0091498

SAF-RC-055
100K Burial Grounds – Other Solid In-Process
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 10/25/10
INITIAL/DATE

RECEIVED
NOV 01 2010
EDMC

COMMENTS:

SDG D1029306 SAF-RC-055

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Waste Site: 118-K-1 trench K anomalous odor

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

ANALYTICAL REPORT

Report Date _____

Joan Kessner
Washington Closure Hanford, LLC
2620 Fermi Ave.
Richland, WA 99354

Phone: (509) 375-4688

E-mail: Joan.kessner@wch-rcc.com

Client Project ID: Washington Closure 102010
Purchase Order: R118K12600
Workorder: 1029306
Project Manager Kevin Griffiths

Analytical Results

Sample ID: **J1CDD2** | Media: Summa 6 Liter Canister | Collected: 10/18/2010
Lab ID: 1029306001 | Sampling Location: 118-K-1 | Received: 10/20/2010

Method: EPA TO-15 — Analyzed: 10/21/2010

Analyte	Result
Bromofluorobenzene	

Method: EPA TO-15 — Analyzed: 10/21/2010

Analyte	ppb	ug/m³	LOD (ppb)	RL (ppb)
Dichlorodifluoromethane	**(1.1)**	**(5.5)**	0.39	2.0
Methyl chloride	**(1.1)**	**(2.3)**	0.57	2.0
Freon 114	ND	<2.9	0.41	2.0
Vinyl chloride	ND	<0.95	0.37	2.0
1,3-Butadiene	ND	<1.7	0.77	2.0
Bromomethane	ND	<1.9	0.48	2.0
Ethyl chloride	ND	<1.4	0.54	2.0
Freon 11	**(0.78)**	**(4.4)**	0.40	2.0
Freon 113	ND	<2.2	0.29	2.0
1,1-Dichloroethene	ND	<5.0	1.3	2.0
Acetone	**12**	**27**	1.2	2.0
Carbon disulfide	ND	<2.0	0.66	2.0
Methylene chloride	**7.0**	**24**	0.56	2.0
trans-1,2-Dichloroethene	ND	<3.2	0.80	2.0
Methyl t-butyl ether	ND	<2.3	0.65	2.0
Vinyl acetate	ND	<2.1	0.58	2.0
Methyl ethyl ketone	**(1.8)**	**(5.3)**	0.55	2.0
cis-1,2-Dichloroethene	ND	<2.9	0.74	2.0
1,1-Dichloroethane	ND	<1.8	0.43	2.0
Ethyl acetate	ND	<4.6	1.3	2.0
n-Hexane	**(1.0)**	**(3.6)**	0.51	2.0
Chloroform	ND	<2.0	0.41	2.0
Tetrahydrofuran	ND	<1.3	0.45	2.0
1,2-Dichloroethane	ND	<2.2	0.54	2.0

Results Continued on Next Page

ANALYTICAL REPORT

Client Project ID: Washington Closure 102010
Purchase Order: R118K12600
Workorder:J1029306
Project Manager Kevin Griffiths

Analytical Results

Sample ID: **J1CDD2**	Media: Summa 6 Liter Canister	Collected: 10/18/2010
Lab ID: 1029306001	Sampling Location: 118-K-1	Received: 10/20/2010

Method: EPA TO-15 — Analyzed: 10/21/2010

Analyte	ppb	ug/m³	LOD (ppb)	RL (ppb)
1,1,1-Trichloroethane	ND	<1.6	0.30	2.0
Carbon tetrachloride	ND	<1.9	0.29	2.0
Benzene	**2.2**	**7.0**	0.40	2.0
Cyclohexane	ND	<2.3	0.68	2.0
Trichloroethene	ND	<1.3	0.24	2.0
1,2-Dichloropropane	ND	<1.8	0.37	2.0
Bromodichloromethane	ND	<1.4	0.21	2.0
Heptane	ND	<1.7	0.42	2.0
cis-1,3-Dichloropropene	ND	<1.5	0.32	2.0
Methyl isobutyl ketone	ND	<0.69	0.17	2.0
trans-1,3-Dichloropropene	ND	<1.7	0.38	2.0
1,1,2-Trichloroethane	ND	<1.9	0.34	2.0
Toluene	**(1.4)**	**(5.3)**	0.41	2.0
2-Hexanone	ND	<1.1	0.27	4.0
Tetrachloroethene	ND	<2.5	0.36	2.0
Dibromochloromethane	ND	<2.1	0.24	2.0
1,2-Dibromoethane	ND	<2.0	0.26	2.0
Chlorobenzene	ND	<0.71	0.15	2.0
Ethyl benzene	**6.7**	**29**	0.35	2.0
m,p-Xylene	**13**	**56**	0.68	2.0
o-Xylene	**21**	**93**	0.28	2.0
Styrene	ND	<1.8	0.42	2.0
Bromoform	ND	<2.6	0.25	2.0
1,1,2,2-Tetrachloroethane	ND	<1.7	0.25	2.0
4-Ethyl toluene	**7.9**	**39**	0.23	2.0
1,3,5-Trimethylbenzene	**32**	**160**	0.21	2.0
1,2,4-Trimethylbenzene	**200** E	**1000**	0.32	2.0
1,3-Dichlorobenzene	ND	<1.4	0.24	2.0
1,4-Dichlorobenzene	ND	<2.2	0.37	2.0
Benzyl chloride	ND	<0.87	0.17	4.0
1,2-Dichlorobenzene	ND	<2.6	0.44	4.0
1,2,4-Trichlorobenzene	ND	<4.4	0.59	4.0
Hexachloro-1,3-butadiene	ND	<3.3	0.31	4.0

