



ALS Environmental
ALS Group USA, Corp
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www.alsglobal.com

August 21, 2020

Analytical Report for Service Request No: K2006550

Duane Morita
Naval Facilities Engineering Command Hawaii
Environmental Services Laboratory,
PRJ411
1423 Central Ave
Pearl Harbor, HI 96860

RE: Red Hill Shaft DW - Additional Testing

Dear Duane,

Enclosed are the results of the sample(s) submitted to our laboratory July 23, 2020
For your reference, these analyses have been assigned our service request number **K2006550**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3316. You may also contact me via email at Jeff.Christian@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Jeff Christian
Technical Services
Manager



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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Chain of Custody

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
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CHAIN OF CUSTODY

Handwritten: 12006550
 SR# 12006231

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 222 | +1 800 695 7222 | +1 360 636 1068 (fax)

PROJECT NAME Red Hill Additional Testing					NUMBER OF CONTAINERS	<input checked="" type="checkbox"/> Semivolatile Organics by GC/MS <input checked="" type="checkbox"/> Volatile Organics <input checked="" type="checkbox"/> Hydrocarbons (see below) <input checked="" type="checkbox"/> Oil & Grease/TRPH <input type="checkbox"/> PCBs <input type="checkbox"/> Pesticides/Herbicides <input type="checkbox"/> Chlorophenolics - 8151M <input checked="" type="checkbox"/> Metals Total <input type="checkbox"/> Cyanide <input type="checkbox"/> Hex-Chrom <input type="checkbox"/> (Trace) pH, Cond., Cl, SO ₄ , PO ₄ , F, NO ₃ , NO ₂ , BOD, TSS, TDS, Turb. <input type="checkbox"/> (Trace) NH ₃ -N, COD, TRN, TOC, DOC, NO ₂ -N, T-Phos <input type="checkbox"/> TOX 9020 <input type="checkbox"/> AOX 1650 <input type="checkbox"/> Alkalinity <input type="checkbox"/> CO ₂ <input type="checkbox"/> HCO ₃ <input type="checkbox"/> Dioxins / Furans <input type="checkbox"/> Dispersed Gases - CO ₂ <input type="checkbox"/> DOC, Non-Purgeable, TOC D (SM 5310 C)
PROJECT NUMBER						
PROJECT MANAGER Duane Morita						
COMPANY NAME NAVFAC Hawaii Env. Services Lab						
ADDRESS 1423 Central Ave						
CITY/STATE/ZIP JBPBH, HI 96860						
E-MAIL ADDRESS duane.morita@navy.mil						
PHONE # < (808) 471-0768						
SAMPLE'S SIGNATURE <i>[Signature]</i>						
SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX		
20-07331 (360-001)	7/22/2020	8:30 AM		DW	9	
20-07332 Trip Blank	7/7/2020				2	

REPORT REQUIREMENTS I. Routine Report: Method Blank, Surrogate, as required II. Report Dup., MS, MSD as required III. CLP Like Summary (no raw data) X IV. Data Validation Report V. EDD	INVOICE INFORMATION PO # _____ Bill To: _____	Circle which metals are to be analyzed: Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe <u>Pb</u> Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg	
	TURNAROUND REQUIREMENTS <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 day <input checked="" type="checkbox"/> Standard (15 working days) 14 Calendar Days Requested Report Date	* INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: _____ (CIRCLE ONE)	SPECIAL INSTRUCTIONS/COMMENTS: Fedex Tracking Number 7710 6822 8511 Sodium Sulfite and Hydrochloric Acid added to the 2x12 amber glass bottles for semivolatiles DW
	<input type="checkbox"/> Sample Shipment contains USDA regulated soil samples (check box if applicable)		

RELINQUISHED BY: <i>[Signature]</i> Signature K. Miyaki Printed Name NAVFAC HI Firm	7/22/20 1250 Date/Time	RELINQUISHED BY: <i>[Signature]</i> Signature Date/Time 7/23/20 0930 Firm	RELINQUISHED BY: Signature Date/Time Printed Name Firm	RELINQUISHED BY: Signature Date/Time Printed Name Firm
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Cooler Receipt and Preservation Form

W 2006550

PC JC

Client NAV fac Service Request K20 06 23 16 84
Received: 7/23/20 Opened: 7/23/20 By: BL Unloaded: 7/23/20 By: BL

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
2. Samples were received in: (circle) Cooler Box Envelope Other
3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 front
If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Table with columns: Temp Blank, Sample 1, Sample 2, Sample 3, Sample 4, IR GUN, Cooler / COC ID NA, Tracking Number NA, Filed. Contains handwritten data for samples 1 and 2.

