MEMORANDUM
ARIZONA STATE LAND DEPARTMENT
Natural Resources Division

TO: File

FROM: Bruce Campbell

DATE: November 2, 2015

SUBJECT: Drum Removal at Paradise Ridge Parcel MF4 (53-118055)

A Phase I ESA conducted by Kimley Horn and Associates, dated July 31, 2015 for the above referenced parcel observed and noted the following "Recognized Environmental Condition" (REC) on the Parcel:

- ***"Two 55-gallon drums were observed onsite and appeared to be associated with wildcat dumping, which is improper and illegal disposal of solid waste, as truck tire tracks were visible adjacent to the drums. Each drum is rusty and has leaked what appears to be petroleum product (likely diesel fuel or oil based on odor and soil staining) on the adjacent soils. The soil staining appears to be local and the drums appear to contain additional petroleum product. These drums and contaminated soil should be removed/remediated per all federal, state and local rules and regulations".***

In response to these findings, the Arizona State Land Department retained Environmental Response, Inc. (ERI), a State-approved response and remediation contractor to remove the drums, contents and affected soils.

On September 18, 2015 ERI removed the two drums and their contents and excavated and removed 3840 lbs. of contaminated soil. Soil samples from the excavation bottoms confirmed that no contaminants of concern above their respective soil remediation levels remained.

A copy of the removal report, waste manifests, and laboratory analytical documents are attached.

Attachments:

EXECUTIVE SUMMARY

A. Contractor Information:

Contractor Name and Address:	Environmental Response, Inc. 2202 West Medtronic Way, Suite 108 Tempe, AZ 85281 Phone #: (480) 967-2802 Fax #: (480) 967-2735
Contractor Project ID #:	20-159399-3

B. Generator Information:

Generator Name and Address:	Arizona State Land Department 1616 W. Adams Street Phoenix, AZ 85007
Generator Contact:	Bruce Campbell Phone #: (602) 542-2578
Purchase Order No.:	LDA16-199

C. Incident Information:

Call Received By:	Eric Smith
Incident Location:	Lat. 33 Degrees, 39' 15.1" Long. 111 Degrees, 56' 20.4"

D. Incident Description:

1. Scene Description:	Drum clean-up
2. Materials Involved:	Mineral oil
3. Chemical Hazards:	Petroleum
4. Physical Hazards:	Chemical exposure, dust, pinch point, power tools, skin irritation, slip/trip/fall, strains/ sprains, surface penetration, weather (heat)
5. Estimated Spill Dimensions:	1' x 1' x 1' and 8' x 10' x 2'
6. Estimated Spill Quantity:	Not applicable
7. Contaminated Media:	Native soil
8. Quantity of Contaminated Material:	Two (2) 55-gallon drums of used oil; eight (8) 55-gallon drums of oil-impacted soil
9. Injuries Present:	None

E. **On Scene Information:**

1. Supervisor: Eric Smith
   Technician: Leander Skeet, Greg Crawford
2. Date and Time of Arrival: 9/18/2015 at 0730 hours

Off Scene Information:

1. Project Manager: Eric Smith

F. **Response Actions to Contain/Clean Up Hazardous Substances/Pollutants:**

September 18, 2015 – ERI assembled a crew at the office in Tempe, AZ to load supplies and equipment to clean up an oil spill in soil from drums that were illegally dumped on Arizona State Land property. Upon arrival to the site, a safety meeting was held to discuss the scope of work and potential hazards. The two (2) drums of oil were tipped up to prevent further leaking. Next, the oil was pumped out of the two (2) leaking drums into the new 55-gallon drums using a disposable siphon pump. Once the oil was into the new drums, chlor-d-tects were used to analyze the oil for chlorinated solvents to ensure non-hazardous material. The two (2) new drums containing the oil were labeled and loaded onto the stakebed truck for transportation offsite. The two (2) empty drums were also loaded onto ERI's stakebed truck for transportation offsite. Next, the crew hand excavated the oil impacted soil and placed the material into 55-gallon drums. In total, eight (8) 55-gallon drums of oil impacted soil were excavated from the two spill areas. Once all the oil impacted soil was removed from the spill areas, confirmation samples were taken from the bottom of the excavations. Two (2) confirmation samples were taken from the excavation that was 8'x10'x2' deep and one (1) confirmation sample was taken from the excavation that was 1'x1'x1' deep. A composite sample was obtained from the eight (8) drums of impacted soil to be used for the waste profile. Once all the oil clean up was complete, the two (2) excavation areas were backfilled with soil from on site. All the drums were properly labeled and transported to ERI's storage facility to be profiled and transported to their respective TSDFs.

G. **Subcontractors Being Used:**

None

H. **Materials Removed from Site:**

Two (2) 55-gallon drums of used oil were removed from the site and ultimately transported to Mesa Oil in Phoenix, Arizona for disposal; eight (8) 55-gallon drums of oil-impacted soil were removed from the site and ultimately transported to US Ecology in Beatty, Nevada for disposal; two (2) empty 55-gallon drums were removed from the site and transported to ERI's Winslow Yard to be crushed.

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	CESQG	1	800-535-5053	159399

GENERATOR

5. Generator's Name and Mailing Address
Arizona State Land Department -
1616 W. Adams Street
Phoenix, AZ 85007
Generator's Phone: 602 542-2578

Generator's Site Address (if different than mailing address)
ASLD Paradise Ranch II
Paradise Ranch Parcel MF4
Phoenix, AZ 85054

6. Transporter 1 Company Name: Environmental Response Inc.
U.S. EPA ID Number: AZ0000303032

7. Transporter 2 Company Name: Veolia Environmental Services, T.S., LLC
U.S. EPA ID Number: NJD080631369

8. Designated Facility Name and Site Address
US Ecology- Beatty
P.O. Box 578, Highway 95, 11 Miles south of Beatty
Beatty, NV 89003
Facility's Phone: 800-239-3943
U.S. EPA ID Number: NVT330010000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
	1. N/A, Non-DOT Regulated Waste Material, N/A. PG-N/A, (Petroleum Contaminated Soil)	8	DM	3840	P	
	2.					
	3.					
	4.					

13. Special Handling Instructions and Additional Information
1) 070128043-12000, 8x55g
ER Phone Chemtrec 800-535-5053, CD Required, ERI# 20-159399-3

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Bruce Campbell - Environmental Prog. Spec | Signature | Month 10 | Day 7 | Year 2015

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: ERIC SMITH | Signature | Month 10 | Day 7 | Year 15
Transporter 2 Printed/Typed Name: PAUL E OSBORNE | Signature | Month 10 | Day 08 | Year 15

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Tabitha Moore | Signature | Month 10 | Day 12 | Year 15

DESIGNATED FACILITY TO GENERATOR

CERTIFICATE OF DISPOSAL

October 15,2015

ARIZONA STATE LANDE DEPARTMENT PARADISE
PARADISE RANCH PARCEL MF4
PHOENIX, AZ 85054

This is to certify that waste as defined on Waste Manifest number **159399/159399** was received by U.S. Ecology, Inc., on **10/12/2015**.The waste(s) were subsequently treated, if required by 40 CFR Part 268 and U.S. Ecology's permits and disposed of on **10/12/2015** in accordance with permits and laws regulating this facility.

Reference Number: 15100908586-159399-1-1
Material: 8 55 GALLON DRUM
Process: Direct Landfill

Facility: U.S. ECOLOGY NEVADA, INC.
HWY 95 11 MILES S. OF BEATTY
BEATTY, NV 89003
EPA ID: NVT330010000

Waste Stream #: 070128043-12000
Waste Type: NON HAZARDOUS WASTE
Customer: ENVIRONMENTAL RESPONSE/SPRAY SYSTEMS

Printed Name: JOHN DYER
Signature: John Dyer
Title: COMPLIANCE MANAGER

RECEIVED
OCT 27 2015
ER&T

ANALYTICAL REPORT

September 25, 2015

Environmental Response, Inc.

Sample Delivery Group:	L789736
Samples Received:	09/19/2015
Project Number:	20-159399
Description:	ASLD Desert Ridge

Report To: Eric Smith
2202 W. Medtronic Way, Ste 108
Tempe, AZ 85281

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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CONFIRMATION 1 L789736-01 Solid

Collected by	Collected date/time	Received date/time
	09/18/15 12:22	09/19/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG816916	1	09/23/15 01:34	09/23/15 11:51	KMP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG816553	25	09/21/15 11:22	09/22/15 00:06	MCB

CONFIRMATION 2 L789736-02 Solid

Collected by	Collected date/time	Received date/time
	09/18/15 12:25	09/19/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG816916	1	09/23/15 01:34	09/23/15 12:55	KMP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG816553	25	09/21/15 11:22	09/22/15 01:37	MCB

CONFIRMATION 3 L789736-03 Solid

Collected by	Collected date/time	Received date/time
	09/18/15 12:30	09/19/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG816916	1	09/23/15 01:34	09/23/15 13:17	KMP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG816553	25	09/21/15 11:22	09/22/15 01:56	MCB

PROFILE SAMPLE L789736-04 Solid

Collected by	Collected date/time	Received date/time
	09/18/15 12:32	09/19/15 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analysis Analyst
Mercury by Method 7471A	WG816577	1	09/22/15 13:49	09/23/15 09:55	BRJ
Metals (ICP) by Method 6010B	WG816782	1	09/22/15 15:10	09/22/15 23:53	JDG
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG816916	20	09/23/15 01:34	09/24/15 01:04	KMP
Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM	WG816916	5	09/23/15 01:34	09/23/15 14:00	KMP
Volatile Organic Compounds (GC/MS) by Method 8260B	WG816553	25	09/21/15 11:22	09/22/15 02:14	MCB