Results Continued on Next Page

ANALYTICAL REPORT

Client Project ID: Washington Closure 102010
Purchase Order: R118K12600
Workorder: 1029306
Project Manager Kevin Griffiths

Analytical Results

Sample ID: **J1CDD2** | Media: Summa 6 Liter Canister | Collected: 10/18/2010
Lab ID: 1029306001 | Sampling Location: 118-K-1 | Received: 10/20/2010

Method: EPA TO-15 | Analyzed: 10/21/2010

Tentatively Identified Compound Results

Analyte	ppb	Retention Time
Ethanol	16	6.13
Isopropyl Alcohol	5	6.76
Benzene, 1-ethyl-4-methyl-	23	16.56
Benzene, 1,2,3-trimethyl-	27	17.75
Limonene	240	17.93
Benzene, 1,2-diethyl-	24	18.14
Benzene, 4-ethyl-1,2-dimethyl-	30	18.27
Benzene, 1-methyl-2-(1-methylethyl)-	24	18.68
Benzene, 1-ethyl-2,3-dimethyl-	27	18.78
Benzene, 1,2,4,5-tetramethyl-	24	19.34
Benzene, 1,2,3,5-tetramethyl-	17	19.42
Benzene, 1-methyl-2-(2-propenyl)-	16	19.97
Naphthalene	14	20.56

Sample ID: **J1CDD3** | Media: Summa 6 Liter Canister | Collected: 10/18/2010
Lab ID: 1029306002 | Sampling Location: 118-K-1 | Received: 10/20/2010

Method: EPA TO-15 | Analyzed: 10/21/2010

Analyte	Result
Bromofluorobenzene	

Method: EPA TO-15 | Analyzed: 10/21/2010

Analyte	ppb	ug/m³	LOD (ppb)	RL (ppb)
Dichlorodifluoromethane	**(0.88)**	**(4.4)**	0.39	2.0
Methyl chloride	**(1.6)**	**(3.3)**	0.57	2.0
Freon 114	ND	<2.9	0.41	2.0
Vinyl chloride	ND	<0.95	0.37	2.0
1,3-Butadiene	ND	<1.7	0.77	2.0
Bromomethane	ND	<1.9	0.48	2.0
Ethyl chloride	ND	<1.4	0.54	2.0
Freon 11	ND	<2.3	0.40	2.0
Freon 113	ND	<2.2	0.29	2.0
1,1-Dichloroethene	ND	<5.0	1.3	2.0

Results Continued on Next Page

ANALYTICAL REPORT

Client Project ID: Washington Closure 102010
Purchase Order: R118K12600
Workorder:D1029306
Project Manager Kevin Griffiths

Analytical Results

Sample ID: **J1CDD3** Media: Summa 6 Liter Canister Collected: 10/18/2010
Lab ID: 1029306002 Sampling Location: 118-K-1 Received: 10/20/2010

