LSC
173639	173934	5	MS	45983	B29HD2(111059011MS)	111059011	Tritium by LSC
173639	173934	16	SAMPLE	111069009	B29H53		Tritium by LSC
173639	173934	17	SAMPLE	111069010	B29HB2		Tritium by LSC
173639	173934	18	SAMPLE	111069011	B29HB7		Tritium by LSC
173641	173927	1	BLANK	45984	BLANK		TC99 by Liquid Scintillation
173641	173927	2	LCS	45985	LCS		TC99 by Liquid Scintillation
173641	173927	4	DUP	45986	B29HD2(111059011DUP)	111059011	TC99 by Liquid Scintillation
173641	173927	5	MS	45987	B29HD2(111059011MS)	111059011	TC99 by Liquid Scintillation
173641	173927	16	SAMPLE	111069009	B29H53		TC99 by Liquid Scintillation
173641	173927	17	SAMPLE	111069010	B29HB2		TC99 by Liquid Scintillation
173641	173927	18	SAMPLE	111069011	B29HB7		TC99 by Liquid Scintillation
173641	173927	19	SAMPLE	111069012	B29H97		TC99 by Liquid Scintillation
173642	173933	1	BLANK	45988	BLANK		Tritium by LSC

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
173642	173933	2	LCS	45989	LCS		Tritium by LSC
173642	173933	3	SAMPLE	111069012	B29H97		Tritium by LSC
173642	173933	4	DUP	45990	B29H97(111069012DUP)	111069012	Tritium by LSC
173642	173933	5	MS	45991	B29H97(111069012MS)	111069012	Tritium by LSC
173923	175129	1	DUP	46269	B29H53(111069009DUP)	111069009	Uranium (AEA)
173923	175129	2	SAMPLE	111069009	B29H53		Uranium (AEA)
173923	175129	3	SAMPLE	111069010	B29HB2		Uranium (AEA)
173923	175129	4	SAMPLE	111069011	B29HB7		Uranium (AEA)
173923	175129	5	SAMPLE	111069012	B29H97		Uranium (AEA)
173923	175129	6	BLANK	46267	BLANK		Uranium (AEA)
173923	175129	7	LCS	46268	LCS		Uranium (AEA)
173923	175132	1	BLANK	46267	BLANK		Plutonium (AEA)
173923	175132	2	LCS	46268	LCS		Plutonium (AEA)
173923	175132	3	SAMPLE	111069009	B29H53		Plutonium (AEA)
173923	175132	4	DUP	46269	B29H53(111069009DUP)	111069009	Plutonium (AEA)
173923	175132	5	SAMPLE	111069010	B29HB2		Plutonium (AEA)
173923	175132	6	SAMPLE	111069011	B29HB7		Plutonium (AEA)
173923	175132	7	SAMPLE	111069012	B29H97		Plutonium (AEA)
174188	174916	1	BLANK	46383	BLANK		Gross Alpha/Gross Beta
174188	174916	2	LCS	46384	LCS		Gross Alpha/Gross Beta
174188	174916	5	DUP	46385	B29HK3(111063010DUP)	111063010	Gross Alpha/Gross Beta
174188	174916	6	SAMPLE	111069009	B29H53		Gross Alpha/Gross Beta
174188	174916	7	SAMPLE	111069009	B29H53		Gross Alpha/Gross Beta

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
174188	174916	8	SAMPLE	111069010	B29HB2		Gross Alpha/Gross Beta
174188	174916	9	SAMPLE	111069010	B29HB2		Gross Alpha/Gross Beta
174188	174916	10	SAMPLE	111069011	B29HB7		Gross Alpha/Gross Beta
174188	174916	11	SAMPLE	111069011	B29HB7		Gross Alpha/Gross Beta
174188	174916	12	SAMPLE	111069012	B29H97		Gross Alpha/Gross Beta
174188	174916	13	SAMPLE	111069012	B29H97		Gross Alpha/Gross Beta