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		1.25	25	09/22/2015 00:06	WG816553
Acrylonitrile	ND		0.250	25	09/22/2015 00:06	WG816553
Benzene	ND		0.0250	25	09/22/2015 00:06	WG816553
Bromobenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
Bromodichloromethane	ND		0.0250	25	09/22/2015 00:06	WG816553
Bromoform	ND		0.0250	25	09/22/2015 00:06	WG816553
Bromomethane	ND		0.125	25	09/22/2015 00:06	WG816553
1,3-Butadiene	ND		0.0500	25	09/22/2015 00:06	WG816553
n-Butylbenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
sec-Butylbenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
tert-Butylbenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
Carbon disulfide	ND		0.0250	25	09/22/2015 00:06	WG816553
Carbon tetrachloride	ND		0.0250	25	09/22/2015 00:06	WG816553
Chlorobenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
Chlorodibromomethane	ND		0.0250	25	09/22/2015 00:06	WG816553
Chloroethane	ND		0.125	25	09/22/2015 00:06	WG816553
Chloroform	ND		0.125	25	09/22/2015 00:06	WG816553
Chloromethane	ND		0.0625	25	09/22/2015 00:06	WG816553
2-Chlorotoluene	ND		0.0250	25	09/22/2015 00:06	WG816553
4-Chlorotoluene	ND		0.0250	25	09/22/2015 00:06	WG816553
Cyclohexane	ND		0.0250	25	09/22/2015 00:06	WG816553
1,2-Dibromo-3-Chloropropane	ND		0.125	25	09/22/2015 00:06	WG816553
1,2-Dibromoethane	ND		0.0250	25	09/22/2015 00:06	WG816553
Dibromomethane	ND		0.0250	25	09/22/2015 00:06	WG816553
1,2-Dichlorobenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
1,3-Dichlorobenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
1,4-Dichlorobenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
Dichlorodifluoromethane	ND		0.125	25	09/22/2015 00:06	WG816553
1,1-Dichloroethane	ND		0.0250	25	09/22/2015 00:06	WG816553
1,2-Dichloroethane	ND		0.0250	25	09/22/2015 00:06	WG816553
1,1-Dichloroethene	ND		0.0250	25	09/22/2015 00:06	WG816553
cis-1,2-Dichloroethene	ND		0.0250	25	09/22/2015 00:06	WG816553
trans-1,2-Dichloroethene	ND		0.0250	25	09/22/2015 00:06	WG816553
1,2-Dichloropropane	ND		0.0250	25	09/22/2015 00:06	WG816553
1,1-Dichloropropene	ND		0.0250	25	09/22/2015 00:06	WG816553
1,3-Dichloropropane	ND		0.0250	25	09/22/2015 00:06	WG816553
cis-1,3-Dichloropropene	ND		0.0250	25	09/22/2015 00:06	WG816553
trans-1,3-Dichloropropene	ND		0.0250	25	09/22/2015 00:06	WG816553
2,2-Dichloropropane	ND		0.0250	25	09/22/2015 00:06	WG816553
Dicyclopentadiene	ND		0.0250	25	09/22/2015 00:06	WG816553
Di-isopropyl ether	ND		0.0250	25	09/22/2015 00:06	WG816553
Ethylbenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
4-Ethyltoluene	ND		0.0250	25	09/22/2015 00:06	WG816553
Hexachloro-1,3-butadiene	ND		0.0250	25	09/22/2015 00:06	WG816553
n-Hexane	ND		0.250	25	09/22/2015 00:06	WG816553
Isopropylbenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
p-Isopropyltoluene	ND		0.0250	25	09/22/2015 00:06	WG816553
2-Butanone (MEK)	ND		0.250	25	09/22/2015 00:06	WG816553
Methylene Chloride	ND		0.125	25	09/22/2015 00:06	WG816553
4-Methyl-2-pentanone (MIBK)	ND		0.250	25	09/22/2015 00:06	WG816553
Methyl tert-butyl ether	ND		0.0250	25	09/22/2015 00:06	WG816553
Methyl Cyclohexane	ND		0.0250	25	09/22/2015 00:06	WG816553
Naphthalene	ND		0.125	25	09/22/2015 00:06	WG816553
Propene	ND		0.0625	25	09/22/2015 00:06	WG816553
n-Propylbenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
Styrene	ND		0.0250	25	09/22/2015 00:06	WG816553

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.0250	25	09/22/2015 00:06	WG816553
1,1,2,2-Tetrachloroethane	ND		0.0250	25	09/22/2015 00:06	WG816553
1,1,2-Trichlorotrifluoroethane	ND		0.0250	25	09/22/2015 00:06	WG816553
Tetrachloroethene	ND		0.0250	25	09/22/2015 00:06	WG816553
Toluene	ND		0.125	25	09/22/2015 00:06	WG816553
1,2,3-Trichlorobenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
1,2,4-Trichlorobenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
1,1,1-Trichloroethane	ND		0.0250	25	09/22/2015 00:06	WG816553
1,1,2-Trichloroethane	ND		0.0250	25	09/22/2015 00:06	WG816553
Trichloroethene	ND		0.0250	25	09/22/2015 00:06	WG816553
Trichlorofluoromethane	ND		0.125	25	09/22/2015 00:06	WG816553
1,2,3-Trichloropropane	ND		0.0625	25	09/22/2015 00:06	WG816553
1,2,4-Trimethylbenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
1,2,3-Trimethylbenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
1,3,5-Trimethylbenzene	ND		0.0250	25	09/22/2015 00:06	WG816553
Vinyl chloride	ND		0.0250	25	09/22/2015 00:06	WG816553
Xylenes, Total	ND		0.0750	25	09/22/2015 00:06	WG816553
(S) Toluene-d8	*104*		*88.7-115*		*09/22/2015 00:06*	WG816553
(S) Dibromofluoromethane	*92.2*		*76.3-123*		*09/22/2015 00:06*	WG816553
(S) 4-Bromofluorobenzene	*109*		*69.7-129*		*09/22/2015 00:06*	WG816553

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	09/23/2015 11:51	WG816916
Acenaphthene	ND		0.00600	1	09/23/2015 11:51	WG816916
Acenaphthylene	ND		0.00600	1	09/23/2015 11:51	WG816916
Benzo(a)anthracene	ND		0.00600	1	09/23/2015 11:51	WG816916
Benzo(a)pyrene	ND		0.00600	1	09/23/2015 11:51	WG816916
Benzo(b)fluoranthene	ND		0.00600	1	09/23/2015 11:51	WG816916
Benzo(g,h,i)perylene	ND		0.00600	1	09/23/2015 11:51	WG816916
Benzo(k)fluoranthene	ND		0.00600	1	09/23/2015 11:51	WG816916
Chrysene	ND		0.00600	1	09/23/2015 11:51	WG816916
Dibenz(a,h)anthracene	ND		0.00600	1	09/23/2015 11:51	WG816916
Fluoranthene	ND		0.00600	1	09/23/2015 11:51	WG816916
Fluorene	ND		0.00600	1	09/23/2015 11:51	WG816916
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/23/2015 11:51	WG816916
Naphthalene	ND		0.0200	1	09/23/2015 11:51	WG816916
Phenanthrene	ND		0.00600	1	09/23/2015 11:51	WG816916
Pyrene	ND		0.00600	1	09/23/2015 11:51	WG816916
1-Methylnaphthalene	ND		0.0200	1	09/23/2015 11:51	WG816916
2-Methylnaphthalene	ND		0.0200	1	09/23/2015 11:51	WG816916
2-Chloronaphthalene	ND		0.0200	1	09/23/2015 11:51	WG816916
(S) p-Terphenyl-d14	*61.3*		*32.2-131*		*09/23/2015 11:51*	WG816916
(S) Nitrobenzene-d5	*79.1*		*22.1-146*		*09/23/2015 11:51*	WG816916
(S) 2-Fluorobiphenyl	*63.6*		*40.6-122*		*09/23/2015 11:51*	WG816916

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		1.25	25	09/22/2015 01:37	WG816553
Acrylonitrile	ND		0.250	25	09/22/2015 01:37	WG816553
Benzene	ND		0.0250	25	09/22/2015 01:37	WG816553
Bromobenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
Bromodichloromethane	ND		0.0250	25	09/22/2015 01:37	WG816553
Bromoform	ND		0.0250	25	09/22/2015 01:37	WG816553
Bromomethane	ND		0.125	25	09/22/2015 01:37	WG816553
1,3-Butadiene	ND		0.0500	25	09/22/2015 01:37	WG816553
n-Butylbenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
sec-Butylbenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
tert-Butylbenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
Carbon disulfide	ND		0.0250	25	09/22/2015 01:37	WG816553
Carbon tetrachloride	ND		0.0250	25	09/22/2015 01:37	WG816553
Chlorobenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
Chlorodibromomethane	ND		0.0250	25	09/22/2015 01:37	WG816553
Chloroethane	ND		0.125	25	09/22/2015 01:37	WG816553
Chloroform	ND		0.125	25	09/22/2015 01:37	WG816553
Chloromethane	ND		0.0625	25	09/22/2015 01:37	WG816553
2-Chlorotoluene	ND		0.0250	25	09/22/2015 01:37	WG816553
4-Chlorotoluene	ND		0.0250	25	09/22/2015 01:37	WG816553
Cyclohexane	ND		0.0250	25	09/22/2015 01:37	WG816553
1,2-Dibromo-3-Chloropropane	ND		0.125	25	09/22/2015 01:37	WG816553
1,2-Dibromoethane	ND		0.0250	25	09/22/2015 01:37	WG816553
Dibromomethane	ND		0.0250	25	09/22/2015 01:37	WG816553
1,2-Dichlorobenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
1,3-Dichlorobenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
1,4-Dichlorobenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
Dichlorodifluoromethane	ND		0.125	25	09/22/2015 01:37	WG816553
1,1-Dichloroethane	ND		0.0250	25	09/22/2015 01:37	WG816553
1,2-Dichloroethane	ND		0.0250	25	09/22/2015 01:37	WG816553
1,1-Dichloroethene	ND		0.0250	25	09/22/2015 01:37	WG816553
cis-1,2-Dichloroethene	ND		0.0250	25	09/22/2015 01:37	WG816553
trans-1,2-Dichloroethene	ND		0.0250	25	09/22/2015 01:37	WG816553
1,2-Dichloropropane	ND		0.0250	25	09/22/2015 01:37	WG816553
1,1-Dichloropropene	ND		0.0250	25	09/22/2015 01:37	WG816553
1,3-Dichloropropane	ND		0.0250	25	09/22/2015 01:37	WG816553
cis-1,3-Dichloropropene	ND		0.0250	25	09/22/2015 01:37	WG816553
trans-1,3-Dichloropropene	ND		0.0250	25	09/22/2015 01:37	WG816553
2,2-Dichloropropane	ND		0.0250	25	09/22/2015 01:37	WG816553
Dicyclopentadiene	ND		0.0250	25	09/22/2015 01:37	WG816553
Di-isopropyl ether	ND		0.0250	25	09/22/2015 01:37	WG816553
Ethylbenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
4-Ethyltoluene	ND		0.0250	25	09/22/2015 01:37	WG816553
Hexachloro-1,3-butadiene	ND		0.0250	25	09/22/2015 01:37	WG816553
n-Hexane	ND		0.250	25	09/22/2015 01:37	WG816553
Isopropylbenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
p-Isopropyltoluene	ND		0.0250	25	09/22/2015 01:37	WG816553
2-Butanone (MEK)	ND		0.250	25	09/22/2015 01:37	WG816553
Methylene Chloride	ND		0.125	25	09/22/2015 01:37	WG816553
4-Methyl-2-pentanone (MIBK)	ND		0.250	25	09/22/2015 01:37	WG816553
Methyl tert-butyl ether	ND		0.0250	25	09/22/2015 01:37	WG816553
Methyl Cyclohexane	ND		0.0250	25	09/22/2015 01:37	WG816553
Naphthalene	ND		0.125	25	09/22/2015 01:37	WG816553
Propene	ND		0.0625	25	09/22/2015 01:37	WG816553
n-Propylbenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
Styrene	ND		0.0250	25	09/22/2015 01:37	WG816553