Method: EPA TO-15 Analyzed: 10/21/2010

Analyte	ppb	ug/m³	LOD (ppb)	RL (ppb)
Acetone	**24**	**56**	1.2	2.0
Carbon disulfide	ND	<2.0	0.66	2.0
Methylene chloride	**(1.5)**	**(5.1)**	0.56	2.0
trans-1,2-Dichloroethene	ND	<3.2	0.80	2.0
Methyl t-butyl ether	ND	<2.3	0.65	2.0
Vinyl acetate	ND	<2.1	0.58	2.0
Methyl ethyl ketone	**4.2**	**12**	0.55	2.0
cis-1,2-Dichloroethene	ND	<2.9	0.74	2.0
1,1-Dichloroethane	ND	<1.8	0.43	2.0
Ethyl acetate	ND	<4.6	1.3	2.0
n-Hexane	**(0.85)**	**(3.0)**	0.51	2.0
Chloroform	ND	<2.0	0.41	2.0
Tetrahydrofuran	ND	<1.3	0.45	2.0
1,2-Dichloroethane	ND	<2.2	0.54	2.0
1,1,1-Trichloroethane	ND	<1.6	0.30	2.0
Carbon tetrachloride	ND	<1.9	0.29	2.0
Benzene	**(1.4)**	**(4.5)**	0.40	2.0
Cyclohexane	**(0.91)**	**(3.1)**	0.68	2.0
Trichloroethene	ND	<1.3	0.24	2.0
1,2-Dichloropropane	**(0.74)**	**(3.6)**	0.37	2.0
Bromodichloromethane	ND	<1.4	0.21	2.0
Heptane	ND	<1.7	0.42	2.0
cis-1,3-Dichloropropene	ND	<1.5	0.32	2.0
Methyl isobutyl ketone	ND	<0.69	0.17	2.0
trans-1,3-Dichloropropene	ND	<1.7	0.38	2.0
1,1,2-Trichloroethane	ND	<1.9	0.34	2.0
Toluene	**(0.99)**	**(3.7)**	0.41	2.0
2-Hexanone	ND	<1.1	0.27	4.0
Tetrachloroethene	ND	<2.5	0.36	2.0
Dibromochloromethane	ND	<2.1	0.24	2.0
1,2-Dibromoethane	ND	<2.0	0.26	2.0
Chlorobenzene	ND	<0.71	0.15	2.0
Ethyl benzene	ND	<1.5	0.35	2.0
m,p-Xylene	**(1.7)**	**(7.5)**	0.68	2.0

Results Continued on Next Page

ANALYTICAL REPORT

Client Project ID: Washington Closure 102010
Purchase Order: R118K12600
Workorder: 1029306
Project Manager Kevin Griffiths

Analytical Results

Sample ID: **J1CDD3**	Media: Summa 6 Liter Canister	Collected: 10/18/2010
Lab ID: 1029306002	Sampling Location: 118-K-1	Received: 10/20/2010

Method: EPA TO-15 — Analyzed: 10/21/2010

Analyte	ppb	ug/m³	LOD (ppb)	RL (ppb)
o-Xylene	**14**	**61**	0.28	2.0
Styrene	**(0.83)**	**(3.5)**	0.42	2.0
Bromoform	ND	<2.6	0.25	2.0
1,1,2,2-Tetrachloroethane	ND	<1.7	0.25	2.0
4-Ethyl toluene	**2.8**	**14**	0.23	2.0
1,3,5-Trimethylbenzene	**25**	**120**	0.21	2.0
1,2,4-Trimethylbenzene	**14**	**68**	0.32	2.0
1,3-Dichlorobenzene	ND	<1.4	0.24	2.0
1,4-Dichlorobenzene	ND	<2.2	0.37	2.0
Benzyl chloride	ND	<0.87	0.17	4.0
1,2-Dichlorobenzene	ND	<2.6	0.44	4.0
1,2,4-Trichlorobenzene	ND	<4.4	0.59	4.0
Hexachloro-1,3-butadiene	ND	<3.3	0.31	4.0

Method: EPA TO-15 — Analyzed: 10/21/2010

Tentatively Identified Compound Results

Analyte	ppb	Retention Time
C10 Hydrocarbon	9.8	16.56
C10 Hydrocarbon	15	16.83
Decane	28	17.31
Cyclohexane, 1-methyl-4-(1-methylethyl)-, cis-	8.9	17.49
Benzene, 1,2,3-trimethyl-	26	17.74
Indene	45	18.13

Parameter Footnotes

E — Result exceeds calibration range

Workorder Comments

1029306 — The two canisters were recieved under vacuum.
J1CDD2 ~22 Hg" vacuum
J1CDD3 ~20 Hg" vacuum

ANALYTICAL REPORT

Client Project ID: Washington Closure 102010
Purchase Order: R118K12600
Workorder: 1029306
Project Manager Kevin Griffiths

Report Authorization

Method: EPA TO-15	
Lisa M. Reid	Thomas J. Masoian
Analyst	Peer Review

Laboratory Contact Information

Phone: (801) 266-7700
Email: alslt.lab@alsglobal.com
Web: www.datachem.com

ALS Laboratory Group (formerly DataChem Laboratories, Inc.)
960 W Levoy Drive
Salt Lake City, Utah 84123

General Lab Comments

The results provided in this report relate only to the items tested.
Samples were received in acceptable condition unless otherwise noted.
Samples have not been blank corrected unless otherwise noted.
This test report shall not be reproduced, except in full, without written approval of ALS.