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

QC Batch 173633
Associated Samples 111069009, 111069010, 111069011, 111069012

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #45968**								
Strontium-89/90	SR-RAD		-0.87	pCi/L						U	01/27/11
LCS			**QC Sample #45969**								
Strontium-89/90	SR-RAD		99	pCi/L	106.8	80 - 120					01/27/11
DUP			**QC Sample #45970**								
			Original 111063009								
Strontium-89/90	SR-RAD		-1.2	pCi/L			-280.00	20	*	U	01/27/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

QC Batch 173639
Associated Samples 111069009, 111069010, 111069011

Test Tritium by LSC

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #45980**								
Tritium	10028-17-8		-96	pCi/L						U	01/31/11
LCS			**QC Sample #45981**								
Tritium	10028-17-8		2900	pCi/L	92.5	80 - 120					01/31/11
DUP			**QC Sample #45982**								
			Original 111059011								
Tritium	10028-17-8		1200	pCi/L			34.50	20	*	X	01/31/11
MS			**QC Sample #45983**								
			Original 111059011								
Tritium	10028-17-8		19000	pCi/L	93.3	75 - 125					01/31/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

QC Batch 173641
Associated Samples 111069009, 111069010, 111069011, 111069012

Test TC99 by Liquid Scintillation

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #45984**							
Technetium-99	14133-76-7		-2.6	pCi/L					U	01/24/11
LCS			**QC Sample #45985**							
Technetium-99	14133-76-7		270	pCi/L	108.9	80 - 120				01/24/11
DUP			**QC Sample #45986**							
			Original 111059011							
Technetium-99	14133-76-7		-5.4	pCi/L			-15.40	20	U	01/24/11
MS			**QC Sample #45987**							
			Original 111059011							
Technetium-99	14133-76-7		1100	pCi/L	108.9	75 - 125				01/24/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

QC Batch 173642
Associated Samples 111069012

Test Tritium by LSC

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #45988**							
Tritium	10028-17-8		-40	pCi/L					U	01/29/11
LCS			**QC Sample #45989**							
Tritium	10028-17-8		3200	pCi/L	100.4	80 - 120				01/29/11
DUP			**QC Sample #45990**							
			Original 111069012							
Tritium	10028-17-8	6700	6400	pCi/L			4.60	20		01/29/11
MS			**QC Sample #45991**							
			Original 111069012							
Tritium	10028-17-8	6700	19000	pCi/L	93.1	75 - 125				01/29/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

QC Batch 173923
Associated Samples 111069009, 111069010, 111069011, 111069012

Test Plutonium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #46267**								
Plutonium-238	13981-16-3		9.2E-3	pCi/L						U	01/31/11
Uranium-234	U-233/234		0.15	pCi/L						X	01/27/11
Plutonium-239/240	PU-239/240		9.2E-3	pCi/L						U	01/31/11
Uranium-235	15117-96-1		0.065	pCi/L						U	01/27/11
Uranium-238	U-238		0.086	pCi/L						X	01/27/11
LCS			**QC Sample #46268**								
Plutonium-239/240	PU-239/240		6.0	pCi/sample	103.5	80 - 120					01/31/11
Uranium-238	U-238		8.6	pCi/sample	101.4	80 - 120					01/27/11
DUP			**QC Sample #46269**								
			Original 111069009								
Plutonium-238	13981-16-3	-0.023	-0.015	pCi/L			-42.10	20	*	U	01/27/11
Plutonium-239/240	PU-239/240	0.023	0.052	pCi/L			77.30	20	*	X	01/27/11
Uranium-234	U-233/234	0.28	0.42	pCi/L			40.00	20	*	X	01/27/11
Uranium-235	15117-96-1	0.039	0.091	pCi/L			80.00	20	*	X	01/27/11
Uranium-238	U-238	0.21	0.33	pCi/L			44.40	20	*	X	01/27/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

QC Batch 174188
Associated Samples 111069009, 111069010, 111069011, 111069012

Test Gross Alpha/Gross Beta

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #46383**								
Gross Alpha	12587-46-1		0.71	pCi/L						U	01/26/11
Gross Beta	12587-47-2		1.9	pCi/L						U	01/26/11
LCS			**QC Sample #46384**								
Gross Alpha	12587-46-1		75	pCi/L	92.2	80 - 120					01/26/11
Gross Beta	12587-47-2		250	pCi/L	114.1	80 - 120					01/26/11
DUP			**QC Sample #46385**								
			Original 111063010								
Gross Alpha	12587-46-1		2.5	pCi/L			27.30	20	*	X	01/26/11
Gross Beta	12587-47-2		6.1	pCi/L			10.90	20			01/26/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