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.0250	25	09/22/2015 01:37	WG816553
1,1,2,2-Tetrachloroethane	ND		0.0250	25	09/22/2015 01:37	WG816553
1,1,2-Trichlorotrifluoroethane	ND		0.0250	25	09/22/2015 01:37	WG816553
Tetrachloroethene	ND		0.0250	25	09/22/2015 01:37	WG816553
Toluene	ND		0.125	25	09/22/2015 01:37	WG816553
1,2,3-Trichlorobenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
1,2,4-Trichlorobenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
1,1,1-Trichloroethane	ND		0.0250	25	09/22/2015 01:37	WG816553
1,1,2-Trichloroethane	ND		0.0250	25	09/22/2015 01:37	WG816553
Trichloroethene	ND		0.0250	25	09/22/2015 01:37	WG816553
Trichlorofluoromethane	ND		0.125	25	09/22/2015 01:37	WG816553
1,2,3-Trichloropropane	ND		0.0625	25	09/22/2015 01:37	WG816553
1,2,4-Trimethylbenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
1,2,3-Trimethylbenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
1,3,5-Trimethylbenzene	ND		0.0250	25	09/22/2015 01:37	WG816553
Vinyl chloride	ND		0.0250	25	09/22/2015 01:37	WG816553
Xylenes, Total	ND		0.0750	25	09/22/2015 01:37	WG816553
(S) Toluene-d8	*102*		*88.7-115*		*09/22/2015 01:37*	WG816553
(S) Dibromofluoromethane	*88.0*		*76.3-123*		*09/22/2015 01:37*	WG816553
(S) 4-Bromofluorobenzene	*111*		*69.7-129*		*09/22/2015 01:37*	WG816553

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	09/23/2015 12:55	WG816916
Acenaphthene	ND		0.00600	1	09/23/2015 12:55	WG816916
Acenaphthylene	ND		0.00600	1	09/23/2015 12:55	WG816916
Benzo(a)anthracene	ND		0.00600	1	09/23/2015 12:55	WG816916
Benzo(a)pyrene	ND		0.00600	1	09/23/2015 12:55	WG816916
Benzo(b)fluoranthene	ND		0.00600	1	09/23/2015 12:55	WG816916
Benzo(g,h,i)perylene	ND		0.00600	1	09/23/2015 12:55	WG816916
Benzo(k)fluoranthene	ND		0.00600	1	09/23/2015 12:55	WG816916
Chrysene	ND		0.00600	1	09/23/2015 12:55	WG816916
Dibenz(a,h)anthracene	ND		0.00600	1	09/23/2015 12:55	WG816916
Fluoranthene	ND		0.00600	1	09/23/2015 12:55	WG816916
Fluorene	ND		0.00600	1	09/23/2015 12:55	WG816916
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/23/2015 12:55	WG816916
Naphthalene	ND		0.0200	1	09/23/2015 12:55	WG816916
Phenanthrene	ND		0.00600	1	09/23/2015 12:55	WG816916
Pyrene	ND		0.00600	1	09/23/2015 12:55	WG816916
1-Methylnaphthalene	ND		0.0200	1	09/23/2015 12:55	WG816916
2-Methylnaphthalene	ND		0.0200	1	09/23/2015 12:55	WG816916
2-Chloronaphthalene	ND		0.0200	1	09/23/2015 12:55	WG816916
(S) p-Terphenyl-d14	*33.5*		*32.2-131*		*09/23/2015 12:55*	WG816916
(S) Nitrobenzene-d5	*43.8*		*22.1-146*		*09/23/2015 12:55*	WG816916
(S) 2-Fluorobiphenyl	*38.9*	S6	*40.6-122*		*09/23/2015 12:55*	WG816916

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		1.25	25	09/22/2015 01:56	WG816553
Acrylonitrile	ND		0.250	25	09/22/2015 01:56	WG816553
Benzene	ND		0.0250	25	09/22/2015 01:56	WG816553
Bromobenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
Bromodichloromethane	ND		0.0250	25	09/22/2015 01:56	WG816553
Bromoform	ND		0.0250	25	09/22/2015 01:56	WG816553
Bromomethane	ND		0.125	25	09/22/2015 01:56	WG816553
1,3-Butadiene	ND		0.0500	25	09/22/2015 01:56	WG816553
n-Butylbenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
sec-Butylbenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
tert-Butylbenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
Carbon disulfide	ND		0.0250	25	09/22/2015 01:56	WG816553
Carbon tetrachloride	ND		0.0250	25	09/22/2015 01:56	WG816553
Chlorobenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
Chlorodibromomethane	ND		0.0250	25	09/22/2015 01:56	WG816553
Chloroethane	ND		0.125	25	09/22/2015 01:56	WG816553
Chloroform	ND		0.125	25	09/22/2015 01:56	WG816553
Chloromethane	ND		0.0625	25	09/22/2015 01:56	WG816553
2-Chlorotoluene	ND		0.0250	25	09/22/2015 01:56	WG816553
4-Chlorotoluene	ND		0.0250	25	09/22/2015 01:56	WG816553
Cyclohexane	ND		0.0250	25	09/22/2015 01:56	WG816553
1,2-Dibromo-3-Chloropropane	ND		0.125	25	09/22/2015 01:56	WG816553
1,2-Dibromoethane	ND		0.0250	25	09/22/2015 01:56	WG816553
Dibromomethane	ND		0.0250	25	09/22/2015 01:56	WG816553
1,2-Dichlorobenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
1,3-Dichlorobenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
1,4-Dichlorobenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
Dichlorodifluoromethane	ND		0.125	25	09/22/2015 01:56	WG816553
1,1-Dichloroethane	ND		0.0250	25	09/22/2015 01:56	WG816553
1,2-Dichloroethane	ND		0.0250	25	09/22/2015 01:56	WG816553
1,1-Dichloroethene	ND		0.0250	25	09/22/2015 01:56	WG816553
cis-1,2-Dichloroethene	ND		0.0250	25	09/22/2015 01:56	WG816553
trans-1,2-Dichloroethene	ND		0.0250	25	09/22/2015 01:56	WG816553
1,2-Dichloropropane	ND		0.0250	25	09/22/2015 01:56	WG816553
1,1-Dichloropropene	ND		0.0250	25	09/22/2015 01:56	WG816553
1,3-Dichloropropane	ND		0.0250	25	09/22/2015 01:56	WG816553
cis-1,3-Dichloropropene	ND		0.0250	25	09/22/2015 01:56	WG816553
trans-1,3-Dichloropropene	ND		0.0250	25	09/22/2015 01:56	WG816553
2,2-Dichloropropane	ND		0.0250	25	09/22/2015 01:56	WG816553
Dicyclopentadiene	ND		0.0250	25	09/22/2015 01:56	WG816553
Di-isopropyl ether	ND		0.0250	25	09/22/2015 01:56	WG816553
Ethylbenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
4-Ethyltoluene	ND		0.0250	25	09/22/2015 01:56	WG816553
Hexachloro-1,3-butadiene	ND		0.0250	25	09/22/2015 01:56	WG816553
n-Hexane	ND		0.250	25	09/22/2015 01:56	WG816553
Isopropylbenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
p-Isopropyltoluene	ND		0.0250	25	09/22/2015 01:56	WG816553
2-Butanone (MEK)	ND		0.250	25	09/22/2015 01:56	WG816553
Methylene Chloride	ND		0.125	25	09/22/2015 01:56	WG816553
4-Methyl-2-pentanone (MIBK)	ND		0.250	25	09/22/2015 01:56	WG816553
Methyl tert-butyl ether	ND		0.0250	25	09/22/2015 01:56	WG816553
Methyl Cyclohexane	ND		0.0250	25	09/22/2015 01:56	WG816553
Naphthalene	ND		0.125	25	09/22/2015 01:56	WG816553
Propene	ND		0.0625	25	09/22/2015 01:56	WG816553
n-Propylbenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
Styrene	ND		0.0250	25	09/22/2015 01:56	WG816553