- 4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? Indicate in the table below. NA Y N
If applicable, tissue samples were received: Frozen Partially Thawed Thawed
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below. NA Y N
11. Were VOA vials received without headspace? Indicate in the table below. NA Y N
12. Was C12/Res negative? NA Y N

Table with columns: Sample ID on Bottle, Sample ID on COC, Identified by:

Table with columns: Sample ID, Bottle Count, Bottle Type, Out of Temp, Head-space, Broke, pH, Reagent, Volume added, Reagent Lot Number, Initials, Time. Contains handwritten entry for Trip Blank.

Notes, Discrepancies, & Resolutions:



Subcontract Lab Results

ALS Environmental—Kelso Laboratory
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805 Orchard Dr Ste 4 - Bellingham, WA 98225 - 360.715.1212

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Bend, OR *Microbiology (e)*
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August 21, 2020

Page 1 of 1

Jeff Christian
ALS Environmental - Kelso
1317 South 13th Avenue
Kelso, WA 98626
RE: 20-25239 - K2006231

Dear Jeff Christian,

Your project: K2006231, was received on Tuesday July 28, 2020.

All samples were analyzed within the accepted holding times and were appropriately preserved and analyzed according to approved analytical protocols, unless noted in the data or QC reports. The quality control data was within laboratory acceptance limits, unless specified in the data or QC reports.

If you have questions phone us at 800 755-9295.

Respectfully

A handwritten signature in blue ink that reads "Lawrence J Henderson". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Lawrence J Henderson, PhD
Director of Laboratories, Vice President

Enclosures: Data Report
QC Reports
Chain of Custody



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SYNTHETIC ORGANIC COMPOUNDS (SOC) REPORT

Client Name: ALS Environmental - Kelso
 1317 South 13th Avenue
 Kelso, WA 98626

Reference Number: 20-25239
 Project: K2006231

Date Collected: 7/22/20 08:30
 System ID Number:
 Lab Number: 046-47913
 Sample Location: 20-07331 (360-001)
 Sample Purpose: Investigative or Other
 Sample Composition:
 Date Extracted: 525_200729
 Approved By: nml
 Authorized By:

Field ID: K2006231-001
 System Group Type:
 System Name:
 County:
 Source Number:
 Multiple Sources:
 Date Received: 7/28/2020 1:50:00P
 Date Analyzed: 08/20/20
 Date: Reported: 8/21/20
 Sample Type:
 Sample Collected By: K. Miyaki
 Sampler Phone:


 Lawrence J Henderson, PhD
 Director of Laboratories, Vice President

EPA Method 525.2 For State Drinking Water Compliance

DOH#	COMPOUNDS	RESULTS	UNITS	SRL	Trigger	MCL	Lab	Analyst	COMMENT
EPA Regulated									
33	ENDRIN	ND Q12	ug/L	0.01	0.01	2	a	MA	
34	LINDANE (BHC - GAMMA)	ND	ug/L	0.02	0.02	0.2	a	MA	
35	METHOXYCHLOR	ND	ug/L	0.1	0.1	40	a	MA	
117	ALACHLOR	ND	ug/L	0.2	0.2	2	a	MA	
119	ATRAZINE	ND	ug/L	0.1	0.1	3	a	MA	
120	BENZO(A)PYRENE	ND	ug/L	0.02	0.02	0.2	a	MA	
124	DI(ETHYLHEXYL)-ADIPATE	ND	ug/L	0.6	0.6	400	a	MA	
125	DI(ETHYLHEXYL)-PHTHALATE	ND	ug/L	0.6	0.6	6	a	MA	
126	HEPTACHLOR	ND	ug/L	0.04	0.04	0.4	a	MA	
127	HEPTACHLOR EPOXIDE	ND	ug/L	0.02	0.02	0.2	a	MA	
128	HEXACHLORO BENZENE	ND	ug/L	0.1	0.1	1	a	MA	
129	HEXACHLOROCYCLO-PENTADIENE	ND	ug/L	0.1	0.1	50	a	MA	
133	SIMAZINE	ND	ug/L	0.07	0.07	4	a	MA	
EPA Unregulated									
118	ALDRIN	ND	ug/L	0.1	0.1		a	MA	
121	BUTACHLOR	ND	ug/L	0.4	0.4		a	MA	
123	DIELDRIN	ND	ug/L	0.1	0.1		a	MA	
130	METOLACHLOR	ND	ug/L	1.0	1.0		a	MA	
131	METRIBUZIN	ND	ug/L	0.2	0.2		a	MA	
132	PROPACHLOR	ND	ug/L	0.1	0.1		a	MA	
254	FLUORENE	ND	ug/L	0.2	0.2		a	MA	
179	BROMACIL	ND	ug/L	0.2	0.2		a	MA	
State Unregulated - Other									
190	TERBACIL	ND	ug/L	0.1			a	MA	