QC Batch 173633
Associated Samples 111069009, 111069010, 111069011, 111069012

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111069009**							
Strontium-85	13967-73-2				67.9	25 - 105				01/27/11
SAMPLE			**Sample #111069010**							
Strontium-85	13967-73-2				73.3	25 - 105				01/27/11
SAMPLE			**Sample #111069011**							
Strontium-85	13967-73-2				79.1	25 - 105				01/27/11
SAMPLE			**Sample #111069012**							
Strontium-85	13967-73-2				83.5	25 - 105				01/27/11
BLANK			**QC Sample #45968**							
Strontium-85	13967-73-2				61	25 - 105				01/27/11
LCS			**QC Sample #45969**							
Strontium-85	13967-73-2				72.7	25 - 105				01/27/11
DUP			**QC Sample #45970**							
			Original 111063009							
Strontium-85	13967-73-2				78.8	25 - 105	9.50			01/27/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

QC Batch 173923
Associated Samples 111069009, 111069010, 111069011, 111069012

Test Uranium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111069009**							
Uranium-232 Tracer	14158-29-3				92.4	25 - 105				01/27/11
Plutonium-242 Tracer	13982-10-0				86.3	25 - 105				01/27/11
SAMPLE			**Sample #111069010**							
Uranium-232 Tracer	14158-29-3				93.5	25 - 105				01/27/11
Plutonium-242 Tracer	13982-10-0				94	25 - 105				01/27/11
SAMPLE			**Sample #111069011**							
Uranium-232 Tracer	14158-29-3				98.1	25 - 105				01/27/11
Plutonium-242 Tracer	13982-10-0				81.1	25 - 105				01/27/11
SAMPLE			**Sample #111069012**							
Uranium-232 Tracer	14158-29-3				91.8	25 - 105				01/27/11
Plutonium-242 Tracer	13982-10-0				85.6	25 - 105				01/27/11
BLANK			**QC Sample #46267**							
Uranium-232 Tracer	14158-29-3				94.9	25 - 105				01/27/11
Plutonium-242 Tracer	13982-10-0				72.7	25 - 105				01/31/11
LCS			**QC Sample #46268**							

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111069

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium-232 Tracer	14158-29-3				64.6	25 - 105				01/27/11
Plutonium-242 Tracer	13982-10-0				97.4	25 - 105				01/31/11
DUP			**QC Sample #46269**							
			Original	**111069009**						
Uranium-232 Tracer	14158-29-3				95.4	25 - 105	0.00			01/27/11
Plutonium-242 Tracer	13982-10-0				91.5	25 - 105	0.00			01/27/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111207

QC Batch 173921
Associated Samples 111207003

Test Plutonium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #46261**								
Plutonium-238	13981-16-3		0.023	pCi/L						U	01/31/11
Uranium-234	U-233/234		0.062	pCi/L						U	01/31/11
Plutonium-239/240	PU-239/240		0.016	pCi/L						U	01/31/11
Uranium-235	15117-96-1		0.039	pCi/L						X	01/31/11
Uranium-238	U-238		0.027	pCi/L						X	01/31/11
LCS			**QC Sample #46262**								
Plutonium-239/240	PU-239/240		6.0	pCi/sample	105.1	80 - 120					01/31/11
Uranium-238	U-238		8.9	pCi/sample	104.6	80 - 120					01/31/11
DUP			**QC Sample #46263**								
			Original 111074003								
Plutonium-238	13981-16-3		0.0090	pCi/L			-344.00	20	*	U	01/31/11
Plutonium-239/240	PU-239/240		0.0090	pCi/L			6.90	20		U	01/31/11
Uranium-234	U-233/234		0.71	pCi/L			8.10	20			01/31/11
Uranium-235	15117-96-1		0.048	pCi/L			78.50	20	*	U	01/31/11
Uranium-238	U-238		0.74	pCi/L			31.20	20	*	X	01/31/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111207