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
1,1,1,2-Tetrachloroethane	ND		0.0250	25	09/22/2015 01:56	WG816553
1,1,2,2-Tetrachloroethane	ND		0.0250	25	09/22/2015 01:56	WG816553
1,1,2-Trichlorotrifluoroethane	ND		0.0250	25	09/22/2015 01:56	WG816553
Tetrachloroethene	ND		0.0250	25	09/22/2015 01:56	WG816553
Toluene	ND		0.125	25	09/22/2015 01:56	WG816553
1,2,3-Trichlorobenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
1,2,4-Trichlorobenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
1,1,1-Trichloroethane	ND		0.0250	25	09/22/2015 01:56	WG816553
1,1,2-Trichloroethane	ND		0.0250	25	09/22/2015 01:56	WG816553
Trichloroethene	ND		0.0250	25	09/22/2015 01:56	WG816553
Trichlorofluoromethane	ND		0.125	25	09/22/2015 01:56	WG816553
1,2,3-Trichloropropane	ND		0.0625	25	09/22/2015 01:56	WG816553
1,2,4-Trimethylbenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
1,2,3-Trimethylbenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
1,3,5-Trimethylbenzene	ND		0.0250	25	09/22/2015 01:56	WG816553
Vinyl chloride	ND		0.0250	25	09/22/2015 01:56	WG816553
Xylenes, Total	ND		0.0750	25	09/22/2015 01:56	WG816553
(S) Toluene-d8	*105*		*88.7-115*		*09/22/2015 01:56*	WG816553
(S) Dibromofluoromethane	*88.7*		*76.3-123*		*09/22/2015 01:56*	WG816553
(S) 4-Bromofluorobenzene	*111*		*69.7-129*		*09/22/2015 01:56*	WG816553

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	ND		0.00600	1	09/23/2015 13:17	WG816916
Acenaphthene	ND		0.00600	1	09/23/2015 13:17	WG816916
Acenaphthylene	ND		0.00600	1	09/23/2015 13:17	WG816916
Benzo(a)anthracene	ND		0.00600	1	09/23/2015 13:17	WG816916
Benzo(a)pyrene	ND		0.00600	1	09/23/2015 13:17	WG816916
Benzo(b)fluoranthene	ND		0.00600	1	09/23/2015 13:17	WG816916
Benzo(g,h,i)perylene	ND		0.00600	1	09/23/2015 13:17	WG816916
Benzo(k)fluoranthene	ND		0.00600	1	09/23/2015 13:17	WG816916
Chrysene	ND		0.00600	1	09/23/2015 13:17	WG816916
Dibenz(a,h)anthracene	ND		0.00600	1	09/23/2015 13:17	WG816916
Fluoranthene	ND		0.00600	1	09/23/2015 13:17	WG816916
Fluorene	ND		0.00600	1	09/23/2015 13:17	WG816916
Indeno(1,2,3-cd)pyrene	ND		0.00600	1	09/23/2015 13:17	WG816916
Naphthalene	ND		0.0200	1	09/23/2015 13:17	WG816916
Phenanthrene	ND		0.00600	1	09/23/2015 13:17	WG816916
Pyrene	ND		0.00600	1	09/23/2015 13:17	WG816916
1-Methylnaphthalene	ND		0.0200	1	09/23/2015 13:17	WG816916
2-Methylnaphthalene	ND		0.0200	1	09/23/2015 13:17	WG816916
2-Chloronaphthalene	ND		0.0200	1	09/23/2015 13:17	WG816916
(S) p-Terphenyl-d14	*43.4*		*32.2-131*		*09/23/2015 13:17*	WG816916
(S) Nitrobenzene-d5	*54.2*		*22.1-146*		*09/23/2015 13:17*	WG816916
(S) 2-Fluorobiphenyl	*47.4*		*40.6-122*		*09/23/2015 13:17*	WG816916

Mercury by Method 7471A

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Mercury	ND		0.0200	1	09/23/2015 09:55	WG816577

Metals (ICP) by Method 6010B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Arsenic	5.53		2.00	1	09/22/2015 23:53	WG816782
Barium	117		0.500	1	09/22/2015 23:53	WG816782
Cadmium	ND		0.500	1	09/22/2015 23:53	WG816782
Chromium	6.26		1.00	1	09/22/2015 23:53	WG816782
Lead	12.3		0.500	1	09/22/2015 23:53	WG816782
Selenium	ND		2.00	1	09/22/2015 23:53	WG816782
Silver	ND		1.00	1	09/22/2015 23:53	WG816782

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Acetone	ND		1.25	25	09/22/2015 02:14	WG816553
Acrylonitrile	ND		0.250	25	09/22/2015 02:14	WG816553
Benzene	ND		0.0250	25	09/22/2015 02:14	WG816553
Bromobenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
Bromodichloromethane	ND		0.0250	25	09/22/2015 02:14	WG816553
Bromoform	ND		0.0250	25	09/22/2015 02:14	WG816553
Bromomethane	ND		0.125	25	09/22/2015 02:14	WG816553
1,3-Butadiene	ND		0.0500	25	09/22/2015 02:14	WG816553
n-Butylbenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
sec-Butylbenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
tert-Butylbenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
Carbon disulfide	ND		0.0250	25	09/22/2015 02:14	WG816553
Carbon tetrachloride	ND		0.0250	25	09/22/2015 02:14	WG816553
Chlorobenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
Chlorodibromomethane	ND		0.0250	25	09/22/2015 02:14	WG816553
Chloroethane	ND		0.125	25	09/22/2015 02:14	WG816553
Chloroform	ND		0.125	25	09/22/2015 02:14	WG816553
Chloromethane	ND		0.0625	25	09/22/2015 02:14	WG816553
2-Chlorotoluene	ND		0.0250	25	09/22/2015 02:14	WG816553
4-Chlorotoluene	ND		0.0250	25	09/22/2015 02:14	WG816553
Cyclohexane	ND		0.0250	25	09/22/2015 02:14	WG816553
1,2-Dibromo-3-Chloropropane	ND		0.125	25	09/22/2015 02:14	WG816553
1,2-Dibromoethane	ND		0.0250	25	09/22/2015 02:14	WG816553
Dibromomethane	ND		0.0250	25	09/22/2015 02:14	WG816553
1,2-Dichlorobenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
1,3-Dichlorobenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
1,4-Dichlorobenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
Dichlorodifluoromethane	ND		0.125	25	09/22/2015 02:14	WG816553
1,1-Dichloroethane	ND		0.0250	25	09/22/2015 02:14	WG816553
1,2-Dichloroethane	ND		0.0250	25	09/22/2015 02:14	WG816553
1,1-Dichloroethene	ND		0.0250	25	09/22/2015 02:14	WG816553
cis-1,2-Dichloroethene	ND		0.0250	25	09/22/2015 02:14	WG816553
trans-1,2-Dichloroethene	ND		0.0250	25	09/22/2015 02:14	WG816553
1,2-Dichloropropane	ND		0.0250	25	09/22/2015 02:14	WG816553
1,1-Dichloropropene	ND		0.0250	25	09/22/2015 02:14	WG816553
1,3-Dichloropropane	ND		0.0250	25	09/22/2015 02:14	WG816553
cis-1,3-Dichloropropene	ND		0.0250	25	09/22/2015 02:14	WG816553
trans-1,3-Dichloropropene	ND		0.0250	25	09/22/2015 02:14	WG816553
2,2-Dichloropropane	ND		0.0250	25	09/22/2015 02:14	WG816553

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Dicyclopentadiene	ND		0.0250	25	09/22/2015 02:14	WG816553
Di-Isopropyl ether	ND		0.0250	25	09/22/2015 02:14	WG816553
Ethylbenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
4-Ethyltoluene	ND		0.0250	25	09/22/2015 02:14	WG816553
Hexachloro-1,3-butadiene	ND		0.0250	25	09/22/2015 02:14	WG816553
n-Hexane	ND		0.250	25	09/22/2015 02:14	WG816553
Isopropylbenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
p-Isopropyltoluene	ND		0.0250	25	09/22/2015 02:14	WG816553
2-Butanone (MEK)	ND		0.250	25	09/22/2015 02:14	WG816553
Methylene Chloride	ND		0.125	25	09/22/2015 02:14	WG816553
4-Methyl-2-pentanone (MIBK)	ND		0.250	25	09/22/2015 02:14	WG816553
Methyl tert-butyl ether	ND		0.0250	25	09/22/2015 02:14	WG816553
Methyl Cyclohexane	ND		0.0250	25	09/22/2015 02:14	WG816553
Naphthalene	ND		0.125	25	09/22/2015 02:14	WG816553
Propene	ND		0.0625	25	09/22/2015 02:14	WG816553
n-Propylbenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
Styrene	ND		0.0250	25	09/22/2015 02:14	WG816553
1,1,1,2-Tetrachloroethane	ND		0.0250	25	09/22/2015 02:14	WG816553
1,1,2,2-Tetrachloroethane	ND		0.0250	25	09/22/2015 02:14	WG816553
1,1,2-Trichlorotrifluoroethane	ND		0.0250	25	09/22/2015 02:14	WG816553
Tetrachloroethene	ND		0.0250	25	09/22/2015 02:14	WG816553
Toluene	ND		0.125	25	09/22/2015 02:14	WG816553
1,2,3-Trichlorobenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
1,2,4-Trichlorobenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
1,1,1-Trichloroethane	ND		0.0250	25	09/22/2015 02:14	WG816553
1,1,2-Trichloroethane	ND		0.0250	25	09/22/2015 02:14	WG816553
Trichloroethene	ND		0.0250	25	09/22/2015 02:14	WG816553
Trichlorofluoromethane	ND		0.125	25	09/22/2015 02:14	WG816553
1,2,3-Trichloropropane	ND		0.0625	25	09/22/2015 02:14	WG816553
1,2,4-Trimethylbenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
1,2,3-Trimethylbenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
1,3,5-Trimethylbenzene	ND		0.0250	25	09/22/2015 02:14	WG816553
Vinyl chloride	ND		0.0250	25	09/22/2015 02:14	WG816553
Xylenes, Total	ND		0.0750	25	09/22/2015 02:14	WG816553
(S) Toluene-d8	*105*		*88.7-115*		*09/22/2015 02:14*	WG816553
(S) Dibromofluoromethane	*87.0*		*76.3-123*		*09/22/2015 02:14*	WG816553
(S) 4-Bromofluorobenzene	*110*		*69.7-129*		*09/22/2015 02:14*	WG816553