NOTES:
 If a compound is detected > or = to the State Reporting Level, SRL, specified increased monitoring frequencies may occur per DOH.
 MCL (Maximum Contaminant Level) maximum permissible level of a contaminant in water established by EPA; a blank MCL value indicates a level is not currently established.

Trigger Level: DOH Drinking Water Response level. Systems with compounds detected in excess of this level are required to take additional samples. Contact your regional DOH office.
 ND (Not Detected): indicates that the parameter was not detected above the State Reporting Limit (SRL).
 An * in front of the parameter name indicates it is not NELAP accredited but it is accredited through WSDOH or USEPA Region 10.

These test results meet all the requirements of NELAC, unless otherwise stated in writing, and relate only to these samples.
 If you have any questions concerning this report contact Lawrence J Henderson, PhD, Director of Laboratories, Vice President, at the toll-free phone number above.

SYNTHETIC ORGANIC COMPOUNDS (SOC) REPORT

DOH#	COMPOUNDS	RESULTS	UNITS	SRL	Trigger	MCL	Lab	Analyst	COMMENT
208	EPTC	ND	ug/L	0.1			a	MA	
218	MOLINATE	ND	ug/L	0.1			a	MA	
232	4,4-DDD	ND	ug/L	0.1			a	MA	
233	4,4-DDE	ND	ug/L	0.1			a	MA	
234	4,4-DDT	ND	ug/L	0.1			a	MA	
261	DIMETHYL PHTHALATE	ND	ug/L	1.0			a	MA	
243	TRIFLURALIN	ND	ug/L	0.1			a	MA	
244	ACENAPHTHYLENE	ND	ug/L	0.2			a	MA	
246	ANTHRACENE	ND	ug/L	0.2			a	MA	
247	BENZO(A)ANTHRACENE	ND	ug/L	0.2			a	MA	
248	BENZO(B)FLUORANTHENE	ND	ug/L	0.2			a	MA	
250	BENZO(K)FLUORANTHENE	ND	ug/L	0.2			a	MA	
251	CHRYSENE	ND	ug/L	0.2			a	MA	
253	FLUORANTHENE	ND	ug/L	0.2			a	MA	
256	PHENANTHRENE	ND	ug/L	0.2			a	MA	
257	PYRENE	ND	ug/L	0.2			a	MA	
258	BENZYL BUTYL PHTHALATE	ND	ug/L	1.0			a	MA	
259	DI-N-BUTYL PHTHALATE	ND	ug/L	1.0			a	MA	
260	DIETHYL PHTHALATE	ND	ug/L	1.0			a	MA	

NOTES:
 If a compound is detected > or = to the State Reporting Level, SRL, specified increased monitoring frequencies may occur per DOH.
 MCL (Maximum Contaminant Level) maximum permissible level of a contaminant in water established by EPA; a blank MCL value indicates a level is not currently established.
 Trigger Level: DOH Drinking Water Response level. Systems with compounds detected in excess of this level are required to take additional samples. Contact your regional DOH office.
 ND (Not Detected); indicates that the parameter was not detected above the State Reporting Limit (SRL).
 An * in front of the parameter name indicates it is not NELAP accredited but it is accredited through WSDOH or USEPA Region 10.

These test results meet all the requirements of NELAC, unless otherwise stated in writing, and relate only to these samples.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Laboratory Fortified Blank