QC Batch 174736
Associated Samples 111207003

Test TC99 by Liquid Scintillation

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #46971**								
Technetium-99	14133-76-7		0.20	pCi/L						U	01/26/11
LCS			**QC Sample #46972**								
Technetium-99	14133-76-7		220	pCi/L	102.6	80 - 120					01/26/11
DUP			**QC Sample #46973**								
			Original 111146001								
Technetium-99	14133-76-7		-1.9	pCi/L			-92.30	20	*	U	01/26/11
MS			**QC Sample #46974**								
			Original 111146001								
Technetium-99	14133-76-7		900	pCi/L	103.1	75 - 125					01/26/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111207

QC Batch 174788
Associated Samples 111207003

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #46989**								
Strontium-89/90	SR-RAD		-6.5	pCi/L						U	02/03/11
LCS			**QC Sample #46990**								
Strontium-89/90	SR-RAD		89	pCi/L	95.7	80 - 120					02/03/11
DUP			**QC Sample #46991**								
			Original 111216001								
Strontium-89/90	SR-RAD		-4.8	pCi/L			-28.60	20	*	U	02/03/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111207

QC Batch 174797
Associated Samples 111207003

Test Gross Alpha/Gross Beta

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #47011**								
Gross Alpha	12587-46-1		-0.18	pCi/L						U	02/10/11
Gross Beta	12587-47-2		0.67	pCi/L						U	02/10/11
LCS			**QC Sample #47012**								
Gross Alpha	12587-46-1		71	pCi/L	86.9	80 - 120					02/10/11
Gross Beta	12587-47-2		260	pCi/L	118.8	80 - 120					02/10/11
DUP			**QC Sample #47013**								
			Original 111175005								
Gross Alpha	12587-46-1		-0.090	pCi/L			600.00	20	*	U	02/10/11
Gross Beta	12587-47-2		1.6	pCi/L			88.30	20	*	U	02/10/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111207

QC Batch 174935
Associated Samples 111207003

Test Tritium by LSC

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #47215**								
Tritium	10028-17-8		-32	pCi/L						U	02/04/11
LCS			**QC Sample #47216**								
Tritium	10028-17-8		2900	pCi/L	90.4	80 - 120					02/04/11
DUP			**QC Sample #47217**								
			Original 111208001								
Tritium	10028-17-8		110	pCi/L			53.30	20	*	U	02/04/11
MS			**QC Sample #47218**								
			Original 111208001								
Tritium	10028-17-8		19000	pCi/L	92.5	75 - 125					02/04/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111207

QC Batch 173921
Associated Samples 111207003

Test Uranium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111207003**							
Uranium-232 Tracer	14158-29-3				100.2	25 - 105				01/31/11
Plutonium-242 Tracer	13982-10-0				87.7	25 - 105				01/31/11
BLANK			**QC Sample #46261**							
Uranium-232 Tracer	14158-29-3				91.2	25 - 105				01/31/11
Plutonium-242 Tracer	13982-10-0				84.9	25 - 105				01/31/11
LCS			**QC Sample #46262**							
Uranium-232 Tracer	14158-29-3				61.8	25 - 105				01/31/11
Plutonium-242 Tracer	13982-10-0				84.2	25 - 105				01/31/11
DUP			**QC Sample #46263**							
			Original 111074003							
Uranium-232 Tracer	14158-29-3				99.3	25 - 105	0.00			01/31/11
Plutonium-242 Tracer	13982-10-0				81.9	25 - 105	0.00			01/31/11

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF111207

QC Batch 174788
Associated Samples 111207003

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #111207003**							
Strontium-85	13967-73-2				92.2	25 - 105				02/03/11
BLANK			**QC Sample #46989**							
Strontium-85	13967-73-2				97.8	25 - 105				02/03/11
LCS			**QC Sample #46990**							
Strontium-85	13967-73-2				91.4	25 - 105				02/03/11
DUP			**QC Sample #46991**							
			Original 111216001							
Strontium-85	13967-73-2				88.1	25 - 105	0.00			02/03/11