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0359		0.0300	5	09/23/2015 14:00	WG816916
Acenaphthene	ND		0.0300	5	09/23/2015 14:00	WG816916
Acenaphthylene	ND		0.0300	5	09/23/2015 14:00	WG816916
Benzo(a)anthracene	0.144		0.120	20	09/24/2015 01:04	WG816916
Benzo(a)pyrene	ND		0.120	20	09/24/2015 01:04	WG816916
Benzo(b)fluoranthene	ND		0.120	20	09/24/2015 01:04	WG816916
Benzo(g,h,i)perylene	0.177		0.120	20	09/24/2015 01:04	WG816916
Benzo(k)fluoranthene	ND		0.120	20	09/24/2015 01:04	WG816916
Chrysene	ND		0.120	20	09/24/2015 01:04	WG816916
Dibenz(a,h)anthracene	ND		0.120	20	09/24/2015 01:04	WG816916
Fluoranthene	0.201		0.0300	5	09/23/2015 14:00	WG816916
Fluorene	ND		0.0300	5	09/23/2015 14:00	WG816916
Indeno(1,2,3-cd)pyrene	ND		0.120	20	09/24/2015 01:04	WG816916
Naphthalene	ND		0.100	5	09/23/2015 14:00	WG816916
Phenanthrene	ND		0.0300	5	09/23/2015 14:00	WG816916

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM

Analyte	Result mg/kg	Qualifier	RDL mg/kg	Dilution	Analysis date / time	Batch
Pyrene	0.228		0.120	20	09/24/2015 01:04	WG816916
1-Methylnaphthalene	ND		0.100	5	09/23/2015 14:00	WG816916
2-Methylnaphthalene	ND		0.100	5	09/23/2015 14:00	WG816916
2-Chloronaphthalene	ND		0.100	5	09/23/2015 14:00	WG816916
(S) p-Terphenyl-d14	*67.5*		*32.2-131*		*09/24/2015 01:04*	WG816916
(S) Nitrobenzene-d5	*83.9*		*22.1-146*		*09/23/2015 14:00*	WG816916
(S) 2-Fluorobiphenyl	*65.9*		*40.6-122*		*09/23/2015 14:00*	WG816916

Sample Narrative:

8270C-SIM L789736-04 WG816916: dilution due to matrix

QUALITY CONTROL SUMMARY

L789736-04

Method Blank (MB)

(MB) 09/23/15 08:51

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Mercury	ND		0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/23/15 08:53 • (LCSD) 09/23/15 08:56

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.270	0.276	90	92	80-120			2	20

L789724-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/23/15 08:59 • (MS) 09/23/15 09:01 • (MSD) 09/23/15 09:09

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.300	0.000744	0.271	0.274	90	91	1	75-125			1	20

Method Blank (MB)

(MB) 09/22/15 22:28

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Arsenic	ND		2.00
Barium	ND		0.500
Cadmium	ND		0.500
Chromium	ND		1.00
Lead	ND		0.500
Selenium	ND		2.00
Silver	ND		1.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/22/15 22:31 • (LCSD) 09/22/15 22:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Arsenic	100	99.7	94.9	100	95	80-120			5	20
Barium	100	102	97.0	102	97	80-120			5	20
Cadmium	100	100	95.8	100	96	80-120			5	20
Chromium	100	101	96.0	101	96	80-120			5	20
Lead	100	102	96.7	102	97	80-120			5	20
Selenium	100	102	96.9	102	97	80-120			5	20
Silver	100	98.8	94.2	99	94	80-120			5	20

L789436-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/22/15 22:42 • (MS) 09/22/15 22:51 • (MSD) 09/22/15 22:54

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Arsenic	100	13.3	113	106	100	93	1	75-125			7	20
Barium	100	67.7	159	145	92	77	1	75-125			9	20
Cadmium	100	0.719	104	107	104	106	1	75-125			2	20
Chromium	100	11.3	109	110	98	99	1	75-125			1	20
Lead	100	10.6	116	115	106	105	1	75-125			1	20
Selenium	100	ND	95.6	80.8	96	81	1	75-125			17	20
Silver	100	0.137	104	105	103	105	1	75-125			1	20

Method Blank (MB)

(MB) 09/21/15 22:53

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Acetone	ND		0.0500
Acrylonitrile	ND		0.0100
Benzene	ND		0.00100
Bromobenzene	ND		0.00100
Bromodichloromethane	ND		0.00100
Bromoform	ND		0.00100
Bromomethane	ND		0.00500
1,3-Butadiene	ND		0.00200
n-Butylbenzene	ND		0.00100
sec-Butylbenzene	ND		0.00100
tert-Butylbenzene	ND		0.00100
Carbon disulfide	ND		0.00100
Carbon tetrachloride	ND		0.00100
Chlorobenzene	ND		0.00100
Chlorodibromomethane	ND		0.00100
Chloroethane	ND		0.00500
Chloroform	ND		0.00500
Chloromethane	ND		0.00250
Cyclohexane	ND		0.00100
2-Chlorotoluene	ND		0.00100
4-Chlorotoluene	ND		0.00100
1,2-Dibromo-3-Chloropropane	ND		0.00500
1,2-Dibromoethane	ND		0.00100
Dibromomethane	ND		0.00100
1,2-Dichlorobenzene	ND		0.00100
1,3-Dichlorobenzene	ND		0.00100
1,4-Dichlorobenzene	ND		0.00100
Dichlorodifluoromethane	ND		0.00500
1,1-Dichloroethane	ND		0.00100
1,2-Dichloroethane	ND		0.00100
1,1-Dichloroethene	ND		0.00100
cis-1,2-Dichloroethene	ND		0.00100
trans-1,2-Dichloroethene	ND		0.00100
1,2-Dichloropropane	ND		0.00100
1,1-Dichloropropene	ND		0.00100
1,3-Dichloropropane	ND		0.00100

Method Blank (MB)

(MB) 09/21/15 22:53

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
cis-1,3-Dichloropropene	ND		0.00100
trans-1,3-Dichloropropene	ND		0.00100
2,2-Dichloropropane	ND		0.00100
Dicyclopentadiene	ND		0.00100
Di-isopropyl ether	ND		0.00100
Ethylbenzene	ND		0.00100
4-Ethyltoluene	ND		0.00100
Hexachloro-1,3-butadiene	ND		0.00100
n-Hexane	ND		0.0100
Isopropylbenzene	ND		0.00100
p-Isopropyltoluene	ND		0.00100
2-Butanone (MEK)	ND		0.0100
Methyl Cyclohexane	ND		0.00100
Methylene Chloride	ND		0.00500
4-Methyl-2-pentanone (MIBK)	ND		0.0100
Methyl tert-butyl ether	ND		0.00100
Naphthalene	ND		0.00500
Propene	ND		0.00250
n-Propylbenzene	ND		0.00100
Styrene	ND		0.00100
1,1,1,2-Tetrachloroethane	ND		0.00100
1,1,2,2-Tetrachloroethane	ND		0.00100
Tetrachloroethene	ND		0.00100
Toluene	ND		0.00500
1,1,2-Trichlorotrifluoroethane	ND		0.00100
1,2,3-Trichlorobenzene	ND		0.00100
1,2,4-Trichlorobenzene	ND		0.00100
1,1,1-Trichloroethane	ND		0.00100
1,1,2-Trichloroethane	ND		0.00100
Trichloroethene	ND		0.00100
Trichlorofluoromethane	ND		0.00500
1,2,3-Trichloropropane	ND		0.00250
1,2,3-Trimethylbenzene	ND		0.00100
1,2,4-Trimethylbenzene	ND		0.00100
1,3,5-Trimethylbenzene	ND		0.00100
Vinyl chloride	ND		0.00100

Method Blank (MB)

(MB) 09/21/15 22:53

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Xylenes, Total	ND		0.00300
(S) Toluene-d8	*105*		*88.7-115*
(S) Dibromofluoromethane	*97.0*		*76.3-123*
(S) 4-Bromofluorobenzene	*103*		*69.7-129*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/21/15 21:21 • (LCSD) 09/21/15 21:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.137	0.124	110	98.9	25.3-178			10.5	22.9
Acrylonitrile	0.125	0.118	0.121	94.5	96.6	57.8-143			2.23	20
Benzene	0.0250	0.0213	0.0211	85.0	84.5	72.6-120			0.640	20
Bromobenzene	0.0250	0.0247	0.0237	98.9	95.0	80.3-115			4.04	20
Bromodichloromethane	0.0250	0.0246	0.0248	98.3	99.1	75.3-119			0.800	20
Bromoform	0.0250	0.0267	0.0256	107	102	69.1-135			4.45	20
Bromomethane	0.0250	0.0208	0.0213	83.0	85.3	23.0-191			2.65	20
1,3-Butadiene	0.0250	0.0183	0.0195	73.1	78.0	35.1-134			6.47	20
n-Butylbenzene	0.0250	0.0234	0.0240	93.7	96.0	74.2-134			2.39	20
sec-Butylbenzene	0.0250	0.0260	0.0249	104	99.6	77.8-129			4.41	20
tert-Butylbenzene	0.0250	0.0257	0.0248	103	99.4	77.2-129			3.19	20
Carbon disulfide	0.0250	0.0184	0.0189	73.7	75.7	49.9-136			2.71	20
Carbon tetrachloride	0.0250	0.0227	0.0234	90.8	93.7	69.4-129			3.10	20
Chlorobenzene	0.0250	0.0245	0.0240	97.9	95.9	78.9-122			2.03	20
Chlorodibromomethane	0.0250	0.0257	0.0251	103	100	76.4-126			2.39	20
Chloroethane	0.0250	0.0225	0.0228	90.1	91.2	47.2-147			1.21	20
Chloroform	0.0250	0.0232	0.0235	92.9	94.0	73.3-122			1.18	20
Chloromethane	0.0250	0.0192	0.0193	76.9	77.1	53.1-135			0.300	20
2-Chlorotoluene	0.0250	0.0262	0.0243	105	97.2	74.6-127			7.51	20
4-Chlorotoluene	0.0250	0.0256	0.0244	102	97.6	79.5-123			4.80	20
1,2-Dibromo-3-Chloropropane	0.0250	0.0245	0.0255	97.8	102	64.9-131			4.00	20
1,2-Dibromoethane	0.0250	0.0245	0.0242	98.1	97.0	78.7-123			1.13	20
Dibromomethane	0.0250	0.0244	0.0245	97.6	98.2	78.5-117			0.600	20
1,2-Dichlorobenzene	0.0250	0.0232	0.0235	92.8	93.9	83.6-119			1.20	20
1,3-Dichlorobenzene	0.0250	0.0267	0.0246	107	98.4	75.9-129			8.21	20
1,4-Dichlorobenzene	0.0250	0.0227	0.0225	90.7	89.9	81.0-115			0.870	20