Reference Number: **20-25239**

Report Date: 08/21/20

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier	QC Type	Comment
525_200729	0 1,3-DIMETHYL-2-NITROBENZENE (Surr)	88		%	525.2		70-130		LFB	
	0 4,4-DDD	0.99	1	ug/L	525.2	99	70-130		LFB	
	0 4,4-DDT	1.16	1	ug/L	525.2	116	70-130		LFB	
	0 ACENAPHTHYLENE	0.66	1	ug/L	525.2	66	70-130	LR	LFB	
	0 ANTHRACENE	0.73	1	ug/L	525.2	73	70-130		LFB	
	0 BENZO(A)ANTHRACENE	0.78	1	ug/L	525.2	78	70-130		LFB	
	0 BENZO(B)FLUORANTHENE	0.72	1	ug/L	525.2	72	70-130		LFB	
	0 BENZO(K)FLUORANTHENE	0.77	1	ug/L	525.2	77	70-130		LFB	
	0 BENZYL BUTYL PHTHALATE	0.92	1	ug/L	525.2	92	70-130		LFB	
	0 CHRYSENE	0.74	1	ug/L	525.2	74	70-130		LFB	
	0 DIETHYL PHTHALATE	0.88	1	ug/L	525.2	88	70-130		LFB	
	0 DIMETHYL PHTHALATE	0.86	1	ug/L	525.2	86	70-130		LFB	
	0 DI-N-BUTYL PHTHALATE	0.92	1	ug/L	525.2	92	70-130		LFB	
	0 EPTC	0.85	1	ug/L	525.2	85	70-130		LFB	
	0 FLUORANTHENE	0.87	1	ug/L	525.2	87	70-130		LFB	
	0 MOLINATE	0.85	1	ug/L	525.2	85	70-130		LFB	
	0 PHENANTHRENE	0.87	1	ug/L	525.2	87	70-130		LFB	
	0 PYRENE	0.88	1	ug/L	525.2	88	70-130		LFB	
	0 TRIFLURALIN	0.95	1	ug/L	525.2	95	70-130		LFB	
	0 ALDRIN	0.81	1	ug/L	525.2	81	70-130		LFB	
	0 BROMACIL	1.11	1	ug/L	525.2	111	70-130		LFB	
	0 BUTACHLOR	1.10	1	ug/L	525.2	110	70-130		LFB	
	0 DIELDRIN	0.91	1	ug/L	525.2	91	70-130		LFB	
	0 FLUORENE	0.84	1	ug/L	525.2	84	70-130		LFB	
	0 METOLACHLOR	1.17	1	ug/L	525.2	117	70-130		LFB	
	0 METRIBUZIN	0.78	1	ug/L	525.2	78	70-130		LFB	
	0 PROPACHLOR	0.97	1	ug/L	525.2	97	70-130		LFB	
	0 ALACHLOR	1.88	2	ug/L	525.2	94	70-130		LFB	
	0 ATRAZINE	1.85	2	ug/L	525.2	93	70-130		LFB	
	0 BENZO(A)PYRENE	0.61	1	ug/L	525.2	61	70-130	LR	LFB	
	0 DI(ETHYLHEXYL)-ADIPATE	0.85	1	ug/L	525.2	85	70-130		LFB	
	0 DI(ETHYLHEXYL)-PHTHALATE	0.92	1	ug/L	525.2	92	70-130		LFB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



**SAMPLE INDEPENDENT
QUALITY CONTROL REPORT**

Laboratory Fortified Blank

Reference Number: **20-25239**

Report Date: 08/21/20

Batch	Analyte	Result	True Value	Units	Method	% Recovery	QC Limits*	QC Qualifier Type	QC Comment
525_200729	0 ENDRIN	1.04	1	ug/L	525.2	104	70-130	LFB	
	0 HEPTACHLOR	1.16	1	ug/L	525.2	116	70-130	LFB	
	0 HEPTACHLOR EPOXIDE	0.87	1	ug/L	525.2	87	70-130	LFB	
	0 HEXACHLOROBENZENE	0.86	1	ug/L	525.2	86	70-130	LFB	
	0 HEXACHLOROCYCLO-PENTADIENE	0.97	1	ug/L	525.2	97	70-130	LFB	
	0 LINDANE (BHC - GAMMA)	0.93	1	ug/L	525.2	93	70-130	LFB	
	0 METHOXYCHLOR	1.01	1	ug/L	525.2	101	70-130	LFB	
	0 SIMAZINE	0.95	1	ug/L	525.2	95	70-130	LFB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Low-Level Lab Fortified Blank