ALS is accredited by ANSI/ACLASS (ISO 17025:2005) for specific fields of testing as documented in its current scope of accreditation (ID#AT-1421) which is available on request by contacting your project manager or view on the internet at http://www.aclasscorp.com. The quality systems implemented in the laboratory apply to all technologies performed by ALS.

ALS provides professional analytical services for all samples submitted. ALS is not in a position to interpret the data and assumes no responsibility for the quality of the samples submitted.

All quality control samples processed with the samples in this report yielded acceptable results unless otherwise noted.

Definitions

LOD = Limit of Detection = MDL = Method Detection Limit, A statistical estimate of method/media/instrument sensitivity.
LOQ = Limit of Quantitation = RL = Reporting Limit, A verified value of method/media/instrument sensitivity.
ND = Not Detected, Testing result not detected above the LOD or LOQ.
** No result could be reported, see sample comments for details.
< This testing result is less than the numerical value.
( ) This testing result is between the LOD and LOQ and has higher analytical uncertainty than values at or above the LOQ.

1029306

Washi 1029306

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-055-048 | Page 1 of 1

Collector: D. Bowers	Company Contact: D. Bowers	Telephone No.: 509-531-0701	Project Coordinator: KESSNER, JH
Price Code: 9L	Data Turnaround: ~~7 Days~~ ASAP 10-18-10		
Project Designation: 100K Burial Grounds - Other Solid In-Process	Sampling Location: 118-K-1 trench K anomalous odor		SAF No.: RC-055
Ice Chest No.: WCH-08-034	Field Logbook No.: EL-1602-8	COA: R118K12600	Method of Shipment: FEDEX
Shipped To: ALS Laboratories - Salt Lake City	Offsite Property No.: AJ006601		Bill of Lading/Air Bill No.: See OSPC

POSSIBLE SAMPLE HAZARDS/REMARKS

None

Special Handling and/or Storage

None

Preservation	None										
Type of Container	Summa Canister										
No. of Container(s)	1										
Volume	6L										
SAMPLE ANALYSIS	VOA - T0-15										

Sample No.	Matrix *	Sample Date	Sample Time									Summa Canister #
J1CDD2	OTHER SOLID	10-18-10	1044	✓								049
J1CDD3	OTHER SOLID	10-18-10	1051	✓								107

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Doug Bowers	10-18-10/1250	S. VanDenHende	10-18-10 1250
S. VanDenHende	10-18-10 1415	J.E. Benhal	10-18-10 1415
J.E. Benhal	10-19-10 1000	FED EX	
FED EX			10/20/10 0930
UDS Lab			

SPECIAL INSTRUCTIONS

If possible, please also run the Sulfur Scan on all samples. Contact Joan Kessner with any questions.

REVIEWED BY JR
DATE 10/19/10

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

LABORATORY SECTION	Received By:	Title: 10/20/10 0936	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Apex™

Non-Reg.

Analysis Report for RCF25954

J1CDD3 SAF:RC-055 100K/118-K-1 TRENCH K SUMMA CANISTER 107

GAMMA SPECTRUM ANALYSIS

Sample Identification	: RCF25954
Sample Description	: J1CDD3 SAF:RC-055 100K/118-K-1 TRENCH K SUMMA CANISTER 107
Sample Type	: Non Standard Geometry
Sample Size	: 1.000E+00 units
Facility	: Default
Sample Taken On	: 10/18/2010 10:51:00AM
Acquisition Started	: 10/18/2010 2:40:45PM
Procedure	: Non Standard Geometry
Operator	: RCT
Detector Name	: GEA2703
Geometry	: Non Standard Geometry
Live Time	: 3600.0 seconds
Real Time	: 3600.8 seconds
Dead Time	: 0.02 %
Peak Locate Threshold	: 3.00
Peak Locate Range (in channels)	: 40 - 4096
Peak Area Range (in channels)	: 40 - 4096
Identification Energy Tolerance	: 1.000 keV
Energy Calibration Used Done On	: 2/4/2010
Efficiency Calibration Used Done On	: 3/10/2010
Efficiency Calibration Description	: GEA2703 NONSTD 031010Effcal SN80398-238
Sample Number	: 7913

QUALITATIVE ONLY

INTERFERENCE CORRECTED REPORT

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/units)	Wt mean Activity Uncertainty	Comments