QUALITY CONTROL SUMMARY

L789736-01,02,03,04

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/21/15 21:21 • (LCSD) 09/21/15 21:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Dichlorodifluoromethane	0.0250	0.0217	0.0218	86.7	87.4	50.9-139			0.730	20
1,1-Dichloroethane	0.0250	0.0217	0.0224	86.8	89.8	71.7-125			3.35	20
1,2-Dichloroethane	0.0250	0.0233	0.0242	93.1	96.6	67.2-121			3.74	20
1,1-Dichloroethene	0.0250	0.0211	0.0217	84.4	86.7	60.6-133			2.67	20
cis-1,2-Dichloroethene	0.0250	0.0226	0.0226	90.3	90.4	76.1-121			0.120	20
trans-1,2-Dichloroethene	0.0250	0.0211	0.0223	84.5	89.3	70.7-124			5.55	20
1,2-Dichloropropane	0.0250	0.0230	0.0232	91.9	92.9	76.9-123			1.14	20
1,1-Dichloropropene	0.0250	0.0217	0.0224	86.6	89.7	71.2-126			3.53	20
1,3-Dichloropropane	0.0250	0.0235	0.0229	94.1	91.4	80.3-114			2.92	20
cis-1,3-Dichloropropene	0.0250	0.0238	0.0238	95.3	95.4	77.3-123			0.0400	20
trans-1,3-Dichloropropene	0.0250	0.0257	0.0257	103	103	73.0-127			0.260	20
2,2-Dichloropropane	0.0250	0.0216	0.0237	86.2	94.7	61.9-132			9.30	20
Dicyclopentadiene	0.0250	0.0236	0.0230	94.4	91.9	73.1-126			2.64	20
Di-isopropyl ether	0.0250	0.0213	0.0218	85.2	87.1	67.2-131			2.23	20
Ethylbenzene	0.0250	0.0249	0.0247	99.5	98.6	78.6-124			0.860	20
4-Ethyltoluene	0.0250	0.0246	0.0239	98.5	95.5	78.0-127			2.99	20
Hexachloro-1,3-butadiene	0.0250	0.0232	0.0234	92.7	93.4	69.2-136			0.760	20
n-Hexane	0.0250	0.0195	0.0203	77.9	81.1	59.9-125			4.04	20
Isopropylbenzene	0.0250	0.0246	0.0245	98.5	98.0	79.4-126			0.480	20
p-Isopropyltoluene	0.0250	0.0261	0.0254	104	102	75.4-132			2.69	20
2-Butanone (MEK)	0.125	0.121	0.119	97.0	95.5	44.5-154			1.49	21.3
Methylene Chloride	0.0250	0.0209	0.0213	83.4	85.3	68.2-119			2.21	20
4-Methyl-2-pentanone (MIBK)	0.125	0.120	0.125	96.2	100	61.1-138			4.21	20
Methyl tert-butyl ether	0.0250	0.0225	0.0232	90.0	92.9	70.2-122			3.17	20
Naphthalene	0.0250	0.0235	0.0247	94.1	98.8	69.9-132			4.87	20
Propene	0.0250	0.00615	0.00641	24.6	25.6	10.0-192			4.17	26.1
n-Propylbenzene	0.0250	0.0250	0.0247	99.9	98.9	80.2-124			1.07	20
Styrene	0.0250	0.0257	0.0238	103	95.3	79.4-124			7.62	20
1,1,1,2-Tetrachloroethane	0.0250	0.0248	0.0244	99.2	97.7	76.7-127			1.48	20
1,1,2,2-Tetrachloroethane	0.0250	0.0260	0.0252	104	101	78.8-124			2.87	20
Tetrachloroethene	0.0250	0.0248	0.0241	99.1	96.4	71.1-133			2.75	20
Toluene	0.0250	0.0227	0.0222	91.0	88.7	76.7-116			2.54	20
1,1,2-Trichlorotrifluoroethane	0.0250	0.0217	0.0225	86.8	89.8	62.6-138			3.40	20
1,2,3-Trichlorobenzene	0.0250	0.0242	0.0249	97.0	99.6	72.5-137			2.67	20
1,2,4-Trichlorobenzene	0.0250	0.0245	0.0246	98.0	98.5	74.0-137			0.550	20
1,1,1-Trichloroethane	0.0250	0.0226	0.0239	90.6	95.5	69.9-127			5.30	20

QUALITY CONTROL SUMMARY

L789736-01,02,03,04

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/21/15 21:21 • (LCSD) 09/21/15 21:40

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1,2-Trichloroethane	0.0250	0.0250	0.0248	99.9	99.3	81.9-119			0.580	20
Trichloroethene	0.0250	0.0243	0.0240	97.3	95.8	77.2-122			1.57	20
Trichlorofluoromethane	0.0250	0.0228	0.0236	91.2	94.5	51.5-151			3.55	20
1,2,3-Trichloropropane	0.0250	0.0278	0.0272	111	109	74.0-124			2.18	20
1,2,3-Trimethylbenzene	0.0250	0.0223	0.0227	89.2	90.8	79.4-118			1.77	20
1,2,4-Trimethylbenzene	0.0250	0.0253	0.0242	101	96.9	77.1-124			4.31	20
1,3,5-Trimethylbenzene	0.0250	0.0256	0.0252	102	101	79.0-125			1.73	20
Vinyl chloride	0.0250	0.0215	0.0220	85.9	88.0	58.4-134			2.35	20
Xylenes, Total	0.0750	0.0723	0.0706	96.5	94.1	78.1-123			2.45	20
(S) Toluene-d8				*102*	*101*	*88.7-115*				
(S) Dibromofluoromethane				*93.3*	*95.9*	*76.3-123*				
(S) 4-Bromofluorobenzene				*107*	*103*	*69.7-129*				

L789736-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/22/15 00:06 • (MS) 09/21/15 23:11 • (MSD) 09/21/15 23:29

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	ND	1.51	1.49	48.3	47.8	25	10.0-130			0.990	31.5
Acrylonitrile	0.125	ND	1.50	1.70	48.0	54.5	25	39.3-152			12.6	27.2
Benzene	0.0250	ND	0.445	0.455	71.1	72.8	25	47.8-131			2.28	22.8
Bromobenzene	0.0250	ND	0.590	0.598	94.4	95.7	25	40.0-130			1.36	27.4
Bromodichloromethane	0.0250	ND	0.542	0.541	86.8	86.6	25	50.6-128			0.230	22.8
Bromoform	0.0250	ND	0.553	0.573	88.5	91.7	25	43.3-139			3.56	25.9
Bromomethane	0.0250	ND	0.419	0.436	67.0	69.7	25	5.00-189			3.96	26.7
1,3-Butadiene	0.0250	ND	0.375	0.380	59.9	60.7	25	29.2-126			1.30	26.1
n-Butylbenzene	0.0250	ND	0.587	0.611	93.8	97.7	25	23.6-146			4.04	39.2
sec-Butylbenzene	0.0250	ND	0.633	0.662	101	106	25	31.0-142			4.49	34.7
tert-Butylbenzene	0.0250	ND	0.636	0.645	102	103	25	36.9-142			1.34	31.7
Carbon disulfide	0.0250	ND	0.268	0.274	42.8	43.8	25	21.2-135			2.40	23.8
Carbon tetrachloride	0.0250	ND	0.508	0.514	81.3	82.2	25	46.0-140			1.06	27.2
Chlorobenzene	0.0250	ND	0.564	0.580	90.2	92.8	25	44.1-134			2.75	25.7
Chlorodibromomethane	0.0250	ND	0.563	0.593	90.2	94.8	25	49.7-134			5.05	24
Chloroethane	0.0250	ND	0.405	0.393	64.7	62.8	25	5.00-164			3.01	28.4
Chloroform	0.0250	ND	0.517	0.521	82.7	83.4	25	51.2-133			0.870	22.8
Chloromethane	0.0250	ND	0.321	0.342	51.4	54.8	25	31.4-141			6.38	24.6

QUALITY CONTROL SUMMARY

L789736-01,02,03,04

L789736-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/22/15 00:06 • (MS) 09/21/15 23:11 • (MSD) 09/21/15 23:29