Reference Number: **20-25239**

Report Date: 08/21/20

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier Type	QC Comment
525_200729	0 1,3-DIMETHYL-2-NITROBENZENE (Surr)	90		%	525.2		50-150	LLFB	
	0 4,4-DDD	0.13	0.1	ug/L	525.2	130	50-150	LLFB	
	0 4,4-DDT	0.13	0.1	ug/L	525.2	130	50-150	LLFB	
	0 ACENAPHTHYLENE	0.07	0.1	ug/L	525.2	70	50-150	LLFB	
	0 ANTHRACENE	0.06	0.1	ug/L	525.2	60	50-150	LLFB	
	0 BENZO(A)ANTHRACENE	0.07	0.1	ug/L	525.2	70	50-150	LLFB	
	0 BENZO(B)FLUORANTHENE	0.11	0.1	ug/L	525.2	110	50-150	LLFB	
	0 BENZO(K)FLUORANTHENE	0.05	0.1	ug/L	525.2	50	50-150	LLFB	
	0 BENZYL BUTYL PHTHALATE	0.14	0.1	ug/L	525.2	140	50-150	LLFB	
	0 CHRYSENE	0.07	0.1	ug/L	525.2	70	50-150	LLFB	
	0 DIETHYL PHTHALATE	0.09	0.1	ug/L	525.2	90	50-150	LLFB	
	0 DIMETHYL PHTHALATE	0.10	0.1	ug/L	525.2	100	50-150	LLFB	
	0 DI-N-BUTYL PHTHALATE	0.10	0.1	ug/L	525.2	100	50-150	LLFB	
	0 EPTC	0.07	0.1	ug/L	525.2	70	50-150	LLFB	
	0 FLUORANTHENE	0.07	0.1	ug/L	525.2	70	50-150	LLFB	
	0 MOLINATE	0.08	0.1	ug/L	525.2	80	50-150	LLFB	
	0 PHENANTHRENE	0.09	0.1	ug/L	525.2	90	50-150	LLFB	
	0 PYRENE	0.09	0.1	ug/L	525.2	90	50-150	LLFB	
	0 TRIFLURALIN	0.06	0.1	ug/L	525.2	60	50-150	LLFB	
	0 ALDRIN	0.09	0.1	ug/L	525.2	90	50-150	LLFB	
	0 BROMACIL	0.07	0.1	ug/L	525.2	70	50-150	LLFB	
	0 BUTACHLOR	0.08	0.1	ug/L	525.2	80	50-150	LLFB	
	0 DIELDRIN	0.09	0.1	ug/L	525.2	90	50-150	LLFB	
	0 FLUORENE	0.08	0.1	ug/L	525.2	80	50-150	LLFB	
	0 METOLACHLOR	0.14	0.1	ug/L	525.2	140	50-150	LLFB	
	0 METRIBUZIN	0.06	0.1	ug/L	525.2	60	50-150	LLFB	
	0 PROPACHLOR	0.08	0.1	ug/L	525.2	80	50-150	LLFB	
	0 ALACHLOR	0.22	0.2	ug/L	525.2	110	50-150	LLFB	
	0 ATRAZINE	0.17	0.2	ug/L	525.2	85	50-150	LLFB	
	0 BENZO(A)PYRENE	0.09	0.1	ug/L	525.2	90	50-150	LLFB	
	0 DI(ETHYLHEXYL)-ADIPATE	0.14	0.1	ug/L	525.2	140	50-150	LLFB	
	0 DI(ETHYLHEXYL)-PHTHALATE	0.40	0.5	ug/L	525.2	80	50-150	LLFB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

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**SAMPLE INDEPENDENT
QUALITY CONTROL REPORT**

Low-Level Lab Fortified Blank

Reference Number: **20-25239**

Report Date: 08/21/20

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier Type	QC Comment
525_200729	0 ENDRIN	0.15	0.1	ug/L	525.2	150	50-150	LLFB	
	0 HEPTACHLOR	0.10	0.1	ug/L	525.2	100	50-150	LLFB	
	0 HEPTACHLOR EPOXIDE	0.12	0.1	ug/L	525.2	120	50-150	LLFB	
	0 HEXACHLOROBENZENE	0.08	0.1	ug/L	525.2	80	50-150	LLFB	
	0 HEXACHLOROCYCLO-PENTADIENE	0.07	0.1	ug/L	525.2	70	50-150	LLFB	
	0 LINDANE (BHC - GAMMA)	0.09	0.1	ug/L	525.2	90	50-150	LLFB	
	0 METHOXYCHLOR	0.07	0.1	ug/L	525.2	70	50-150	LLFB	
	0 SIMAZINE	0.09	0.1	ug/L	525.2	90	50-150	LLFB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Method Blank

Reference Number: **20-25239**

Report Date: 08/21/20

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier Type	QC Comment
525_200729	0 1,3-DIMETHYL-2-NITROBENZENE (Surr)	87		%	525.2		70-130	MB	
	0 4,4-DDD	ND		ug/L	525.2		0-0	MB	
	0 4,4-DDE	ND		ug/L	525.2		0-0	MB	
	0 4,4-DDT	ND		ug/L	525.2		0-0	MB	
	0 ACENAPHTHYLENE	ND		ug/L	525.2		0-0	MB	
	0 ANTHRACENE	ND		ug/L	525.2		0-0	MB	
	0 BENZO(A)ANTHRACENE	ND		ug/L	525.2		0-0	MB	
	0 BENZO(B)FLUORANTHENE	ND		ug/L	525.2		0-0	MB	
	0 BENZO(K)FLUORANTHENE	ND		ug/L	525.2		0-0	MB	
	0 BENZYL BUTYL PHTHALATE	ND		ug/L	525.2		0-0	MB	
	0 CHRYSENE	ND		ug/L	525.2		0-0	MB	
	0 DIETHYL PHTHALATE	ND		ug/L	525.2		0-0	MB	
	0 DIMETHYL PHTHALATE	ND		ug/L	525.2		0-0	MB	
	0 DI-N-BUTYL PHTHALATE	ND		ug/L	525.2		0-0	MB	
	0 EPTC	ND		ug/L	525.2		0-0	MB	
	0 FLUORANTHENE	ND		ug/L	525.2		0-0	MB	
	0 MOLINATE	ND		ug/L	525.2		0-0	MB	
	0 PHENANTHRENE	ND		ug/L	525.2		0-0	MB	
	0 PYRENE	ND		ug/L	525.2		0-0	MB	
	0 TERBACIL	ND		ug/L	525.2		0-0	MB	
	0 TRIFLURALIN	ND		ug/L	525.2		0-0	MB	
	0 ALDRIN	ND		ug/L	525.2		0-0	MB	
	0 BROMACIL	ND		ug/L	525.2		0-0	MB	
	0 BUTACHLOR	ND		ug/L	525.2		0-0	MB	
	0 DIELDRIN	ND		ug/L	525.2		0-0	MB	
	0 FLUORENE	ND		ug/L	525.2		0-0	MB	
	0 METOLACHLOR	ND		ug/L	525.2		0-0	MB	
	0 METRIBUZIN	ND		ug/L	525.2		0-0	MB	
	0 PROPACHLOR	ND		ug/L	525.2		0-0	MB	
	0 ALACHLOR	ND		ug/L	525.2		0-0	MB	
	0 ATRAZINE	ND		ug/L	525.2		0-0	MB	
	0 BENZO(A)PYRENE	ND		ug/L	525.2		0-0	MB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



SAMPLE INDEPENDENT QUALITY CONTROL REPORT

Method Blank

Reference Number: **20-25239**

Report Date: 08/21/20

Batch	Analyte	Result	True Value	Units	Method	% Recovery	Limits*	QC Qualifier	QC Type	Comment
525_200729	0 DI(ETHYLHEXYL)-ADIPATE	ND		ug/L	525.2		0-0		MB	
	0 DI(ETHYLHEXYL)-PHTHALATE	ND		ug/L	525.2		0-0		MB	
	0 ENDRIN	ND		ug/L	525.2		0-0		MB	
	0 HEPTACHLOR	ND		ug/L	525.2		0-0		MB	
	0 HEPTACHLOR EPOXIDE	ND		ug/L	525.2		0-0		MB	
	0 HEXACHLOROBENZENE	ND		ug/L	525.2		0-0		MB	
	0 HEXACHLOROCYCLO-PENTADIENE	ND		ug/L	525.2		0-0		MB	
	0 LINDANE (BHC - GAMMA)	ND		ug/L	525.2		0-0		MB	
	0 METHOXYCHLOR	ND		ug/L	525.2		0-0		MB	
	0 SIMAZINE	ND		ug/L	525.2		0-0		MB	

*Notation:

% Recovery = (Result of Analysis)/(True Value) * 100

NA = Indicates % Recovery could not be calculated.

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.