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
2-Chlorotoluene	0.0250	ND	0.612	0.607	97.9	97.2	25	36.1-137			0.780	28.9
4-Chlorotoluene	0.0250	ND	0.611	0.626	97.7	100	25	35.4-137			2.44	29.8
1,2-Dibromo-3-Chloropropane	0.0250	ND	0.503	0.499	80.4	79.8	25	40.4-138			0.800	30.8
1,2-Dibromoethane	0.0250	ND	0.530	0.547	84.8	87.6	25	50.2-133			3.21	23.6
Dibromomethane	0.0250	ND	0.497	0.496	79.5	79.3	25	52.4-128			0.270	23
1,2-Dichlorobenzene	0.0250	ND	0.558	0.577	89.3	92.4	25	34.6-139			3.34	29.9
1,3-Dichlorobenzene	0.0250	ND	0.623	0.634	99.6	101	25	28.4-142			1.86	31.2
1,4-Dichlorobenzene	0.0250	ND	0.538	0.543	86.1	86.8	25	35.0-133			0.900	31.1
Dichlorodifluoromethane	0.0250	ND	0.440	0.441	70.4	70.6	25	31.2-144			0.270	30.2
1,1-Dichloroethane	0.0250	ND	0.489	0.490	78.2	78.4	25	49.1-136			0.190	22.9
1,2-Dichloroethane	0.0250	ND	0.508	0.513	81.2	82.1	25	47.1-129			1.11	22.7
1,1-Dichloroethene	0.0250	ND	0.450	0.454	72.0	72.6	25	36.1-142			0.950	25.6
cis-1,2-Dichloroethene	0.0250	ND	0.498	0.472	79.6	75.6	25	50.6-133			5.16	23
trans-1,2-Dichloroethene	0.0250	ND	0.438	0.439	70.0	70.2	25	43.8-135			0.280	24.8
1,2-Dichloropropane	0.0250	ND	0.506	0.507	81.0	81.2	25	50.3-134			0.230	22.7
1,1-Dichloropropene	0.0250	ND	0.458	0.484	73.3	77.4	25	43.0-137			5.45	26.4
1,3-Dichloropropane	0.0250	ND	0.521	0.543	83.3	86.9	25	51.4-127			4.24	23.1
cis-1,3-Dichloropropene	0.0250	ND	0.542	0.554	86.7	88.7	25	48.4-134			2.30	23.6
trans-1,3-Dichloropropene	0.0250	ND	0.584	0.580	93.5	92.8	25	46.6-135			0.710	25.3
2,2-Dichloropropane	0.0250	ND	0.429	0.467	68.6	74.7	25	45.2-141			8.46	26.6
Dicyclopentadiene	0.0250	ND	0.570	0.584	91.2	93.4	25	41.3-141			2.36	28.9
Di-isopropyl ether	0.0250	ND	0.488	0.509	78.0	81.5	25	46.7-140			4.32	23.5
Ethylbenzene	0.0250	ND	0.564	0.586	90.3	93.7	25	44.8-135			3.68	26.9
4-Ethyltoluene	0.0250	ND	0.589	0.599	94.2	95.8	25	44.0-141			1.67	28.8
Hexachloro-1,3-butadiene	0.0250	ND	0.617	0.644	98.7	103	25	10.0-149			4.32	40
n-Hexane	0.0250	ND	0.349	0.357	55.8	57.1	25	26.0-123			2.25	40
Isopropylbenzene	0.0250	ND	0.600	0.627	96.0	100	25	41.9-139			4.42	29.3
p-Isopropyltoluene	0.0250	ND	0.644	0.661	103	106	25	27.3-146			2.55	35.1
2-Butanone (MEK)	0.125	ND	1.93	2.03	61.8	64.9	25	23.9-170			4.85	28.3
Methylene Chloride	0.0250	ND	0.426	0.447	68.1	71.5	25	46.7-125			4.84	22.2
4-Methyl-2-pentanone (MIBK)	0.125	ND	2.29	2.67	73.4	85.4	25	42.4-146			15.1	26.7
Methyl tert-butyl ether	0.0250	ND	0.469	0.461	75.1	73.8	25	50.4-131			1.74	24.8
Naphthalene	0.0250	ND	0.547	0.591	87.4	94.5	25	18.4-145			7.74	34
n-Propylbenzene	0.0250	ND	0.609	0.627	97.4	100	25	35.2-139			2.95	31.9
Propene	0.0250	ND	0.156	0.155	25.0	24.8	25	5.00-183			0.770	37
Styrene	0.0250	ND	0.585	0.609	93.6	97.5	25	39.7-137			4.01	28.2

QUALITY CONTROL SUMMARY

L789736-01,02,03,04

L789736-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/22/15 00:06 • (MS) 09/21/15 23:11 • (MSD) 09/21/15 23:29

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,1,1,2-Tetrachloroethane	0.0250	ND	0.608	0.601	97.4	96.2	25	48.8-136			1.22	25.5
1,1,2,2-Tetrachloroethane	0.0250	ND	0.569	0.580	91.1	92.9	25	45.7-140			1.90	26.4
Tetrachloroethene	0.0250	ND	0.532	0.541	85.2	86.6	25	37.7-140			1.68	29.2
Toluene	0.0250	ND	0.501	0.498	80.2	79.6	25	47.8-127			0.760	24.3
1,1,2-Trichlorotrifluoroethane	0.0250	ND	0.579	0.587	92.7	94.0	25	35.7-146			1.35	28.8
1,2,3-Trichlorobenzene	0.0250	ND	0.598	0.641	95.7	103	25	10.0-150			6.95	38.5
1,2,4-Trichlorobenzene	0.0250	ND	0.620	0.646	99.2	103	25	10.0-153			4.15	39.3
1,1,1-Trichloroethane	0.0250	ND	0.530	0.546	84.9	87.3	25	49.0-138			2.84	25.3
1,1,2-Trichloroethane	0.0250	ND	0.548	0.600	87.8	96.0	25	52.3-132			8.97	23.4
Trichloroethene	0.0250	ND	0.519	0.524	83.0	83.8	25	48.0-132			0.990	24.8
Trichlorofluoromethane	0.0250	ND	0.550	0.565	88.1	90.5	25	12.8-169			2.68	29.7
1,2,3-Trichloropropane	0.0250	ND	0.596	0.602	95.4	96.3	25	44.4-138			1.03	26.3
1,2,3-Trimethylbenzene	0.0250	ND	0.547	0.563	87.5	90.1	25	41.0-133			2.90	27.6
1,2,4-Trimethylbenzene	0.0250	ND	0.619	0.620	99.1	99.1	25	32.9-139			0.0800	30.6
1,3,5-Trimethylbenzene	0.0250	ND	0.617	0.631	98.7	101	25	37.1-138			2.31	30.6
Vinyl chloride	0.0250	ND	0.384	0.397	61.4	63.6	25	32.0-146			3.49	26.3
Xylenes, Total	0.0750	ND	1.67	1.73	89.3	92.2	25	42.7-135			3.22	26.6
(S) Toluene-d8					*105*	*104*		*88.7-115*				
(S) Dibromofluoromethane					*91.7*	*89.6*		*76.3-123*				
(S) 4-Bromofluorobenzene					*109*	*111*		*69.7-129*				

Method Blank (MB)

(MB) 09/23/15 06:07

Analyte	MB Result mg/kg	MB Qualifier	MB RDL mg/kg
Anthracene	ND		0.00600
Acenaphthene	ND		0.00600
Acenaphthylene	ND		0.00600
Benzo(a)anthracene	ND		0.00600
Benzo(a)pyrene	ND		0.00600
Benzo(b)fluoranthene	ND		0.00600
Benzo(g,h,i)perylene	ND		0.00600
Benzo(k)fluoranthene	ND		0.00600
Chrysene	ND		0.00600
Dibenz(a,h)anthracene	ND		0.00600
Fluoranthene	ND		0.00600
Fluorene	ND		0.00600
Indeno(1,2,3-cd)pyrene	ND		0.00600
Naphthalene	ND		0.0200
Phenanthrene	ND		0.00600
Pyrene	ND		0.00600
1-Methylnaphthalene	ND		0.0200
2-Methylnaphthalene	ND		0.0200
2-Chloronaphthalene	ND		0.0200
(S) p-Terphenyl-d14	*75.5*		*32.2-131*
(S) Nitrobenzene-d5	*82.5*		*22.1-146*
(S) 2-Fluorobiphenyl	*76.9*		*40.6-122*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/23/15 05:11 • (LCSD) 09/23/15 05:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	0.0646	0.0587	80.7	73.4	50.3-130			9.48	20
Acenaphthene	0.0800	0.0622	0.0567	77.7	70.9	52.4-120			9.21	20
Acenaphthylene	0.0800	0.0632	0.0578	79.0	72.2	49.6-120			9.04	20
Benzo(a)anthracene	0.0800	0.0678	0.0615	84.8	76.9	46.7-125			9.74	20
Benzo(a)pyrene	0.0800	0.0652	0.0594	81.5	74.2	42.3-119			9.37	20
Benzo(b)fluoranthene	0.0800	0.0671	0.0578	83.8	72.2	43.6-124			14.9	20
Benzo(g,h,i)perylene	0.0800	0.0730	0.0667	91.3	83.4	45.1-132			8.97	20
Benzo(k)fluoranthene	0.0800	0.0597	0.0581	74.6	72.6	46.1-131			2.73	20

Semi Volatile Organic Compounds (GC/MS) by Method 8270C-SIM L789736-01,02,03,04

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) 09/23/15 05:11 • (LCSD) 09/23/15 05:45

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chrysene	0.0800	0.0644	0.0576	80.5	72.0	49.5-131			11.1	20
Dibenz(a,h)anthracene	0.0800	0.0738	0.0671	92.2	83.9	44.8-133			9.40	20
Fluoranthene	0.0800	0.0736	0.0674	92.0	84.2	49.3-128			8.87	20
Fluorene	0.0800	0.0683	0.0624	85.4	78.0	50.6-121			9.09	20
Indeno(1,2,3-cd)pyrene	0.0800	0.0750	0.0683	93.8	85.4	46.1-135			9.36	20
Naphthalene	0.0800	0.0659	0.0607	82.4	75.9	49.6-115			8.21	20
Phenanthrene	0.0800	0.0597	0.0545	74.6	68.1	48.8-121			9.11	20
Pyrene	0.0800	0.0574	0.0526	71.8	65.7	44.7-130			8.79	20
1-Methylnaphthalene	0.0800	0.0756	0.0694	94.5	86.8	50.6-122			8.55	20
2-Methylnaphthalene	0.0800	0.0763	0.0697	95.4	87.2	50.4-120			8.97	20
2-Chloronaphthalene	0.0800	0.0617	0.0562	77.1	70.2	53.9-121			9.41	20
(S) p-Terphenyl-d14				*72.9*	*66.8*	*32.2-131*				
(S) Nitrobenzene-d5				*87.6*	*81.4*	*22.1-146*				
(S) 2-Fluorobiphenyl				*79.8*	*73.0*	*40.6-122*				

L789736-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/23/15 11:51 • (MS) 09/23/15 12:12 • (MSD) 09/23/15 12:34