**SAMPLE DEPENDENT
QUALITY CONTROL REPORT**
Duplicate, Matrix Spike/Matrix Spike Duplicate and Confirmation Result Report

Batch/CAS	Sample	Analyte	Result	Duplicate			Units	Percent Recovery		Limits*	%RPD	Limits*	QC Qualifier	Type	Comments
				Spike Result	Spike Result	Spike Conc		MS	MSD						
Laboratory Fortified Matrix (MS)															
525_200729															
81-20-9	46497	1,3-DIMETHYL-2-NITROBENZENE (Surr93	89			%		NA	70-130	NA	0-20			LFM	
72-54-8	46497	4,4-DDD	ND	0.99	1	ug/L	99	NA	70-130	NA	0-20			LFM	
50-29-3	46497	4,4-DDT	ND	1.19	1	ug/L	119	NA	70-130	NA	0-20			LFM	
208-96-8	46497	ACENAPHTHYLENE	ND	0.72	1	ug/L	72	NA	70-130	NA	0-20			LFM	
15972-60-8	46497	ALACHLOR	ND	2.05	2	ug/L	103	NA	70-130	NA	0-20			LFM	
309-00-2	46497	ALDRIN	ND	0.85	1	ug/L	85	NA	70-130	NA	0-20			LFM	
120-12-7	46497	ANTHRACENE	ND	0.80	1	ug/L	80	NA	70-130	NA	0-20			LFM	
1912-24-9	46497	ATRAZINE	ND	1.97	2	ug/L	99	NA	70-130	NA	0-20			LFM	
56-55-3	46497	BENZO(A)ANTHRACENE	ND	0.79	1	ug/L	79	NA	70-130	NA	0-20			LFM	
50-32-8	46497	BENZO(A)PYRENE	ND	0.66	1	ug/L	66	NA	70-130	NA	0-20	LR		LFM	
205-99-2	46497	BENZO(B)FLUORANTHENE	ND	0.78	1	ug/L	78	NA	70-130	NA	0-20			LFM	
207-08-9	46497	BENZO(K)FLUORANTHENE	ND	0.81	1	ug/L	81	NA	70-130	NA	0-20			LFM	
85-68-7	46497	BENZYL BUTYL PHTHALATE	ND	0.96	1	ug/L	96	NA	70-130	NA	0-20			LFM	
314-40-9	46497	BROMACIL	ND	1.21	1	ug/L	121	NA	70-130	NA	0-20			LFM	
23184-66-9	46497	BUTACHLOR	ND	1.18	1	ug/L	118	NA	70-130	NA	0-20			LFM	
218-01-9	46497	CHRYSENE	ND	0.83	1	ug/L	83	NA	70-130	NA	0-20			LFM	
103-23-1	46497	DI(ETHYLHEXYL)-ADIPATE	ND	0.89	1	ug/L	89	NA	70-130	NA	0-20			LFM	
117-81-7	46497	DI(ETHYLHEXYL)-PHTHALATE	ND	0.92	1	ug/L	92	NA	70-130	NA	0-20			LFM	
60-57-1	46497	DIELDRIN	ND	0.98	1	ug/L	98	NA	70-130	NA	0-20			LFM	
84-66-2	46497	DIETHYL PHTHALATE	ND	0.93	1	ug/L	93	NA	70-130	NA	0-20			LFM	
131-11-3	46497	DIMETHYL PHTHALATE	ND	0.93	1	ug/L	93	NA	70-130	NA	0-20			LFM	
84-74-2	46497	DI-N-BUTYL PHTHALATE	ND	0.96	1	ug/L	96	NA	70-130	NA	0-20			LFM	
72-20-8	46497	ENDRIN	ND	1.13	1	ug/L	113	NA	70-130	NA	0-20			LFM	
759-94-4	46497	EPTC	ND	0.84	1	ug/L	84	NA	70-130	NA	0-20			LFM	

%RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of an analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

Only Duplicate sample with detections are listed in this report

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QC Dependent.rpt

Batch/CAS	Sample	Analyte	Result	Duplicate		Spike Conc	Units	Percent Recovery		Limits*	%RPD	Limits*	QC		Comments
				Spike Result	Spike Result			MS	MSD				Qualifier	Type	
206-44-0	46497	FLUORANTHENE	ND	0.91		1	ug/L	91	NA	70-130	NA	0-20			LFM
86-73-7	46497	FLUORENE	ND	0.88		1	ug/L	88	NA	70-130	NA	0-20			LFM
76-44-8	46497	HEPTACHLOR	ND	1.33		1	ug/L	133	NA	70-130	NA	0-20	HR		LFM
1024-57-3	46497	HEPTACHLOR EPOXIDE	ND	1.00		1	ug/L	100	NA	70-130	NA	0-20			LFM
118-74-1	46497	HEXACHLOROBENZENE	ND	0.92		1	ug/L	92	NA	70-130	NA	0-20			LFM
77-47-4	46497	HEXACHLOROCYCLO-PENTADIENE	ND	0.92		1	ug/L	92	NA	70-130	NA	0-20			LFM
58-89-9	46497	LINDANE (BHC - GAMMA)	ND	0.97		1	ug/L	97	NA	70-130	NA	0-20			LFM
72-43-5	46497	METHOXYCHLOR	ND	0.97		1	ug/L	97	NA	70-130	NA	0-20			LFM
51218-45-2	46497	METOLACHLOR	ND	1.19		1	ug/L	119	NA	70-130	NA	0-20			LFM
21087-64-9	46497	METRIBUZIN	ND	1.10		1	ug/L	110	NA	70-130	NA	0-20			LFM
2212-67-1	46497	MOLINATE	ND	0.90		1	ug/L	90	NA	70-130	NA	0-20			LFM
85-01-8	46497	PHENANTHRENE	ND	0.90		1	ug/L	90	NA	70-130	NA	0-20			LFM
1918-16-7	46497	PROPACHLOR	ND	1.01		1	ug/L	101	NA	70-130	NA	0-20			LFM
129-00-0	46497	PYRENE	ND	0.94		1	ug/L	94	NA	70-130	NA	0-20			LFM
122-34-9	46497	SIMAZINE	ND	1.07		1	ug/L	107	NA	70-130	NA	0-20			LFM
1582-09-8	46497	TRIFLURALIN	ND	0.94		1	ug/L	94	NA	70-130	NA	0-20			LFM

%RPD = Relative Percent Difference

NA = Indicates %RPD could not be calculated

Matrix Spike (MS)/Matrix Spike Duplicate (MSD) analyses are used to determine the accuracy (MS) and precision (MSD) of an analytical method in a given sample matrix. Therefore, the usefulness of this report is limited to samples of similar matrices analyzed in the same analytical batch.

Only Duplicate sample with detections are listed in this report

Limits are intended for water matrices only. These criteria are for guidance only when reported with soils/solids.

FORM: QC Dependent.rpt



QUALITY CONTROL REPORT
SURROGATE REPORT

Reference Number: 20-25239
Report Date: 08/21/20

Lab No	Analyte	Result	Qualifier	Units	Method	Limit
525_200729	1,3-DIMETHYL-2-NITROBENZENE (Surr)	89		%	525.2	Acceptance Range is 70% to 130%
47913	PYRENE-D10 (Surr)	115		%		Acceptance Range is 70% to 130%
	TRIPHENYLPHOSPHATE (Surr)	93		%		Acceptance Range is 70% to 130%

*Notation:

A surrogate is a pure compound added to a sample in the laboratory just before processing so that the overall efficiency of a meA surrogate is a pure compound added to a sample in the lab.
The Acceptance Limits (or Control Limits) approximate a 99% confidence interval around the mean recovery.

Qualifier Definitions

Reference Number: 20-25239

Report Date: 08/21/20

Qualifier	Definition
HR	High QCS recovery due to increased detector response No sample dectections, therefore, no further action taken for this analysis set.
LR	Low recovery can not be accounted for. However, there is adequate sensitivity to detect the compound at the MRL. No sample detections so no further action for this analysis batch.
Q12	Sample pH did not meet test method requirements on arrival, pH adjusted to acceptable level in lab.

Note: Some qualifier definitions found on this page may pertain to results or QC data which are not printed with this report.

ALS Contract: Jeff Christian

Project Number: K2006231
 Project Manager: Jeff Christian
 OAP: LAB OAP

20-25239
4-913

Lab Code	Sample ID	# of Cont.	Matrix	Sample		Lab ID
				Date	Time	
K2006231-001	20-07331 (360-001)		Drinking Water	7/22/20	0830	Edge Ana
						Misc Out 1 None (525)
						X

Test Comments
 Misc Out 1 - None
 K2006231-001 (1) EPA 525 sub-contracted to Edge Analytical.

Special Instructions/Comments Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com. <i>Note: Na2SO3 + HCl added when sampled.</i>		Turnaround Requirements RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 STANDARD Requested FAX Date: <u>8/5</u> Requested Report Date: <u>7/27/20</u>		Report Requirements I. Results Only II. Results + QC Summaries <input checked="" type="checkbox"/> III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data POL/MDI/J <u>Y</u> EDD <u>N</u>		Invoice Information PO# 51K2006231 Bill to	
H - Test is On Hold P - Test is Authorized for Prep Only							

Relinquished By: [Signature] Received By: [Signature] Airbill Number: 1350 7/28/20