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	ND	0.0565	0.0508	70.7	63.5	1	26.5-141			10.7	21.2
Acenaphthene	0.0800	ND	0.0537	0.0523	67.2	65.3	1	31.9-130			2.77	20
Acenaphthylene	0.0800	ND	0.0543	0.0516	67.8	64.4	1	33.7-129			5.11	20
Benzo(a)anthracene	0.0800	ND	0.0606	0.0571	75.7	71.4	1	18.3-136			5.88	24.6
Benzo(a)pyrene	0.0800	ND	0.0601	0.0548	75.1	68.5	1	16.9-135			9.17	25.2
Benzo(b)fluoranthene	0.0800	ND	0.0604	0.0514	75.6	64.3	1	10.0-134			16.1	30.9
Benzo(g,h,i)perylene	0.0800	ND	0.0626	0.0600	78.3	75.0	1	14.1-140			4.26	25.5
Benzo(k)fluoranthene	0.0800	ND	0.0532	0.0528	66.5	66.0	1	18.2-138			0.780	25.6
Chrysene	0.0800	ND	0.0574	0.0521	71.8	65.2	1	17.1-145			9.66	24.2
Dibenz(a,h)anthracene	0.0800	ND	0.0616	0.0603	77.0	75.3	1	18.5-138			2.17	24.3
Fluoranthene	0.0800	ND	0.0681	0.0635	85.1	79.4	1	15.4-144			6.95	27.1
Fluorene	0.0800	ND	0.0581	0.0555	72.6	69.3	1	23.5-136			4.66	20
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0640	0.0627	80.0	78.4	1	14.5-142			2.06	25.8
Naphthalene	0.0800	ND	0.0560	0.0531	70.0	66.4	1	29.2-128			5.18	20
Phenanthrene	0.0800	ND	0.0581	0.0489	72.6	61.1	1	20.1-134			17.1	23.6
Pyrene	0.0800	ND	0.0537	0.0502	67.1	62.7	1	11.0-148			6.70	26.1

L789736-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) 09/23/15 11:51 • (MS) 09/23/15 12:12 • (MSD) 09/23/15 12:34

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1-Methylnaphthalene	0.0800	ND	0.0667	0.0645	83.4	80.6	1	28.4-137			3.39	20
2-Methylnaphthalene	0.0800	ND	0.0636	0.0651	79.5	81.4	1	26.6-137			2.35	20
2-Chloronaphthalene	0.0800	ND	0.0531	0.0519	66.4	64.9	1	38.6-126			2.28	20
(S) p-Terphenyl-d14					*58.5*	*61.9*		*32.2-131*				
(S) Nitrobenzene-d5					*82.2*	*81.6*		*22.1-146*				
(S) 2-Fluorobiphenyl					*67.5*	*66.1*		*40.6-122*				

INTERNAL STANDARD SUMMARY

Instrument: VOCMS25 • File ID: 0921_34

09/21/2015 20:31

Sample ID	File ID	8260-PENTAFLUOROBENZENE Response	8260-1,4-DIFLUOROBENZENE Response	8260-2-BROMO-1-CHLOROPROPANE Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0921_34	304376	497513	84715	255154
Upper Limit		609000	995000	169000	510000
Lower Limit		152000	249000	42400	128000
LCS R3079343-1 WG816553 1x	0921_36	320848	522109	87294	258233
LCSD R3079343-2 WG816553 1x	0921_37	335379	556306	96581	268394
BLANK R3079343-3 WG816553 1x	0921_41	316796	522892	88941	243714
MS R3079343-4 WG816553 25x	0921_42	317968	520011	89195	259546
MSD R3079343-5 WG816553 25x	0921_43	329336	563013	92455	272401
L789736-01 WG816553 25x	0921_45	348019	580848	94075	269284
L789736-02 WG816553 25x	0921_50	415021	693673	111135	326718
L789736-03 WG816553 25x	0921_51	425421	711955	116590	326376
L789736-04 WG816553 25x	0921_52	425220	678121	109327	315588

INTERNAL STANDARD SUMMARY

Instrument: BNAMS18 • File ID: 0922A_03

09/23/2015 04:49

Sample ID	File ID	NAPHTHALENE-D8 Response	ACENAPHTHENE-D10 Response	PHENANTHRENE-D10 Response	CHRYSENE-D12 Response	PERYLENE-D12 Response
Standard	0922A_03	49654	37799	77767	93591	97997
Upper Limit		99300	75600	156000	187000	196000
Lower Limit		24800	18900	38900	46800	49000
LCS R3079807-1 WG816916 1x	0922A_04	51667	39235	81560	96541	100538
LCSD R3079807-2 WG816916 1x	0922A_05	53343	40575	83355	99710	102274
BLANK R3079807-3 WG816916 1x	0922A_06	50930	39371	80418	96166	100593
L789736-01 WG816916 1x	0922A_22	52464	41159	83773	94763	95678
MS R3079807-4 WG816916 1x	0922A_23	49608	37106	77342	89320	87715
MSD R3079807-5 WG816916 1x	0922A_24	52918	41114	80269	92724	92975
L789736-02 WG816916 1x	0922A_25	55028	39074	77677	93487	95188
L789736-03 WG816916 1x	0922A_26	55163	38552	82333	92880	96846
L789736-04 WG816916 5x	0922A_28	52142	42321	85971		

Instrument: BNAMS18 • File ID: 0923_03

09/23/2015 16:27

Sample ID	File ID	NAPHTHALENE-D8 Response	ACENAPHTHENE-D10 Response	PHENANTHRENE-D10 Response	CHRYSENE-D12 Response	PERYLENE-D12 Response
Standard	0923_03	45768	34956	72128	86256	90780
Upper Limit		91500	69900	144000	173000	182000
Lower Limit		22900	17500	36100	43100	45400
L789736-04 WG816916 20x	0923_27	46922	36464	77119	137753	129937

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for solls].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description
S6	Surrogate recovery was below laboratory and method acceptance limits. Reextraction and/or reanalysis confirms low recovery caused by matrix effect.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Connecticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [14]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

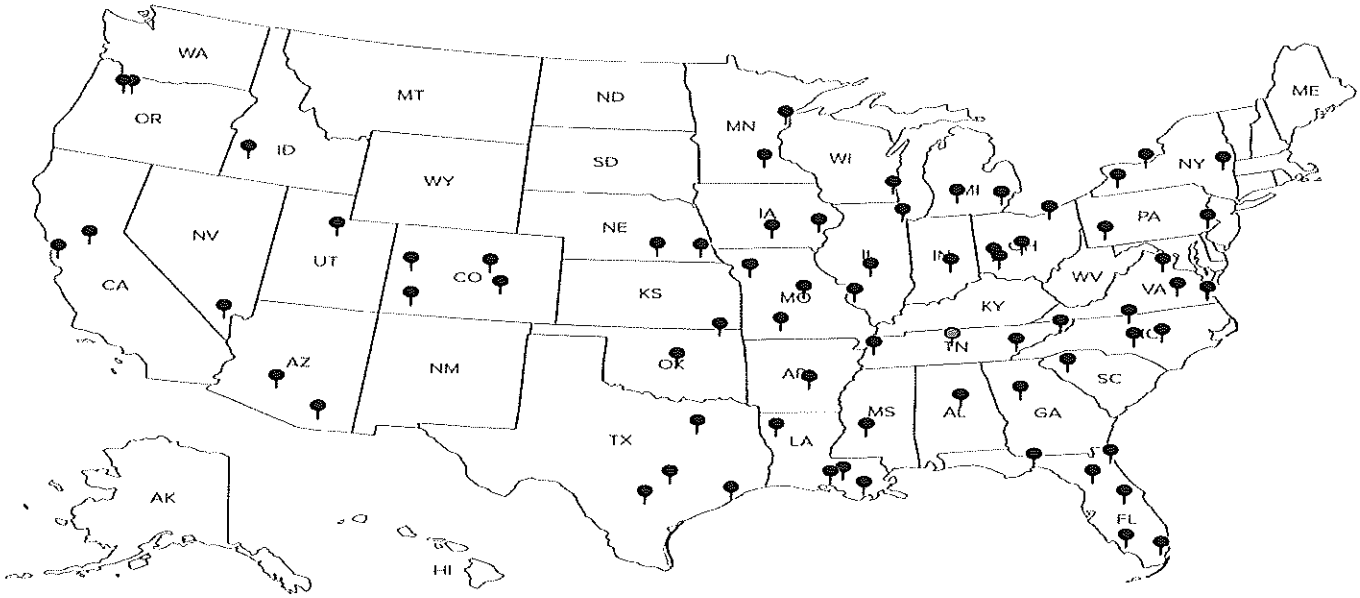
[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:
ERI
2202 W. MEDTRONIC WAY
TEMPE, AZ 85281

Billing Information:
SAME

Report to: ERIC SMITH

Email To: ESMITH@SPRAY-ERI.COM

Project Description: ASLD DESERT RIDGE

City/State Collected: AZ

Phone: 480-967-2802
Fax: 480-967-2735

Client Project #: 20-159399

Lab Project #:

Collected by (print):

Site/Facility ID #:

P.O. #:

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No ___Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LABS SCIENCES
YOUR LAB OF CHOICE
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L789736

B116

Acctnum: ENVRESTAZ
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	RCRA 8 METALS	8310 PAH	8260B VOC							Rem./Contaminant	Sample # (lab only)
CONFIRMATION #1	GRAB	SS		9/18/15	1222	1		X	X								-01
" #2	GRAB	SS		9/18/15	1225	1		X	X								02
" #3	GRAB	SS		9/18/15	1230	1		X	X								03
PROFILE SAMPLE	COMP	SS		9/18/15	1232	1	X	X	X								04

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

pH ___ Temp ___

Remarks: 6436 ****2575

Flow ___ Other ___

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ ___
[signature]	9/18/15	1315	[signature]	
Relinquished by: (Signature) [signature]	9-18-15	1830	Received by: (Signature) FedEx	Temp: 5.1 °C Bottles Received: 1-3607
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) [signature]	Date: 9/19/15 Time: 900

Hold #

Condition: (lab use only) SW7 (GD)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF: