MONITORING PROGRAM ANNUAL REPORT

JANUARY - DECEMBER 2014

ANCHORAGE WATER AND WASTEWATER UTILITY

JOHN M. ASPLUND WATER POLLUTION CONTROL FACILITY
AT POINT WORONZOF

APPENDICES

Prepared for:

Prepared by:

KINNETIC LABORATORIES INCORPORATED
704 West 2nd Ave., Anchorage, AK 99501
(907) 276-6178

February 2015

APPENDICES

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APPENDIX A

Toxic Pollutant and Pesticide Monitoring, June Sampling

A1 Oil & Grease, Cyanide, Metals, Priority Pollutants, Dioxin, Pesticides, Asbestos and Hydrocarbons

ALS Environmental

ALS Environmental
ALS Group USA, Corp.
1317 South 13th Avenue
Kelso, WA 98626
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www.alsglobal.com

July 2, 2014 Analytical Report for Service Request No: K1406023

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.01

Dear Gary:

Enclosed are the results of the samples submitted to our laboratory on June 14, 2014. For your reference, these analyses have been assigned our service request number K1406023.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/mj

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	4704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories, Incorporated	**Service Request No.:**	K1406023
Project:	516.02	**Date Received:**	06/14/14
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Sixteen water samples were received for analysis at ALS Environmental on 06/14/14. As instructed, the discreet samples were composited at the laboratory to create two composite samples: MOA14VOP001-008 Comp and MOA14VOP009 Comp. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Volatile Organic Compounds by EPA Method 624

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Trichloroethene (TCE) for sample Batch QC were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of this sample were observed.

Approved by_____

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. K1406023 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion Date: 30 days.	P.O. #: AK14-1003	KLI Proj. #:516.01

ANALYSIS TYPE: EPA 624. Report results to MDL.

MATRIX: Water	**Preservative:** HCl,6°C	**Type of Container:** 40-mL glass

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14VOP001	INF CMP #1	3	6/11/14 0907		
MOA14VOP002	INF CMP #2	3	1309		
MOA14VOP003	INF CMP #3	3	1503		
MOA14VOP004	INF CMP #4	3	1800		
MOA14VOP005	INF CMP #5	3	2100		
MOA14VOP006	INF CMP #6	3	0010		
MOA14VOP007	INF CMP #7	3	0300		
MOA14VOP008	INF CMP #8	3	6/11 0555		

SAMPLES LISTED ON THIS COC SHOULD BE COMPOSITED IN AN EIGHT-PART COMPOSITE IN A VAPOR-TYPE SYRINGE PRIOR TO ANALYSIS.

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6/12/14 0950 AM		[signature]	6/12 0950
[signature]	6/13 1300	Fed Ex	[signature] VAS	6/14/14 0945

SAMPLED BY (NAME/SIGNATURE): [signature]

C:\Projects\MOA\MOA14\COCs\SummerDry

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax K1406023

Required Completion Date: 30 days.	P.O. #: AK14-1003	KLI Proj. #:516.01

ANALYSIS TYPE: EPA 624. Please perform MS/SD on the composited sample. Report to MDL.

MATRIX: Water	**Preservative:** HCl, 6°C Effluent samples contain L- Ascorbic Acid	**Type of Container:** 40-mL glass

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14VOP009	EFF CMP #1	3	0900		
MOA14VOP010	EFF CMP #2	3	1200		small bubbles
MOA14VOP011	EFF CMP #3	3	1500		
MOA14VOP012	EFF CMP #4	3	1800	mjp	
MOA14VOP013	EFF CMP #5	3	2100		
MOA14VOP014	EFF CMP #6	3	~~04~~ 0015	mjp	
MOA14VOP015	EFF CMP #7	3	0300		
MOA14VOP016	EFF CMP #8	3	0600		

SAMPLES LISTED ON THIS COC SHOULD BE COMPOSITED IN AN EIGHT-PART COMPOSITE IN A VAPOR-TYPE SYRINGE PRIOR TO ANALYSIS.

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6/12/14 0950	hand	[signature]	6/12/14 0950
[signature]	6/13 1300	FedEx	[signature] MS	6/14/14 0945

SAMPLED BY (NAME/SIGNATURE): [signature]

PC HH

Cooler Receipt and Preservation Form

Client / Project: KINNETIC Service Request K14 6023

Received: 6/14/14 Opened: 6/14/14 By: [illegible] Unloaded: 6/14/14 By: [illegible]

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 4 FRONT
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.9	2.6	N/P	—	-0.3	308		770301283826 (MASTER)	
4.1	3.9	N/P	—	-0.2	341			
2.2	2.1	1.0	0.9	-0.1	316			
4.5	4.6	3.2	3.3	0.1	342			

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA ~~Y~~ N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
MOA 14VOP010	3 VOAS		X							
MOA14VOP014	1 VOA			X						

Notes, Discrepancies, & Resolutions: APPROXIMATELY AIRBUBBLES ARE VERY SMALL.

Page ____ *of* ____

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406023
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP001-008 Comp	**Units:**	ug/L
Lab Code:	K1406023-009	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	06/18/14	06/18/14	KWG1406097	
Chloromethane	ND	U	0.50	0.030	1	06/18/14	06/18/14	KWG1406097	
Vinyl Chloride	ND	U	0.50	0.031	1	06/18/14	06/18/14	KWG1406097	
Bromomethane	ND	U	0.50	0.072	1	06/18/14	06/18/14	KWG1406097	
Chloroethane	ND	U	0.50	0.14	1	06/18/14	06/18/14	KWG1406097	
Trichlorofluoromethane	ND	U	0.50	0.080	1	06/18/14	06/18/14	KWG1406097	
Acrolein†	ND	U	50	3.7	1	06/18/14	06/18/14	KWG1406097	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	06/18/14	06/18/14	KWG1406097	
1,1-Dichloroethene	ND	U	0.50	0.039	1	06/18/14	06/18/14	KWG1406097	
Acetone	**180**		20	3.1	1	06/18/14	06/18/14	KWG1406097	
Carbon Disulfide	**0.22**	J	0.50	0.032	1	06/18/14	06/18/14	KWG1406097	
Methylene Chloride	**1.2**	J	2.0	0.14	1	06/18/14	06/18/14	KWG1406097	
Acrylonitrile†	ND	U	10	0.14	1	06/18/14	06/18/14	KWG1406097	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	06/18/14	06/18/14	KWG1406097	
1,1-Dichloroethane	ND	U	0.50	0.025	1	06/18/14	06/18/14	KWG1406097	
Vinyl Acetate	ND	U	10	0.33	1	06/18/14	06/18/14	KWG1406097	
cis-1,2-Dichloroethene	**0.17**	J	0.50	0.036	1	06/18/14	06/18/14	KWG1406097	
2-Butanone (MEK)	**27**		20	3.0	1	06/18/14	06/18/14	KWG1406097	
Chloroform	**2.5**		0.50	0.062	1	06/18/14	06/18/14	KWG1406097	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	06/18/14	06/18/14	KWG1406097	
Carbon Tetrachloride	ND	U	0.50	0.12	1	06/18/14	06/18/14	KWG1406097	
Benzene	**0.22**	J	0.50	0.031	1	06/18/14	06/18/14	KWG1406097	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	06/18/14	06/18/14	KWG1406097	
Trichloroethene (TCE)	**0.090**	J	0.50	0.044	1	06/18/14	06/18/14	KWG1406097	
1,2-Dichloropropane	ND	U	0.50	0.044	1	06/18/14	06/18/14	KWG1406097	
Bromodichloromethane	**0.10**	J	0.50	0.086	1	06/18/14	06/18/14	KWG1406097	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	06/18/14	06/18/14	KWG1406097	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	06/18/14	06/18/14	KWG1406097	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	06/18/14	06/18/14	KWG1406097	
Toluene	**20**		0.50	0.032	1	06/18/14	06/18/14	KWG1406097	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	06/18/14	06/18/14	KWG1406097	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	06/18/14	06/18/14	KWG1406097	
Tetrachloroethene (PCE)	**0.41**	J	0.50	0.032	1	06/18/14	06/18/14	KWG1406097	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406023
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP001-008 Comp	**Units:**	ug/L
Lab Code:	K1406023-009	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	06/18/14	06/18/14	KWG1406097	
Dibromochloromethane	ND	U	0.50	0.081	1	06/18/14	06/18/14	KWG1406097	
Chlorobenzene	ND	U	0.50	0.031	1	06/18/14	06/18/14	KWG1406097	
Ethylbenzene	**4.7**		0.50	0.030	1	06/18/14	06/18/14	KWG1406097	
m,p-Xylenes	**21**		1.0	0.14	1	06/18/14	06/18/14	KWG1406097	
o-Xylene	**7.5**		0.50	0.024	1	06/18/14	06/18/14	KWG1406097	
Styrene	ND	U	0.50	0.023	1	06/18/14	06/18/14	KWG1406097	
Bromoform	ND	U	0.50	0.17	1	06/18/14	06/18/14	KWG1406097	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	06/18/14	06/18/14	KWG1406097	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	06/18/14	06/18/14	KWG1406097	
1,4-Dichlorobenzene	**0.69**		0.50	0.073	1	06/18/14	06/18/14	KWG1406097	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	06/18/14	06/18/14	KWG1406097	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	109	76-132	06/18/14	Acceptable
Toluene-d8	96	80-120	06/18/14	Acceptable
4-Bromofluorobenzene	100	68-120	06/18/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406023
Project:	516.01	**Date Collected:**	06/12/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP009-016 Comp	**Units:**	ug/L
Lab Code:	K1406023-018	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	06/18/14	06/18/14	KWG1406097	
Chloromethane	**0.80**		0.50	0.030	1	06/18/14	06/18/14	KWG1406097	
Vinyl Chloride	ND	U	0.50	0.031	1	06/18/14	06/18/14	KWG1406097	
Bromomethane	ND	U	0.50	0.072	1	06/18/14	06/18/14	KWG1406097	
Chloroethane	**0.41**	J	0.50	0.14	1	06/18/14	06/18/14	KWG1406097	
Trichlorofluoromethane	ND	U	0.50	0.080	1	06/18/14	06/18/14	KWG1406097	
Acrolein†	ND	U	50	3.7	1	06/18/14	06/18/14	KWG1406097	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	06/18/14	06/18/14	KWG1406097	
1,1-Dichloroethene	ND	U	0.50	0.039	1	06/18/14	06/18/14	KWG1406097	
Acetone	**230**		20	3.1	1	06/18/14	06/18/14	KWG1406097	
Carbon Disulfide	**0.41**	J	0.50	0.032	1	06/18/14	06/18/14	KWG1406097	
Methylene Chloride	**1.7**	J	2.0	0.14	1	06/18/14	06/18/14	KWG1406097	
Acrylonitrile†	ND	U	10	0.14	1	06/18/14	06/18/14	KWG1406097	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	06/18/14	06/18/14	KWG1406097	
1,1-Dichloroethane	ND	U	0.50	0.025	1	06/18/14	06/18/14	KWG1406097	
Vinyl Acetate	ND	U	10	0.33	1	06/18/14	06/18/14	KWG1406097	
cis-1,2-Dichloroethene	**0.14**	J	0.50	0.036	1	06/18/14	06/18/14	KWG1406097	
2-Butanone (MEK)	**51**		20	3.0	1	06/18/14	06/18/14	KWG1406097	
Chloroform	**4.2**		0.50	0.062	1	06/18/14	06/18/14	KWG1406097	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	06/18/14	06/18/14	KWG1406097	
Carbon Tetrachloride	ND	U	0.50	0.12	1	06/18/14	06/18/14	KWG1406097	
Benzene	**0.26**	J	0.50	0.031	1	06/18/14	06/18/14	KWG1406097	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	06/18/14	06/18/14	KWG1406097	
Trichloroethene (TCE)	**0.070**	J	0.50	0.044	1	06/18/14	06/18/14	KWG1406097	
1,2-Dichloropropane	ND	U	0.50	0.044	1	06/18/14	06/18/14	KWG1406097	
Bromodichloromethane	**0.20**	J	0.50	0.086	1	06/18/14	06/18/14	KWG1406097	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	06/18/14	06/18/14	KWG1406097	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	06/18/14	06/18/14	KWG1406097	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	06/18/14	06/18/14	KWG1406097	
Toluene	**7.5**		0.50	0.032	1	06/18/14	06/18/14	KWG1406097	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	06/18/14	06/18/14	KWG1406097	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	06/18/14	06/18/14	KWG1406097	
Tetrachloroethene (PCE)	**0.40**	J	0.50	0.032	1	06/18/14	06/18/14	KWG1406097	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406023
Project:	516.01	**Date Collected:**	06/12/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP009-016 Comp	**Units:**	ug/L
Lab Code:	K1406023-018	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	06/18/14	06/18/14	KWG1406097	
Dibromochloromethane	ND	U	0.50	0.081	1	06/18/14	06/18/14	KWG1406097	
Chlorobenzene	**0.040**	J	0.50	0.031	1	06/18/14	06/18/14	KWG1406097	
Ethylbenzene	**0.46**	J	0.50	0.030	1	06/18/14	06/18/14	KWG1406097	
m,p-Xylenes	**1.5**		1.0	0.14	1	06/18/14	06/18/14	KWG1406097	
o-Xylene	**0.73**		0.50	0.024	1	06/18/14	06/18/14	KWG1406097	
Styrene	**0.050**	J	0.50	0.023	1	06/18/14	06/18/14	KWG1406097	
Bromoform	ND	U	0.50	0.17	1	06/18/14	06/18/14	KWG1406097	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	06/18/14	06/18/14	KWG1406097	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	06/18/14	06/18/14	KWG1406097	
1,4-Dichlorobenzene	**0.63**		0.50	0.073	1	06/18/14	06/18/14	KWG1406097	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	06/18/14	06/18/14	KWG1406097	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	108	76-132	06/18/14	Acceptable
Toluene-d8	96	80-120	06/18/14	Acceptable
4-Bromofluorobenzene	94	68-120	06/18/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406023
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1406097-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	06/18/14	06/18/14	KWG1406097	
Chloromethane	**0.040**	J	0.50	0.030	1	06/18/14	06/18/14	KWG1406097	
Vinyl Chloride	ND	U	0.50	0.031	1	06/18/14	06/18/14	KWG1406097	
Bromomethane	ND	U	0.50	0.072	1	06/18/14	06/18/14	KWG1406097	
Chloroethane	ND	U	0.50	0.14	1	06/18/14	06/18/14	KWG1406097	
Trichlorofluoromethane	ND	U	0.50	0.080	1	06/18/14	06/18/14	KWG1406097	
Acrolein†	ND	U	50	3.7	1	06/18/14	06/18/14	KWG1406097	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	06/18/14	06/18/14	KWG1406097	
1,1-Dichloroethene	ND	U	0.50	0.039	1	06/18/14	06/18/14	KWG1406097	
Acetone	ND	U	20	3.1	1	06/18/14	06/18/14	KWG1406097	
Carbon Disulfide	**0.060**	J	0.50	0.032	1	06/18/14	06/18/14	KWG1406097	
Methylene Chloride	**0.31**	J	2.0	0.14	1	06/18/14	06/18/14	KWG1406097	
Acrylonitrile†	ND	U	10	0.14	1	06/18/14	06/18/14	KWG1406097	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	06/18/14	06/18/14	KWG1406097	
1,1-Dichloroethane	ND	U	0.50	0.025	1	06/18/14	06/18/14	KWG1406097	
Vinyl Acetate	ND	U	10	0.33	1	06/18/14	06/18/14	KWG1406097	
cis-1,2-Dichloroethene	ND	U	0.50	0.036	1	06/18/14	06/18/14	KWG1406097	
2-Butanone (MEK)	ND	U	20	3.0	1	06/18/14	06/18/14	KWG1406097	
Chloroform	ND	U	0.50	0.062	1	06/18/14	06/18/14	KWG1406097	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	06/18/14	06/18/14	KWG1406097	
Carbon Tetrachloride	ND	U	0.50	0.12	1	06/18/14	06/18/14	KWG1406097	
Benzene	ND	U	0.50	0.031	1	06/18/14	06/18/14	KWG1406097	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	06/18/14	06/18/14	KWG1406097	
Trichloroethene (TCE)	**0.090**	J	0.50	0.044	1	06/18/14	06/18/14	KWG1406097	
1,2-Dichloropropane	ND	U	0.50	0.044	1	06/18/14	06/18/14	KWG1406097	
Bromodichloromethane	ND	U	0.50	0.086	1	06/18/14	06/18/14	KWG1406097	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	06/18/14	06/18/14	KWG1406097	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	06/18/14	06/18/14	KWG1406097	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	06/18/14	06/18/14	KWG1406097	
Toluene	ND	U	0.50	0.032	1	06/18/14	06/18/14	KWG1406097	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	06/18/14	06/18/14	KWG1406097	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	06/18/14	06/18/14	KWG1406097	
Tetrachloroethene (PCE)	**0.060**	J	0.50	0.032	1	06/18/14	06/18/14	KWG1406097	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406023
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1406097-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	06/18/14	06/18/14	KWG1406097	
Dibromochloromethane	ND	U	0.50	0.081	1	06/18/14	06/18/14	KWG1406097	
Chlorobenzene	ND	U	0.50	0.031	1	06/18/14	06/18/14	KWG1406097	
Ethylbenzene	ND	U	0.50	0.030	1	06/18/14	06/18/14	KWG1406097	
m,p-Xylenes	ND	U	1.0	0.14	1	06/18/14	06/18/14	KWG1406097	
o-Xylene	ND	U	0.50	0.024	1	06/18/14	06/18/14	KWG1406097	
Styrene	ND	U	0.50	0.023	1	06/18/14	06/18/14	KWG1406097	
Bromoform	ND	U	0.50	0.17	1	06/18/14	06/18/14	KWG1406097	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	06/18/14	06/18/14	KWG1406097	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	06/18/14	06/18/14	KWG1406097	
1,4-Dichlorobenzene	ND	U	0.50	0.073	1	06/18/14	06/18/14	KWG1406097	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	06/18/14	06/18/14	KWG1406097	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	110	76-132	06/18/14	Acceptable
Toluene-d8	97	80-120	06/18/14	Acceptable
4-Bromofluorobenzene	91	68-120	06/18/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406023
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: METHOD **Units:** Percent
Analysis Method: 624 **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
Batch QC	K1405997-001	111	99	88
MOA14VOP001-008 Comp	K1406023-009	109	96	100
MOA14VOP009-016 Comp	K1406023-018	108	96	94
Method Blank	KWG1406097-4	110	97	91
Batch QCMS	KWG1406097-1	108	105	97
Batch QCDMS	KWG1406097-2	106	104	99
Lab Control Sample	KWG1406097-3	106	106	99

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	76-132
Sur2	=	Toluene-d8	80-120
Sur3	=	4-Bromofluorobenzene	68-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406023
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Water	**Date Analyzed:**	06/18/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1405997-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624	**Extraction Lot:**	KWG1406097

		Batch QCMS KWG1406097-1 Matrix Spike			Batch QCDMS KWG1406097-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene	36	41.4	10.0	56	39.2	10.0	33	10-234	6	30
Benzene	0.080	9.72	10.0	96	9.67	10.0	96	37-151	1	30
Trichloroethene (TCE)	340	336E	10.0	-67 #	323E	10.0	-195 #	71-157	4	30
Toluene	0.050	9.39	10.0	93	9.36	10.0	93	47-150	0	30
Chlorobenzene	0.050	8.15	10.0	81	8.36	10.0	83	37-160	3	30
1,2-Dichlorobenzene	ND	8.45	10.0	85	9.03	10.0	90	18-190	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406023
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Water	**Date Analyzed:**	06/18/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1406097

	Lab Control Sample KWG1406097-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	11.9	10.0	119	32-158
Chloromethane	11.5	10.0	115	10-273
Vinyl Chloride	11.4	10.0	114	10-251
Bromomethane	6.68	10.0	67	10-242
Chloroethane	12.8	10.0	128	14-230
Trichlorofluoromethane	9.72	10.0	97	17-181
Acrolein	84.7	100	85	27-200
Trichlorotrifluoroethane	8.81	10.0	88	65-153
1,1-Dichloroethene	11.4	10.0	114	10-234
Acetone	50.8	50.0	102	46-162
Carbon Disulfide	20.7	20.0	103	66-138
Methylene Chloride	10.7	10.0	107	10-221
Acrylonitrile	9.00	10.0	90	61-141
trans-1,2-Dichloroethene	11.0	10.0	110	54-156
1,1-Dichloroethane	11.0	10.0	110	59-155
Vinyl Acetate	16.5	20.0	82	62-141
cis-1,2-Dichloroethene	9.82	10.0	98	80-124
2-Butanone (MEK)	40.0	50.0	80	53-148
Chloroform	10.9	10.0	109	51-138
1,1,1-Trichloroethane (TCA)	10.1	10.0	101	52-162
Carbon Tetrachloride	9.61	10.0	96	70-140
Benzene	10.6	10.0	106	37-151
1,2-Dichloroethane (EDC)	11.4	10.0	114	49-155
Trichloroethene (TCE)	10.5	10.0	105	71-157
1,2-Dichloropropane	10.3	10.0	103	10-210
Bromodichloromethane	10.9	10.0	109	35-155
2-Chloroethyl Vinyl Ether	7.08	10.0	71	10-305
cis-1,3-Dichloropropene	8.94	10.0	89	10-227
4-Methyl-2-pentanone (MIBK)	42.9	50.0	86	46-129
Toluene	10.2	10.0	102	47-150
trans-1,3-Dichloropropene	7.04	10.0	70	17-183
1,1,2-Trichloroethane	8.82	10.0	88	52-150
Tetrachloroethene (PCE)	7.88	10.0	79	64-148
2-Hexanone	41.7	50.0	83	37-136
Dibromochloromethane	8.47	10.0	85	53-149

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406023
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Water	**Date Analyzed:**	06/18/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1406097

	Lab Control Sample KWG1406097-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Chlorobenzene	9.01	10.0	90	37-160
Ethylbenzene	8.99	10.0	90	37-162
m,p-Xylenes	18.9	20.0	95	80-126
o-Xylene	8.75	10.0	88	78-120
Styrene	9.42	10.0	94	80-120
Bromoform	9.16	10.0	92	45-169
1,1,2,2-Tetrachloroethane	9.73	10.0	97	46-157
1,3-Dichlorobenzene	9.31	10.0	93	59-156
1,4-Dichlorobenzene	9.13	10.0	91	18-190
1,2-Dichlorobenzene	9.13	10.0	91	18-190

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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July 2, 2014 Analytical Report for Service Request No: K1406021

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.01

Dear Gary:

Enclosed are the results of the samples submitted to our laboratory on June 14, 2014. For your reference, these analyses have been assigned our service request number K1406021.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/mj

RIGHT SOLUTIONS | RIGHT PARTNER

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	4704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories, Incorporated	**Service Request No.:**	K1406021
Project:	516.02	**Date Received:**	06/14/14
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Two water samples were received for analysis at ALS Environmental on 06/14/14. The samples were received in good condition and consistent with the accompanying chain of custody form, except where noted on the cooler receipt and preservation form included in this report. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Volatile Organic Compounds by EPA Method 624

Calibration Verification Exceptions:
The ALS minimum relative response factor criterion for 2-Butanone (MEK) was not met in Continuing Calibration Verification (CCV) J:\MS23\0617F003.D. In accordance with ALS standard operating procedures, a Method Reporting Limit (MRL) check standard containing the analyte of concern was analyzed each day of analysis. The MRL check standard verified instrument sensitivity was adequate to detect the analyte at the MRL on the day of analysis. Because the sensitivity was shown to be adequate to detect the compound in question the data quality was not significantly affected. No further corrective action was appropriate.

No other anomalies associated with the analysis of this sample were observed.

Approved by_____

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax K1406021

Required Completion Date: 30 days.	P.O. #: AK14-1003	KLI Proj. #:516.01

ANALYSIS TYPE: EPA 624. Detection limits as per method. Report results to MDL.

MATRIX: Water	**Preservative:** HCl, 6°C Effluent samples contain L- Ascorbic Acid	**Type of Container:** 40-mL glass

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14VOP017	C-Station	3	~~6/11/14 1300~~ ~~6/10/14~~		To be filled at AWWU Lab.
MOA14VOP018	Trip Blank	4	Unknown		filled @ ALS

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6/12/14 0950	hand	[signature]	6/12/14 0950
[signature]	6/13 1300	Fed Ex	[signature] ALS	6/14/14 0945

SAMPLED BY (NAME/SIGNATURE): [signature]

C:\Projects\MOA\MOA14\COCs\SummerDry

PC HM

Cooler Receipt and Preservation Form

Client / Project: KINNETIC Service Request K14 6021

Received: 6/14/14 Opened: 6/14/14 By: A Unloaded: 6/14/14 By: AM

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 4 FRONT
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.9	2.6	N/P	—	-0.3	308		770301283826 (MASTER)	
4.1	3.9	N/P	—	-0.2	341			
2.2	2.1	1.0	0.9	-0.1	316			
4.5	4.6	3.2	3.3	0.1	342			

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions:

MOA14V0P017 SAMPLED 6/11/14 1300 PER VIALS.

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406021
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP017	**Units:**	ug/L
Lab Code:	K1406021-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	06/17/14	06/17/14	KWG1405901	
Chloromethane	**0.040**	J	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
Vinyl Chloride	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Bromomethane	ND	U	0.50	0.072	1	06/17/14	06/17/14	KWG1405901	
Chloroethane	ND	U	0.50	0.14	1	06/17/14	06/17/14	KWG1405901	
Trichlorofluoromethane	ND	U	0.50	0.080	1	06/17/14	06/17/14	KWG1405901	
Acrolein†	ND	U	50	3.7	1	06/17/14	06/17/14	KWG1405901	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	06/17/14	06/17/14	KWG1405901	
1,1-Dichloroethene	ND	U	0.50	0.039	1	06/17/14	06/17/14	KWG1405901	
Acetone	ND	U	20	3.1	1	06/17/14	06/17/14	KWG1405901	
Carbon Disulfide	**4.2**		0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Methylene Chloride	ND	U	2.0	0.14	1	06/17/14	06/17/14	KWG1405901	
Acrylonitrile†	**0.35**	J	10	0.14	1	06/17/14	06/17/14	KWG1405901	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
1,1-Dichloroethane	ND	U	0.50	0.025	1	06/17/14	06/17/14	KWG1405901	
Vinyl Acetate	ND	U	10	0.33	1	06/17/14	06/17/14	KWG1405901	
cis-1,2-Dichloroethene	ND	U	0.50	0.036	1	06/17/14	06/17/14	KWG1405901	
2-Butanone (MEK)	ND	U	20	3.0	1	06/17/14	06/17/14	KWG1405901	
Chloroform	ND	U	0.50	0.062	1	06/17/14	06/17/14	KWG1405901	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	06/17/14	06/17/14	KWG1405901	
Carbon Tetrachloride	ND	U	0.50	0.12	1	06/17/14	06/17/14	KWG1405901	
Benzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	06/17/14	06/17/14	KWG1405901	
Trichloroethene (TCE)	ND	U	0.50	0.044	1	06/17/14	06/17/14	KWG1405901	
1,2-Dichloropropane	ND	U	0.50	0.044	1	06/17/14	06/17/14	KWG1405901	
Bromodichloromethane	ND	U	0.50	0.086	1	06/17/14	06/17/14	KWG1405901	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	06/17/14	06/17/14	KWG1405901	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	06/17/14	06/17/14	KWG1405901	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	06/17/14	06/17/14	KWG1405901	
Toluene	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	06/17/14	06/17/14	KWG1405901	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	06/17/14	06/17/14	KWG1405901	
Tetrachloroethene (PCE)	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406021
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP017	**Units:**	ug/L
Lab Code:	K1406021-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	06/17/14	06/17/14	KWG1405901	
Dibromochloromethane	ND	U	0.50	0.081	1	06/17/14	06/17/14	KWG1405901	
Chlorobenzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	ND	U	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	ND	U	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	
Styrene	ND	U	0.50	0.023	1	06/17/14	06/17/14	KWG1405901	
Bromoform	ND	U	0.50	0.17	1	06/17/14	06/17/14	KWG1405901	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	06/17/14	06/17/14	KWG1405901	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	06/17/14	06/17/14	KWG1405901	
1,4-Dichlorobenzene	ND	U	0.50	0.073	1	06/17/14	06/17/14	KWG1405901	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	116	76-132	06/17/14	Acceptable
Toluene-d8	98	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	88	68-120	06/17/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406021
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP018	**Units:**	ug/L
Lab Code:	K1406021-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	06/17/14	06/17/14	KWG1405901	
Chloromethane	**0.050**	J	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
Vinyl Chloride	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Bromomethane	ND	U	0.50	0.072	1	06/17/14	06/17/14	KWG1405901	
Chloroethane	ND	U	0.50	0.14	1	06/17/14	06/17/14	KWG1405901	
Trichlorofluoromethane	ND	U	0.50	0.080	1	06/17/14	06/17/14	KWG1405901	
Acrolein†	ND	U	50	3.7	1	06/17/14	06/17/14	KWG1405901	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	06/17/14	06/17/14	KWG1405901	
1,1-Dichloroethene	ND	U	0.50	0.039	1	06/17/14	06/17/14	KWG1405901	
Acetone	ND	U	20	3.1	1	06/17/14	06/17/14	KWG1405901	
Carbon Disulfide	**0.050**	J	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Methylene Chloride	**0.19**	J	2.0	0.14	1	06/17/14	06/17/14	KWG1405901	
Acrylonitrile†	ND	U	10	0.14	1	06/17/14	06/17/14	KWG1405901	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
1,1-Dichloroethane	ND	U	0.50	0.025	1	06/17/14	06/17/14	KWG1405901	
Vinyl Acetate	ND	U	10	0.33	1	06/17/14	06/17/14	KWG1405901	
cis-1,2-Dichloroethene	ND	U	0.50	0.036	1	06/17/14	06/17/14	KWG1405901	
2-Butanone (MEK)	ND	U	20	3.0	1	06/17/14	06/17/14	KWG1405901	
Chloroform	ND	U	0.50	0.062	1	06/17/14	06/17/14	KWG1405901	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	06/17/14	06/17/14	KWG1405901	
Carbon Tetrachloride	ND	U	0.50	0.12	1	06/17/14	06/17/14	KWG1405901	
Benzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	06/17/14	06/17/14	KWG1405901	
Trichloroethene (TCE)	ND	U	0.50	0.044	1	06/17/14	06/17/14	KWG1405901	
1,2-Dichloropropane	ND	U	0.50	0.044	1	06/17/14	06/17/14	KWG1405901	
Bromodichloromethane	ND	U	0.50	0.086	1	06/17/14	06/17/14	KWG1405901	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	06/17/14	06/17/14	KWG1405901	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	06/17/14	06/17/14	KWG1405901	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	06/17/14	06/17/14	KWG1405901	
Toluene	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	06/17/14	06/17/14	KWG1405901	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	06/17/14	06/17/14	KWG1405901	
Tetrachloroethene (PCE)	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406021
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP018	**Units:**	ug/L
Lab Code:	K1406021-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	06/17/14	06/17/14	KWG1405901	
Dibromochloromethane	ND	U	0.50	0.081	1	06/17/14	06/17/14	KWG1405901	
Chlorobenzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	ND	U	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	ND	U	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	
Styrene	ND	U	0.50	0.023	1	06/17/14	06/17/14	KWG1405901	
Bromoform	ND	U	0.50	0.17	1	06/17/14	06/17/14	KWG1405901	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	06/17/14	06/17/14	KWG1405901	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	06/17/14	06/17/14	KWG1405901	
1,4-Dichlorobenzene	ND	U	0.50	0.073	1	06/17/14	06/17/14	KWG1405901	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	112	76-132	06/17/14	Acceptable
Toluene-d8	97	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	90	68-120	06/17/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406021
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1405901-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	06/17/14	06/17/14	KWG1405901	
Chloromethane	**0.050**	J	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
Vinyl Chloride	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Bromomethane	ND	U	0.50	0.072	1	06/17/14	06/17/14	KWG1405901	
Chloroethane	ND	U	0.50	0.14	1	06/17/14	06/17/14	KWG1405901	
Trichlorofluoromethane	ND	U	0.50	0.080	1	06/17/14	06/17/14	KWG1405901	
Acrolein†	ND	U	50	3.7	1	06/17/14	06/17/14	KWG1405901	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	06/17/14	06/17/14	KWG1405901	
1,1-Dichloroethene	ND	U	0.50	0.039	1	06/17/14	06/17/14	KWG1405901	
Acetone	ND	U	20	3.1	1	06/17/14	06/17/14	KWG1405901	
Carbon Disulfide	**0.060**	J	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Methylene Chloride	**0.24**	J	2.0	0.14	1	06/17/14	06/17/14	KWG1405901	
Acrylonitrile†	ND	U	10	0.14	1	06/17/14	06/17/14	KWG1405901	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
1,1-Dichloroethane	ND	U	0.50	0.025	1	06/17/14	06/17/14	KWG1405901	
Vinyl Acetate	ND	U	10	0.33	1	06/17/14	06/17/14	KWG1405901	
cis-1,2-Dichloroethene	ND	U	0.50	0.036	1	06/17/14	06/17/14	KWG1405901	
2-Butanone (MEK)	ND	U	20	3.0	1	06/17/14	06/17/14	KWG1405901	
Chloroform	ND	U	0.50	0.062	1	06/17/14	06/17/14	KWG1405901	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	06/17/14	06/17/14	KWG1405901	
Carbon Tetrachloride	ND	U	0.50	0.12	1	06/17/14	06/17/14	KWG1405901	
Benzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	06/17/14	06/17/14	KWG1405901	
Trichloroethene (TCE)	ND	U	0.50	0.044	1	06/17/14	06/17/14	KWG1405901	
1,2-Dichloropropane	ND	U	0.50	0.044	1	06/17/14	06/17/14	KWG1405901	
Bromodichloromethane	ND	U	0.50	0.086	1	06/17/14	06/17/14	KWG1405901	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	06/17/14	06/17/14	KWG1405901	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	06/17/14	06/17/14	KWG1405901	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	06/17/14	06/17/14	KWG1405901	
Toluene	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	06/17/14	06/17/14	KWG1405901	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	06/17/14	06/17/14	KWG1405901	
Tetrachloroethene (PCE)	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406021
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1405901-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	06/17/14	06/17/14	KWG1405901	
Dibromochloromethane	ND	U	0.50	0.081	1	06/17/14	06/17/14	KWG1405901	
Chlorobenzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	ND	U	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	ND	U	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	
Styrene	ND	U	0.50	0.023	1	06/17/14	06/17/14	KWG1405901	
Bromoform	ND	U	0.50	0.17	1	06/17/14	06/17/14	KWG1405901	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	06/17/14	06/17/14	KWG1405901	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	06/17/14	06/17/14	KWG1405901	
1,4-Dichlorobenzene	ND	U	0.50	0.073	1	06/17/14	06/17/14	KWG1405901	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	112	76-132	06/17/14	Acceptable
Toluene-d8	98	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	90	68-120	06/17/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406021
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: METHOD **Units:** Percent
Analysis Method: 624 **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MOA14VOP017	K1406021-001	116	98	88
MOA14VOP018	K1406021-002	112	97	90
Batch QC	K1406022-006	114	99	90
Method Blank	KWG1405901-4	112	98	90
Batch QCMS	KWG1405901-1	106	105	98
Batch QCDMS	KWG1405901-2	109	106	100
Lab Control Sample	KWG1405901-3	109	106	99

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	76-132
Sur2	=	Toluene-d8	80-120
Sur3	=	4-Bromofluorobenzene	68-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406021
Project:	516.01	**Date Extracted:**	06/17/2014
Sample Matrix:	Water	**Date Analyzed:**	06/17/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1406022-006	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624	**Extraction Lot:**	KWG1405901

		Batch QCMS KWG1405901-1 Matrix Spike			Batch QCDMS KWG1405901-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene	ND	8.34	10.0	83	8.22	10.0	82	10-234	1	30
Benzene	ND	8.64	10.0	86	8.97	10.0	90	37-151	4	30
Trichloroethene (TCE)	ND	8.27	10.0	83	8.29	10.0	83	71-157	0	30
Toluene	0.10	8.29	10.0	82	8.71	10.0	86	47-150	5	30
Chlorobenzene	ND	7.54	10.0	75	7.98	10.0	80	37-160	6	30
1,2-Dichlorobenzene	ND	7.85	10.0	79	8.85	10.0	89	18-190	12	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406021
Project:	516.01	**Date Extracted:**	06/17/2014
Sample Matrix:	Water	**Date Analyzed:**	06/17/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1405901

	Lab Control Sample KWG1405901-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	12.2	10.0	122	32-158
Chloromethane	11.1	10.0	111	10-273
Vinyl Chloride	11.5	10.0	115	10-251
Bromomethane	6.15	10.0	62	10-242
Chloroethane	12.5	10.0	125	14-230
Trichlorofluoromethane	9.87	10.0	99	17-181
Acrolein	103	100	103	27-200
Trichlorotrifluoroethane	8.97	10.0	90	65-153
1,1-Dichloroethene	11.7	10.0	117	10-234
Acetone	60.7	50.0	121	46-162
Carbon Disulfide	21.1	20.0	105	66-138
Methylene Chloride	10.7	10.0	107	10-221
Acrylonitrile	11.0	10.0	110	61-141
trans-1,2-Dichloroethene	10.9	10.0	109	54-156
1,1-Dichloroethane	11.1	10.0	111	59-155
Vinyl Acetate	18.6	20.0	93	62-141
cis-1,2-Dichloroethene	9.88	10.0	99	80-124
2-Butanone (MEK)	49.8	50.0	100	53-148
Chloroform	11.0	10.0	110	51-138
1,1,1-Trichloroethane (TCA)	10.5	10.0	105	52-162
Carbon Tetrachloride	10.4	10.0	104	70-140
Benzene	10.6	10.0	106	37-151
1,2-Dichloroethane (EDC)	11.9	10.0	119	49-155
Trichloroethene (TCE)	10.5	10.0	105	71-157
1,2-Dichloropropane	10.4	10.0	104	10-210
Bromodichloromethane	11.3	10.0	113	35-155
2-Chloroethyl Vinyl Ether	8.08	10.0	81	10-305
cis-1,3-Dichloropropene	9.76	10.0	98	10-227
4-Methyl-2-pentanone (MIBK)	54.1	50.0	108	46-129
Toluene	10.3	10.0	103	47-150
trans-1,3-Dichloropropene	8.04	10.0	80	17-183
1,1,2-Trichloroethane	9.22	10.0	92	52-150
Tetrachloroethene (PCE)	7.95	10.0	80	64-148
2-Hexanone	49.5	50.0	99	37-136
Dibromochloromethane	9.23	10.0	92	53-149

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406021
Project:	516.01	**Date Extracted:**	06/17/2014
Sample Matrix:	Water	**Date Analyzed:**	06/17/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1405901

	Lab Control Sample KWG1405901-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Chlorobenzene	8.94	10.0	89	37-160
Ethylbenzene	9.05	10.0	91	37-162
m,p-Xylenes	18.9	20.0	95	80-126
o-Xylene	8.77	10.0	88	78-120
Styrene	9.72	10.0	97	80-120
Bromoform	10.8	10.0	108	45-169
1,1,2,2-Tetrachloroethane	10.9	10.0	109	46-157
1,3-Dichlorobenzene	9.26	10.0	93	59-156
1,4-Dichlorobenzene	9.20	10.0	92	18-190
1,2-Dichlorobenzene	9.39	10.0	94	18-190

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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January 9, 2015

Analytical Report for Service Request No: K1406028
Revised Service Request No: K1406028.01

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.01

Dear Gary:

Enclosed is the revised report for the samples submitted to our laboratory on June 14, 2014. For your reference, these analyses have been assigned our service request number K1406028.

The 8260C analyte list was revised to match the 624 list for this project.

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.

We apologize for any inconvenience this may have created.

Please call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/kd

RIGHT SOLUTIONS | RIGHT PARTNER

REVISED
2:55 pm, Jan 09, 2015

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	4704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories, Incorporated	**Service Request No.:**	K1406028
Project:	516.01	**Date Received:**	06/14/14
Sample Matrix:	Water and Sludge		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), Matrix/Duplicate Matrix Spike (MS/DMS), Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Sixteen water and four sludge samples were received for analysis at ALS Environmental on 06/14/14. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

Total Cyanide by Standard Method 4500-CN-E:
The matrix spike recoveries for sample Batch QC was outside control criteria because of suspected matrix interference. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. No further corrective action was taken.

No other anomalies associated with the analysis of these samples were observed.

Total and Dissolved Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Copper and Zinc for sample MOA14SLG001 were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 625

Matrix Spike Recovery Exceptions:
The matrix spike recovery of Pyrene for sample MOA14ORG001 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential low bias in this matrix. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

Approved by_____

Organochlorine Pesticides by EPA Method 8081

Matrix Spike Recovery Exceptions:
Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for the water samples.

The control criteria for the matrix spike recovery of Toxaphene and Chlordane for the associated Matrix Spikes was not applicable. The chromatogram indicated non-target matrix background components contributed to the reported matrix spike concentrations. Thus, the reported recoveries contained a high bias. Based on the magnitude of background contribution, the interference appeared to be minimal.

Elevated Detection Limits:
The detection limit is elevated for Heptachlor in sample Method Blank KWG1406828-5. The chromatogram indicated the presence of non-target background components, which were apparently introduced as laboratory artifacts. The contamination prevented adequate resolution of the target compounds at the detection limit. Note the level of background was relatively low compared to the detection limit, so the affect on the results was minimal. The results are flagged to indicate the problem.

The detection limit was elevated for a few analytes in all field samples. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compounds at the normal limit. The results were flagged to indicate the matrix interference.

No other anomalies associated with the analysis of these samples were observed.

PCB Aroclors by EPA Method 8082

Elevated Detection Limits:
A couple of samples required a dilution due to the presence of elevated levels of target analyte. The reporting limits were adjusted to reflect the dilution.

No other anomalies associated with the analysis of these samples were observed.

Organophosphorus Pesticides by EPA Method 8141

Calibration Verification Exceptions:
The upper control criterion was exceeded for some analytes in the associated Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analytes in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Surrogate Exceptions:
The upper control criterion was exceeded for Tributyl and Triphenyl Phosphate in sample MOA14ORG002. No target analytes were detected in the sample. The error associated with an elevated recovery equated to a high bias. The quality of the sample data was not significantly affected. No further corrective action was appropriate.

The control criteria for Tributyl and Triphenyl Phosphate in sample MOA14SLG001 and associated Matrix Spikes were not applicable. The analysis of the sample required a dilution, which resulted in a surrogate concentration below the reporting limit. No further corrective action was appropriate.

Matrix Spike Recovery Exceptions:
Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for the water samples.

Approved by_____

Organophosphorus Pesticides by EPA Method 8141 (cont)

The recovery of Malathion in MOA14SLG001 was outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

The control criteria for matrix spike recovery of Azinphos-methyl for sample MOA14SLG001 were not applicable. The analysis of this sample required a dilution such that the added spike concentration was diluted below the reporting limit. No further corrective action was required.

Lab Control Sample Exceptions:
The upper control criterion was exceeded for Azinphos-methyl in Laboratory Control Sample (LCS) KWG1406249-1LCS/2DLCS and KWG1407252-3. The analyte in question was not detected in the associated field samples. The error associated with elevated recovery indicated a high bias. The sample data was not significantly affected. No further corrective action was appropriate.

Elevated Detection Limits:
The detection limit was elevated for all analytes in sample MOA14SLG001. The sample extract was diluted prior to instrumental analysis due to relatively high levels of non-target background components. The extract was highly colored and viscous, which indicated the need to perform a dilution prior to injection into the instrument. The result was flagged to indicate the matrix interference.

The detection limit was elevated for a couple analytes in sample MOA14ORG002. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compounds at the normal limit. The results were flagged to indicate the matrix interference.

No other anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:
The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS24\0618F003.D: Bromomethane. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Surrogate Exceptions:
The control criteria were exceeded for Toluene-d8 in sample MOA14VOP019 due to matrix interference. A re-analysis was performed, but produced similar results. The results of the original analysis were reported. No further corrective action was required.

Matrix Spike Recovery Exceptions:
The matrix spike recovery of most analytes for sample MOA14VOP019 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential low bias in this matrix. No further corrective action was appropriate.

Sample Notes and Discussion:
Sample MOA14VOP019 appears to be non-homogenous.

No other anomalies associated with the analysis of these samples were observed.

Approved by_____

Semivolatile Organic Compounds by EPA Method 8270

Second Source Exceptions:
The upper control criterion was exceeded for the following analyte in the Initial Calibration Verification (ICV) for calibration CAL13357: Benzidine. The field sample analyzed in this sequence did not contain the analyte in question. Since the apparent problem equates to a potential high bias, the data quality is not affected. No further corrective action was required.

Calibration Verification Exceptions:
The upper control criterion was exceeded for Benzidine in Continuing Calibration Verification (CCV) MS07\0625F002.D. The field sample analyzed in this sequence did not contain the analyte in question. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Surrogate Exceptions:
The control criteria for Terphenyl-d14 in sample MOA14SLG001 were not applicable. The chromatogram indicated the presence of non-target background components that masked the surrogate, which prevented adequate resolution for quantitation. No corrective action was appropriate.

Lab Control Sample Exceptions:
The recovery of Benzidine in the replicate Laboratory Control Samples (LCS/DLCS) KWG1406329-1 and KWG1406329-2 was outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

Elevated Detection Limits:
The detection limit was elevated for Phenol in sample MOA14SLG001. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compound at the normal limit. The result was flagged to indicate the matrix interference.

Sample Notes and Discussion:
Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

No other anomalies associated with the analysis of these samples were observed.

Dioxins and Furans by EPA Method 8290

The analysis for Dioxins and Furans was performed at ALS Environmental in Houston, Texas. The data for this analysis is included in the corresponding section of this report.

Asbestos

The analysis for Asbestos was performed at ALS Cincinnati, Ohio. The data for this analysis is included in the corresponding section of this report.

Approved by_____

1C1406020

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	FROM:
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion date: 30 Days | **MATRIX**: Water (Inf & Eff), Solids (Sludge) | P.O. #: AK14-1003 | KLI Project Number: 516.01

Sample ID	Sample Location	Sample date & time	No. of contain	Container type	Preservative	EPA 625/8270	8081 A/B Pest OC	8141 A/B PEST OP	PCBs - 8082	8290/2,3,7,8-TCDD	EPA 1664 Oil & Gr.	Metals	Mercury (1631E)	EPA 8260	Asbestos PLM	Asbestos TEM	Total Cyanide	Condition upon receipt	Comments
MOA14ORG001	Influent	6/11/14 0900	6	1-L amber glass	None	X	X	X	X	X									
MOA14ORG002	Effluent		8	1-L amber glass	6°C Effluent samples contain L-Ascorbic Acid	X	X	X	X	X									Run MS/SD on EPA 625
MOA14O&G001	Influent		1	1-L amber glass	HCl 6°C						X								
MOA14O&G002	Effluent	0900	1	1-L amber glass	HCl 6°C						X								
MOA14MET005	Influent	0900	1	500ml HDPE	6°C, HNO3							X							Total metals
MOA14MET006	Influent	0900	1	500ml HDPE	6°C, HNO3							X							Prefiltered for dissolved metals
MOA14MET007	Effluent	0900	1	500ml HDPE	6°C, HNO3							X							Total metals
MOA14MET008	Effluent	0900	1	500ml HDPE	6°C, HNO3							X							Prefiltered for dissolved metals
MOA14TCN011	Influent	0900	1	500ml HDPE	NaOH, 6°C												X		SM 4500-CN-E low level
MOA14TCN012	Effluent	0900	1	500ml HDPE	NaOH, 6°C Eff samp contain L-Ascorbic Acid												X		SM 4500-CN-E low level
MOA14DXN001	Sludge	6/12/14 1000		125ml glass	None, 6°C					X									
MOA14SLG001	Sludge	6/12/14 1000	2	500ml glass	None, 6°C	X	X	X	X			X					X		
MOA14ASB001	Influent	0900	1	1 L HDPE	6° C										X				
MOA14ASB002	Effluent	0900	1	1 L HDPE	6° C										X				
MOA14ASB003	Sludge	6/12/14 1000		125 ml glass	6° C									X					
MOA14VOP019	Sludge	6/12/14 1000	1	125ml glass	None, 6°C								X						
MOA14MRC005	Influent		1	500ml HDPE	HCl 6°C							X							Total LL Hg
MOA14MRC006	Influent	0900	1	500ml HDPE	HCl 6°C							X							Dissolved LL Hg
MOA14MRC007	Effluent	0900	1	500ml HDPE	HCl 6°C							X							Total LL Hg
MOA14MRC008	Effluent	0900	1	500ml HDPE	HCl 6°C							X							Dissolved LL Hg

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID, ANALYTICAL METHOD, MDL, DATE OF EXTRACTION & ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

Comments: Metals to include Ag, As, Be, Cd, Cr, Cu, Mo, Ni, Pb, Sb, Se, Tl, Zn, Hg. Please report using client sample numbers. Report all results to MDL.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
PLW	6/12/14 0950	hand		6/12 0950
	6/13/14 1300	Fed Ex	ALS 6/17/14 0945	

SAMPLED BY (NAME/SIGNATURE):

ALS

PC KG

Cooler Receipt and Preservation Form

Client / Project: KINNETIC Service Request K14 6028

Received: 6/14/14 Opened: 6/14/14 By: A Unloaded: 6/14/14 By: A

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 4 FRONT

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.9	2.6	N/P	—	-0.3	308		770301283826 (MASTER)	
4.1	3.9	N/P	—	-0.2	341			
2.2	2.1	1.0	0.9	-0.1	316			
4.5	4.6	3.2	3.3	0.1	342			

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Page ____ *of* ____

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/14
Sample Matrix:	Water	**Date Received:**	06/14/14
Analysis Method:	1664A	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Oil and Grease, Total (HEM)

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
MOA14O&G001	K1406028-003	**18.0**	5.0	0.8	1	06/26/14 10:40	6/26/14	
MOA14O&G002	K1406028-004	**10.2**	5.2	0.8	1	06/26/14 10:40	6/26/14	
Method Blank	K1406028-MB1	ND U	5.0	0.8	1	06/26/14 10:40	6/26/14	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	06/26/14
		Date Extracted:	06/26/14

Matrix Spike Summary
Oil and Grease, Total (HEM)

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1406141-001	**Basis:**	NA
Analysis Method:	1664A		
Prep Method:	Method		

Matrix Spike
K1406141-001MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Oil and Grease, Total (HEM)	ND U	59.7	57.1	104	78-114

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Analyzed:**	06/26/14
Sample Matrix:	Water	**Date Extracted:**	06/26/14

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	1664A	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	399072

	Lab Control Sample K1406028-LCS3			Duplicate Lab Control Sample K1406028-DLCS3					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Oil and Grease, Total (HEM)	61.2	60.0	102	58.2	60.0	97	78-114	5	20

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/12/14
Sample Matrix:	Sludge, Solid	**Date Received:**	06/14/14
Analysis Method:	9012B	**Units:**	mg/Kg
Prep Method:	Method	**Basis:**	Dry

Cyanide, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
MOA14SLG001	K1406028-018	**0.21**	0.67	0.21	1	06/20/14 10:00	6/19/14	**J**
Method Blank	K1406028-MB2	ND	0.20	0.06	1	06/20/14 10:00	6/19/14	U

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Analyzed:**	06/20/14
Sample Matrix:	Sludge, Solid	**Date Extracted:**	06/19/14

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	9012B	**Units:**	mg/Kg
Prep Method:	Method	**Basis:**	Dry
		Analysis Lot:	398159

	Lab Control Sample K1406028-LCS2			Duplicate Lab Control Sample K1406028-DLCS2					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	94.1	109	86	96.7	109	89	62-128	3	20

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/14
Sample Matrix:	Water	**Date Received:**	06/14/14
Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA

Cyanide, Total

Sample Name	Lab Code	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
MOA14TCN011	K1406028-009	**0.0009**	**J**	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
MOA14TCN012	K1406028-010	**0.0016**	**J**	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
Method Blank	K1406028-MB1	ND	U	0.0047	0.0009	1	06/18/14 09:53	6/17/14	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	06/18/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1406678-03	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1406678-03DUP Result	Average	RPD	RPD Limit
Cyanide, Total	SM 4500-CN- E	0.0047	0.0009	ND	ND	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	06/18/14
		Date Extracted:	06/17/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1406678-03	**Basis:**	NA
Analysis Method:	SM 4500-CN- E		
Prep Method:	SM 4500-CN-C		

		Matrix Spike KQ1406678-03MS			**Duplicate Matrix Spike** KQ1406678-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	ND	0.100	0 *	ND	0.100	0 *	23-148	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/12/14
Sample Matrix:	Sludge, Solid	**Date Received:**	06/14/14
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
MOA14SLG001	K1406028-018	**29.7**	-	-	1	07/01/14 15:42	
MOA14VOP019	K1406028-020	**29.8**	-	-	1	07/01/14 15:42	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, Solid	**Date Received:**	NA
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Replicate Sample Summary
Total Solids

Sample Name:	Lab Code:	MRL	MDL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	KQ1407371-01	-	-	1.67	88.7	45.2	193 *	10	07/01/14
Batch QC	KQ1407371-02	-	-	1.67	1.68	1.68	<1	10	07/01/14

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/14
Sample Matrix:	Water	**Date Received:**	06/14/14

Mercury, Total

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631E	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MOA14MRC005	K1406028-013	2.5	0.30	5	06/18/14	06/19/14	134	
MOA14MRC007	K1406028-015	2.5	0.30	5	06/18/14	06/19/14	54.6	
Method Blank 1	K1406028-MB1	0.5	0.06	1	06/18/14	06/19/14	ND	
Method Blank 2	K1406028-MB2	0.5	0.06	1	06/18/14	06/19/14	ND	
Method Blank 3	K1406028-MB3	0.5	0.06	1	06/18/14	06/19/14	ND	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/14
Sample Matrix:	Water	**Date Received:**	06/14/14

Mercury, Dissolved

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631E	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MOA14MRC006	K1406028-014	0.5	0.06	1	06/18/14	06/19/14	12.0	
MOA14MRC008	K1406028-016	0.5	0.06	1	06/18/14	06/19/14	6.11	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	06/18/14
		Date Analyzed:	06/19/14

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	Batch QC	Units:	ng/L
Lab Code:	K1405946-001MS, K1405946-001MSD	Basis:	NA
Test Notes:			

									Percent Recovery				
	Prep	Analysis		Spike Level		Sample	Spike Result				ALS Acceptance	Relative Percent	Result
Analyte	**Method**	**Method**	**MRL**	**MS**	**DMS**	**Result**	**MS**	**DMS**	**MS**	**DMS**	**Limits**	**Difference**	**Notes**
Mercury	METHOD	1631E	0.5	50	50	1.63	48.5	48.0	94	93	71-125	1	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	06/19/14

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.03	101	77-123	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	06/19/14

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	4.91	98	77-123	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	06/19/14

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.13	103	77-123	

ALS Group USA, Corp.
dba ALS Environmental

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Kinnetic Laboratories, Incorporated
Project Name: 516.01
Project No.:

Service Request: K1406028

Sample Name:	Lab Code:
Batch QC1D	K1405981-001D
Batch QC1S	K1405981-001S
MOA14MET005	K1406028-005
MOA14MET006	K1406028-006DISS
MOA14MET007	K1406028-007
MOA14MET007D	K1406028-007D
MOA14MET007S	K1406028-007S
MOA14MET008	K1406028-008DISS
Method Blank	K1406028-MB

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406028
Project No.:	NA	**Date Collected:**	06/11/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET005** **Lab Code:** **K1406028-005**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.801		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	3.3		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.016	J	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.290		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	3.09		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	73.2		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	3.15		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.19	J	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	3.63		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	7.10		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.6	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.604		
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	181		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406028
Project No.:	NA	**Date Collected:**	06/11/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET006** **Lab Code:** **K1406028-006DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.543		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	2.0		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.039		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	1.09		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	17.7		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.457		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.02	U	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	2.62		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	4.66		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.5	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.084		
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.007	J	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	28.6		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406028
Project No.:	NA	**Date Collected:**	06/11/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET007** **Lab Code:** **K1406028-007**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.675		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	2.9		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.011	J	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.187		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	2.02		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	39.2		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	1.59		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.04	J	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	5.34		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	5.40		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.8	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.296		
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	94.7		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406028
Project No.:	NA	**Date Collected:**	06/11/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET008** **Lab Code:** **K1406028-008DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.571		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	2.5		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.083		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	0.91		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	23.2		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.558		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.03	J	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	4.81		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	4.56		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.6	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.082		
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	54.2		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client: Kinnetic Laboratories, Incorpora
Service Request: K1406028
Project No.: NA
Date Collected:
Project Name: 516.01
Date Received:
Matrix: WATER
Units: ug/L
Basis: NA

Sample Name: Method Blank
Lab Code: K1406028-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.005	U	
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	0.1	U	
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	0.02	U	
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	0.02	U	
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.02	U	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	0.007	U	
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	0.02	U	
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.3	U	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.004	U	
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	0.2	U	

Comments:

Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: **Batch QC1S** **Lab Code:** **K1405981-001S**

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	70 - 130	0.99		0.02	U	1.00	99.0		245.1

An empty field in the Control Limit column indicates the control limit is not applicable

Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: MOA14MET007S **Lab Code:** K1406028-007S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	51.4		0.675		50.00	101.4		200.8
Arsenic	70 - 130	58.5		2.9		50.00	111.2		200.8
Beryllium	70 - 130	2.65		0.011	J	2.50	105.6		200.8
Cadmium	70 - 130	26.5		0.187		25.00	105.3		200.8
Chromium	70 - 130	12.0		2.02		10.00	99.8		200.8
Copper	70 - 130	51.7		39.2		12.50	100.0		200.8
Lead	70 - 130	52.7		1.59		50.00	102.2		200.8
Molybdenum	70 - 130	25.6		5.34		20.00	101.3		200.8
Nickel	70 - 130	30.4		5.40		25.00	100.0		200.8
Selenium	70 - 130	53.2		0.8	J	50.00	104.8		200.8
Silver	70 - 130	12.2		0.296		12.50	95.2		200.8
Thallium	70 - 130	52.8		0.005	U	50.00	105.6		200.8
Zinc	70 - 130	122		94.7		25.00	109.2		200.8

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

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DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: **Batch QC1D** **Lab Code:** **K1405981-001D**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury		0.02	U	0.02	U			245.1

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: MOA14MET007D **Lab Code:** K1406028-007D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	0.675		0.677		0.3		200.8
Arsenic	20	2.9		3.0		3.4		200.8
Beryllium		0.011	J	0.008	J	31.6		200.8
Cadmium	20	0.187		0.186		0.5		200.8
Chromium	20	2.02		1.97		2.5		200.8
Copper	20	39.2		39.5		0.8		200.8
Lead	20	1.59		1.59		0.0		200.8
Molybdenum	20	5.34		5.13		4.0		200.8
Nickel	20	5.40		5.52		2.2		200.8
Selenium		0.8	J	0.8	J	0.0		200.8
Silver	20	0.296		0.278		6.3		200.8
Thallium		0.005	U	0.005	U			200.8
Zinc	20	94.7		96.4		1.8		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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LABORATORY CONTROL SAMPLE

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA

Project Name: 516.01

Aqueous LCS Source: ALS MIXED **Solid LCS Source:**

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits	%R
Antimony	50	52.0	104.0					
Arsenic	50	52.2	104.4					
Beryllium	2.5	2.56	102.4					
Cadmium	25	26.4	105.6					
Chromium	10	10.4	104.0					
Copper	12.5	12.9	103.2					
Lead	50	52.6	105.2					
Mercury	5	4.92	98.4					
Molybdenum	20	19.3	96.5					
Nickel	25	25.6	102.4					
Selenium	50	52.0	104.0					
Silver	12.5	13.1	104.8					
Thallium	50	54.1	108.2					
Zinc	25	26.3	105.2					

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- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Kinnetic Laboratories, Incorporated
Project Name: 516.01
Project No.:

Service Request: K1406028

Sample Name:	Lab Code:
Batch QC1D	K1405919-001D
Batch QC1S	K1405919-001S
Batch QC1SD	K1405919-001SD
MOA14SLG001	K1406028-018
MOA14SLG001D	K1406028-018D
MOA14SLG001S	K1406028-018S
Method Blank	K1406028-MB

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Kinnetic Laboratories, Incorpora
Service Request: K1406028
Project No.: NA
Date Collected: 06/12/14
Project Name: 516.01
Date Received: 06/14/14
Matrix: SLUDGE
Units: mg/Kg
Basis: DRY

Sample Name: MOA14SLG001
Lab Code: K1406028-018

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020A	0.055	0.011	5.0	06/18/14	06/25/14	1.66		
Arsenic	6020A	0.55	0.04	5.0	06/18/14	06/25/14	5.26		
Beryllium	6020A	0.022	0.005	5.0	06/18/14	06/25/14	0.067		
Cadmium	6020A	0.022	0.008	5.0	06/18/14	06/25/14	1.12		
Chromium	6020A	0.22	0.07	5.0	06/18/14	06/25/14	15.2		
Copper	6020A	0.11	0.04	5.0	06/18/14	06/25/14	236		
Lead	6020A	0.06	0.02	5.0	06/18/14	06/25/14	14.1		
Mercury	7471B	0.036	0.004	1.0	06/19/14	06/19/14	0.590		
Molybdenum	6020A	0.06	0.02	5.0	06/18/14	06/25/14	5.27		
Nickel	6020A	0.22	0.03	5.0	06/18/14	06/25/14	14.3		
Selenium	6020A	1.10	0.08	5.0	06/18/14	06/25/14	2.27		
Silver	6020A	0.022	0.004	5.0	06/18/14	06/25/14	3.09		
Thallium	6020A	0.022	0.002	5.0	06/18/14	06/25/14	0.023		
Zinc	6020A	0.5	0.2	5.0	06/18/14	06/25/14	661		

% Solids: 29.7

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Kinnetic Laboratories, Incorpora
Service Request: K1406028
Project No.: NA
Date Collected:
Project Name: 516.01
Date Received:
Matrix: SLUDGE
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: K1406028-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020A	0.050	0.010	5.0	06/18/14	06/25/14	0.010	U	
Arsenic	6020A	0.50	0.04	5.0	06/18/14	06/25/14	0.04	U	
Beryllium	6020A	0.020	0.005	5.0	06/18/14	06/25/14	0.005	U	
Cadmium	6020A	0.020	0.007	5.0	06/18/14	06/25/14	0.007	U	
Chromium	6020A	0.20	0.06	5.0	06/18/14	06/25/14	0.06	U	
Copper	6020A	0.10	0.04	5.0	06/18/14	06/25/14	0.04	U	
Lead	6020A	0.05	0.02	5.0	06/18/14	06/25/14	0.02	J	
Mercury	7471B	0.020	0.002	1.0	06/19/14	06/19/14	0.002	U	
Molybdenum	6020A	0.05	0.02	5.0	06/18/14	06/25/14	0.02	J	
Nickel	6020A	0.20	0.03	5.0	06/18/14	06/25/14	0.03	U	
Selenium	6020A	1.00	0.07	5.0	06/18/14	06/25/14	0.07	U	
Silver	6020A	0.020	0.004	5.0	06/18/14	06/25/14	0.004	U	
Thallium	6020A	0.020	0.002	5.0	06/18/14	06/25/14	0.002	U	
Zinc	6020A	0.5	0.2	5.0	06/18/14	06/25/14	0.4	J	

% Solids: 100.0

Comments:

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Metals

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SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA **Units:** MG/KG

Project Name: 516.01 **Basis:** DRY

Matrix: SEDIMENT **% Solids:** 35.6

Sample Name: Batch QC1S **Lab Code:** K1405919-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	80 - 120	1.01		0.203		0.85	94.9		7471B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

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SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA **Units:** MG/KG

Project Name: 516.01 **Basis:** DRY

Matrix: SEDIMENT **% Solids:** 35.6

Sample Name: Batch QC1SD **Lab Code:** K1405919-001SD

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	80 - 120	0.963		0.203		0.82	92.7		7471B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA **Units:** MG/KG

Project Name: 516.01 **Basis:** DRY

Matrix: SLUDGE **% Solids:** 29.7

Sample Name: MOA14SLG001S **Lab Code:** K1406028-018S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	93.42		1.66		108.3	84.7		6020A
Arsenic	75 - 125	120.81		5.26		108.3	106.7		6020A
Beryllium	75 - 125	11.295		0.067		10.8	104.0		6020A
Cadmium	75 - 125	12.29		1.12		10.8	103.4		6020A
Chromium	75 - 125	59.4		15.2		43.3	102.1		6020A
Copper		283		236		54.1	86.9		6020A
Lead	75 - 125	129.3		14.1		108.3	106.4		6020A
Molybdenum	75 - 125	116.39		5.27		108.3	102.6		6020A
Nickel	75 - 125	125.8		14.3		108.3	103.0		6020A
Selenium	75 - 125	117.38		2.27		108.3	106.3		6020A
Silver	75 - 125	14.25		3.09		10.8	103.3		6020A
Thallium	75 - 125	115.612		0.023		108.3	106.7		6020A
Zinc		737		661		108.3	70.2		6020A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

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DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA **Units:** MG/KG

Project Name: 516.01 **Basis:** DRY

Matrix: SEDIMENT **% Solids:** 35.6

Sample Name: Batch QC1D **Lab Code:** K1405919-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	20	0.203		0.203		0.0		7471B

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA **Units:** MG/KG

Project Name: 516.01 **Basis:** DRY

Matrix: SEDIMENT **% Solids:** 35.6

Sample Name: **Batch QC1SD** **Lab Code:** **K1405919-001SD**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	20	1.01		0.963		4.8		7471B

An empty field in the Control Limit column indicates the control limit is not applicable.

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Metals

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DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA **Units:** MG/KG

Project Name: 516.01 **Basis:** DRY

Matrix: SLUDGE **% Solids:** 29.7

Sample Name: **MOA14SLG001D** **Lab Code:** **K1406028-018D**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	1.66		1.76		5.8		6020A
Arsenic	20	5.26		4.82		8.7		6020A
Beryllium		0.067		0.062		7.8		6020A
Cadmium	20	1.12		1.17		4.4		6020A
Chromium	20	15.2		14.0		8.2		6020A
Copper	20	236		227		3.9		6020A
Lead	20	14.1		14.7		4.2		6020A
Molybdenum	20	5.27		4.89		7.5		6020A
Nickel	20	14.3		12.6		12.6		6020A
Selenium		2.27		2.15		5.4		6020A
Silver	20	3.09		3.55		13.9		6020A
Thallium		0.023		0.023		0.0		6020A
Zinc	20	661		631		4.6		6020A

An empty field in the Control Limit column indicates the control limit is not applicable.

Form VI - IN

Metals

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LABORATORY CONTROL SAMPLE

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406028

Project No.: NA

Project Name: 516.01

Aqueous LCS Source: **Solid LCS Source:** ERA D080-540

Analyte	Aqueous (ug/L) True	Aqueous (ug/L) Found	Aqueous (ug/L) %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) C Limits		Solid (mg/kg) %R
Antimony				88.2	73.3	26	289	83.1
Arsenic				99.6	116.0	69	131	116.5
Beryllium				72.30	76.7	74	126	106.1
Cadmium				182.0	198.0	74	126	108.8
Chromium				136.0	150.0	70	130	110.3
Copper				102.0	110.0	74	126	107.8
Lead				115.0	125.0	72	129	108.7
Mercury				19.9	19.0	51	148	95.5
Molybdenum				133.0	147.0	71	137	110.5
Nickel				153.0	170.0	73	126	111.1
Selenium				150.0	168.0	67	133	112.0
Silver				40.4	45.8	66	134	113.4
Thallium				174.0	212.0	69	132	121.8
Zinc				161.0	169.0	81	119	105.0

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Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG001	**Units:**	ug/L
Lab Code:	K1406028-001	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	26	1.8	1	06/16/14	06/26/14	KWG1405727	
Bis(2-chloroethyl) Ether	ND	U	11	0.38	1	06/16/14	06/26/14	KWG1405727	
Phenol	**24**		11	0.46	1	06/16/14	06/26/14	KWG1405727	
2-Chlorophenol	ND	U	11	0.43	1	06/16/14	06/26/14	KWG1405727	
Bis(2-chloroisopropyl) Ether	ND	U	11	0.37	1	06/16/14	06/26/14	KWG1405727	
Hexachloroethane	ND	U	11	0.27	1	06/16/14	06/26/14	KWG1405727	
N-Nitrosodi-n-propylamine	ND	U	11	0.53	1	06/16/14	06/26/14	KWG1405727	
Nitrobenzene	ND	U	11	0.37	1	06/16/14	06/26/14	KWG1405727	
Isophorone	ND	U	11	0.36	1	06/16/14	06/26/14	KWG1405727	
2-Nitrophenol	ND	U	11	0.36	1	06/16/14	06/26/14	KWG1405727	
2,4-Dimethylphenol	ND	U	11	1.2	1	06/16/14	06/26/14	KWG1405727	
Bis(2-chloroethoxy)methane	ND	U	11	0.32	1	06/16/14	06/26/14	KWG1405727	
2,4-Dichlorophenol	ND	U	11	0.30	1	06/16/14	06/26/14	KWG1405727	
1,2,4-Trichlorobenzene	ND	U	11	0.33	1	06/16/14	06/26/14	KWG1405727	
Naphthalene	**0.53**	J	11	0.32	1	06/16/14	06/26/14	KWG1405727	
Hexachlorobutadiene	ND	U	11	0.23	1	06/16/14	06/26/14	KWG1405727	
4-Chloro-3-methylphenol	ND	U	11	0.49	1	06/16/14	06/26/14	KWG1405727	
Hexachlorocyclopentadiene	ND	U	11	0.60	1	06/16/14	06/26/14	KWG1405727	
2,4,6-Trichlorophenol	ND	U	11	0.20	1	06/16/14	06/26/14	KWG1405727	
2-Chloronaphthalene	ND	U	11	0.44	1	06/16/14	06/26/14	KWG1405727	
Acenaphthylene	ND	U	11	0.30	1	06/16/14	06/26/14	KWG1405727	
Dimethyl Phthalate	ND	U	11	0.73	1	06/16/14	06/26/14	KWG1405727	
2,6-Dinitrotoluene	ND	U	11	0.28	1	06/16/14	06/26/14	KWG1405727	
Acenaphthene	ND	U	11	0.28	1	06/16/14	06/26/14	KWG1405727	
2,4-Dinitrophenol	ND	U	26	1.1	1	06/16/14	06/26/14	KWG1405727	
4-Nitrophenol	ND	U	26	2.4	1	06/16/14	06/26/14	KWG1405727	
2,4-Dinitrotoluene	ND	U	11	0.27	1	06/16/14	06/26/14	KWG1405727	
Fluorene	ND	U	11	0.24	1	06/16/14	06/26/14	KWG1405727	
4-Chlorophenyl Phenyl Ether	ND	U	11	0.27	1	06/16/14	06/26/14	KWG1405727	
Diethyl Phthalate	**2.9**	J	11	0.34	1	06/16/14	06/26/14	KWG1405727	
2-Methyl-4,6-dinitrophenol	ND	U	26	2.4	1	06/16/14	06/26/14	KWG1405727	
N-Nitrosodiphenylamine	ND	U	11	0.35	1	06/16/14	06/26/14	KWG1405727	
1,2-Diphenylhydrazine†	ND	U	11	0.24	1	06/16/14	06/26/14	KWG1405727	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG001	**Units:**	ug/L
Lab Code:	K1406028-001	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Bromophenyl Phenyl Ether	ND	U	11	0.36	1	06/16/14	06/26/14	KWG1405727	
Hexachlorobenzene	ND	U	11	0.28	1	06/16/14	06/26/14	KWG1405727	
Pentachlorophenol	ND	U	26	0.39	1	06/16/14	06/26/14	KWG1405727	
Phenanthrene	**0.55**	J	11	0.25	1	06/16/14	06/26/14	KWG1405727	
Anthracene	ND	U	11	0.34	1	06/16/14	06/26/14	KWG1405727	
Di-n-butyl Phthalate	**0.51**	J	11	0.47	1	06/16/14	06/26/14	KWG1405727	
Fluoranthene	**0.59**	J	11	0.46	1	06/16/14	06/26/14	KWG1405727	
Benzidine	ND	U	52	30	1	06/16/14	06/26/14	KWG1405727	
Pyrene	ND	U	11	0.48	1	06/16/14	06/26/14	KWG1405727	
Butyl Benzyl Phthalate	**2.8**	J	11	0.57	1	06/16/14	06/26/14	KWG1405727	
3,3'-Dichlorobenzidine	ND	U	26	0.49	1	06/16/14	06/26/14	KWG1405727	
Benz(a)anthracene	ND	U	11	0.26	1	06/16/14	06/26/14	KWG1405727	
Chrysene	ND	U	11	0.41	1	06/16/14	06/26/14	KWG1405727	
Bis(2-ethylhexyl) Phthalate	**8.0**	J	11	0.35	1	06/16/14	06/26/14	KWG1405727	
Di-n-octyl Phthalate	ND	U	11	0.39	1	06/16/14	06/26/14	KWG1405727	
Benzo(b)fluoranthene	ND	U	11	0.28	1	06/16/14	06/26/14	KWG1405727	
Benzo(k)fluoranthene	ND	U	11	0.33	1	06/16/14	06/26/14	KWG1405727	
Benzo(a)pyrene	ND	U	11	0.38	1	06/16/14	06/26/14	KWG1405727	
Indeno(1,2,3-cd)pyrene	ND	U	11	0.46	1	06/16/14	06/26/14	KWG1405727	
Dibenz(a,h)anthracene	ND	U	11	0.42	1	06/16/14	06/26/14	KWG1405727	
Benzo(g,h,i)perylene	ND	U	11	0.42	1	06/16/14	06/26/14	KWG1405727	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	75	34-112	06/26/14	Acceptable
Phenol-d6	79	34-116	06/26/14	Acceptable
Nitrobenzene-d5	74	43-120	06/26/14	Acceptable
2-Fluorobiphenyl	75	45-115	06/26/14	Acceptable
2,4,6-Tribromophenol	62	47-128	06/26/14	Acceptable
Terphenyl-d14	57	28-147	06/26/14	Acceptable

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG001	**Units:**	ug/L
Lab Code:	K1406028-001	**Basis:**	NA

† **Analyte Comments**

1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG002	**Units:**	ug/L
Lab Code:	K1406028-002	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	28	1.9	1	06/16/14	06/26/14	KWG1405727	
Bis(2-chloroethyl) Ether	ND	U	11	0.41	1	06/16/14	06/26/14	KWG1405727	
Phenol	**21**		11	0.49	1	06/16/14	06/26/14	KWG1405727	
2-Chlorophenol	ND	U	11	0.46	1	06/16/14	06/26/14	KWG1405727	
Bis(2-chloroisopropyl) Ether	ND	U	11	0.40	1	06/16/14	06/26/14	KWG1405727	
Hexachloroethane	ND	U	11	0.29	1	06/16/14	06/26/14	KWG1405727	
N-Nitrosodi-n-propylamine	**6.1**	J	11	0.56	1	06/16/14	06/26/14	KWG1405727	
Nitrobenzene	ND	U	11	0.40	1	06/16/14	06/26/14	KWG1405727	
Isophorone	ND	U	11	0.39	1	06/16/14	06/26/14	KWG1405727	
2-Nitrophenol	**1.6**	J	11	0.39	1	06/16/14	06/26/14	KWG1405727	
2,4-Dimethylphenol	ND	U	11	1.2	1	06/16/14	06/26/14	KWG1405727	
Bis(2-chloroethoxy)methane	ND	U	11	0.34	1	06/16/14	06/26/14	KWG1405727	
2,4-Dichlorophenol	ND	U	11	0.32	1	06/16/14	06/26/14	KWG1405727	
1,2,4-Trichlorobenzene	ND	U	11	0.35	1	06/16/14	06/26/14	KWG1405727	
Naphthalene	**0.57**	J	11	0.34	1	06/16/14	06/26/14	KWG1405727	
Hexachlorobutadiene	ND	U	11	0.24	1	06/16/14	06/26/14	KWG1405727	
4-Chloro-3-methylphenol	ND	U	11	0.53	1	06/16/14	06/26/14	KWG1405727	
Hexachlorocyclopentadiene	ND	U	11	0.64	1	06/16/14	06/26/14	KWG1405727	
2,4,6-Trichlorophenol	**0.61**	J	11	0.21	1	06/16/14	06/26/14	KWG1405727	
2-Chloronaphthalene	ND	U	11	0.47	1	06/16/14	06/26/14	KWG1405727	
Acenaphthylene	ND	U	11	0.32	1	06/16/14	06/26/14	KWG1405727	
Dimethyl Phthalate	ND	U	11	0.78	1	06/16/14	06/26/14	KWG1405727	
2,6-Dinitrotoluene	ND	U	11	0.30	1	06/16/14	06/26/14	KWG1405727	
Acenaphthene	ND	U	11	0.30	1	06/16/14	06/26/14	KWG1405727	
2,4-Dinitrophenol	ND	U	28	1.1	1	06/16/14	06/26/14	KWG1405727	
4-Nitrophenol	ND	U	28	2.6	1	06/16/14	06/26/14	KWG1405727	
2,4-Dinitrotoluene	ND	U	11	0.29	1	06/16/14	06/26/14	KWG1405727	
Fluorene	ND	U	11	0.26	1	06/16/14	06/26/14	KWG1405727	
4-Chlorophenyl Phenyl Ether	ND	U	11	0.29	1	06/16/14	06/26/14	KWG1405727	
Diethyl Phthalate	**3.0**	J	11	0.36	1	06/16/14	06/26/14	KWG1405727	
2-Methyl-4,6-dinitrophenol	ND	U	28	2.6	1	06/16/14	06/26/14	KWG1405727	
N-Nitrosodiphenylamine	ND	U	11	0.37	1	06/16/14	06/26/14	KWG1405727	
1,2-Diphenylhydrazine†	ND	U	11	0.26	1	06/16/14	06/26/14	KWG1405727	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG002	**Units:**	ug/L
Lab Code:	K1406028-002	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Bromophenyl Phenyl Ether	ND	U	11	0.39	1	06/16/14	06/26/14	KWG1405727	
Hexachlorobenzene	ND	U	11	0.30	1	06/16/14	06/26/14	KWG1405727	
Pentachlorophenol	ND	U	28	0.42	1	06/16/14	06/26/14	KWG1405727	
Phenanthrene	**0.47**	J	11	0.27	1	06/16/14	06/26/14	KWG1405727	
Anthracene	ND	U	11	0.36	1	06/16/14	06/26/14	KWG1405727	
Di-n-butyl Phthalate	**0.91**	J	11	0.51	1	06/16/14	06/26/14	KWG1405727	
Fluoranthene	**0.54**	J	11	0.49	1	06/16/14	06/26/14	KWG1405727	
Benzidine	ND	U	55	32	1	06/16/14	06/26/14	KWG1405727	
Pyrene	ND	U	11	0.52	1	06/16/14	06/26/14	KWG1405727	
Butyl Benzyl Phthalate	**2.0**	J	11	0.60	1	06/16/14	06/26/14	KWG1405727	
3,3'-Dichlorobenzidine	ND	U	28	0.53	1	06/16/14	06/26/14	KWG1405727	
Benz(a)anthracene	ND	U	11	0.28	1	06/16/14	06/26/14	KWG1405727	
Chrysene	ND	U	11	0.44	1	06/16/14	06/26/14	KWG1405727	
Bis(2-ethylhexyl) Phthalate	**8.8**	J	11	0.37	1	06/16/14	06/26/14	KWG1405727	
Di-n-octyl Phthalate	ND	U	11	0.42	1	06/16/14	06/26/14	KWG1405727	
Benzo(b)fluoranthene	ND	U	11	0.30	1	06/16/14	06/26/14	KWG1405727	
Benzo(k)fluoranthene	ND	U	11	0.35	1	06/16/14	06/26/14	KWG1405727	
Benzo(a)pyrene	ND	U	11	0.41	1	06/16/14	06/26/14	KWG1405727	
Indeno(1,2,3-cd)pyrene	ND	U	11	0.49	1	06/16/14	06/26/14	KWG1405727	
Dibenz(a,h)anthracene	ND	U	11	0.45	1	06/16/14	06/26/14	KWG1405727	
Benzo(g,h,i)perylene	ND	U	11	0.45	1	06/16/14	06/26/14	KWG1405727	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	78	34-112	06/26/14	Acceptable
Phenol-d6	71	34-116	06/26/14	Acceptable
Nitrobenzene-d5	72	43-120	06/26/14	Acceptable
2-Fluorobiphenyl	86	45-115	06/26/14	Acceptable
2,4,6-Tribromophenol	70	47-128	06/26/14	Acceptable
Terphenyl-d14	81	28-147	06/26/14	Acceptable

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG002	**Units:**	ug/L
Lab Code:	K1406028-002	**Basis:**	NA

† **Analyte Comments**

1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1405727-5	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	25	1.7	1	06/16/14	06/26/14	KWG1405727	
Bis(2-chloroethyl) Ether	ND	U	10	0.37	1	06/16/14	06/26/14	KWG1405727	
Phenol	ND	U	10	0.45	1	06/16/14	06/26/14	KWG1405727	
2-Chlorophenol	ND	U	10	0.42	1	06/16/14	06/26/14	KWG1405727	
Bis(2-chloroisopropyl) Ether	ND	U	10	0.36	1	06/16/14	06/26/14	KWG1405727	
Hexachloroethane	ND	U	10	0.26	1	06/16/14	06/26/14	KWG1405727	
N-Nitrosodi-n-propylamine	ND	U	10	0.51	1	06/16/14	06/26/14	KWG1405727	
Nitrobenzene	ND	U	10	0.36	1	06/16/14	06/26/14	KWG1405727	
Isophorone	ND	U	10	0.35	1	06/16/14	06/26/14	KWG1405727	
2-Nitrophenol	ND	U	10	0.35	1	06/16/14	06/26/14	KWG1405727	
2,4-Dimethylphenol	ND	U	10	1.1	1	06/16/14	06/26/14	KWG1405727	
Bis(2-chloroethoxy)methane	ND	U	10	0.31	1	06/16/14	06/26/14	KWG1405727	
2,4-Dichlorophenol	ND	U	10	0.29	1	06/16/14	06/26/14	KWG1405727	
1,2,4-Trichlorobenzene	ND	U	10	0.32	1	06/16/14	06/26/14	KWG1405727	
Naphthalene	ND	U	10	0.31	1	06/16/14	06/26/14	KWG1405727	
Hexachlorobutadiene	ND	U	10	0.22	1	06/16/14	06/26/14	KWG1405727	
4-Chloro-3-methylphenol	ND	U	10	0.48	1	06/16/14	06/26/14	KWG1405727	
Hexachlorocyclopentadiene	ND	U	10	0.58	1	06/16/14	06/26/14	KWG1405727	
2,4,6-Trichlorophenol	ND	U	10	0.19	1	06/16/14	06/26/14	KWG1405727	
2-Chloronaphthalene	ND	U	10	0.43	1	06/16/14	06/26/14	KWG1405727	
Acenaphthylene	ND	U	10	0.29	1	06/16/14	06/26/14	KWG1405727	
Dimethyl Phthalate	ND	U	10	0.71	1	06/16/14	06/26/14	KWG1405727	
2,6-Dinitrotoluene	ND	U	10	0.27	1	06/16/14	06/26/14	KWG1405727	
Acenaphthene	ND	U	10	0.27	1	06/16/14	06/26/14	KWG1405727	
2,4-Dinitrophenol	ND	U	25	1.0	1	06/16/14	06/26/14	KWG1405727	
4-Nitrophenol	ND	U	25	2.3	1	06/16/14	06/26/14	KWG1405727	
2,4-Dinitrotoluene	ND	U	10	0.26	1	06/16/14	06/26/14	KWG1405727	
Fluorene	ND	U	10	0.23	1	06/16/14	06/26/14	KWG1405727	
4-Chlorophenyl Phenyl Ether	ND	U	10	0.26	1	06/16/14	06/26/14	KWG1405727	
Diethyl Phthalate	ND	U	10	0.33	1	06/16/14	06/26/14	KWG1405727	
2-Methyl-4,6-dinitrophenol	ND	U	25	2.3	1	06/16/14	06/26/14	KWG1405727	
N-Nitrosodiphenylamine	ND	U	10	0.34	1	06/16/14	06/26/14	KWG1405727	
1,2-Diphenylhydrazine†	ND	U	10	0.23	1	06/16/14	06/26/14	KWG1405727	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1405727-5	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Bromophenyl Phenyl Ether	ND	U	10	0.35	1	06/16/14	06/26/14	KWG1405727	
Hexachlorobenzene	ND	U	10	0.27	1	06/16/14	06/26/14	KWG1405727	
Pentachlorophenol	ND	U	25	0.38	1	06/16/14	06/26/14	KWG1405727	
Phenanthrene	ND	U	10	0.24	1	06/16/14	06/26/14	KWG1405727	
Anthracene	ND	U	10	0.33	1	06/16/14	06/26/14	KWG1405727	
Di-n-butyl Phthalate	ND	U	10	0.46	1	06/16/14	06/26/14	KWG1405727	
Fluoranthene	ND	U	10	0.45	1	06/16/14	06/26/14	KWG1405727	
Benzidine	ND	U	50	29	1	06/16/14	06/26/14	KWG1405727	
Pyrene	ND	U	10	0.47	1	06/16/14	06/26/14	KWG1405727	
Butyl Benzyl Phthalate	ND	U	10	0.55	1	06/16/14	06/26/14	KWG1405727	
3,3'-Dichlorobenzidine	ND	U	25	0.48	1	06/16/14	06/26/14	KWG1405727	
Benz(a)anthracene	ND	U	10	0.25	1	06/16/14	06/26/14	KWG1405727	
Chrysene	ND	U	10	0.40	1	06/16/14	06/26/14	KWG1405727	
Bis(2-ethylhexyl) Phthalate	**0.36**	J	10	0.34	1	06/16/14	06/26/14	KWG1405727	
Di-n-octyl Phthalate	ND	U	10	0.38	1	06/16/14	06/26/14	KWG1405727	
Benzo(b)fluoranthene	ND	U	10	0.27	1	06/16/14	06/26/14	KWG1405727	
Benzo(k)fluoranthene	ND	U	10	0.32	1	06/16/14	06/26/14	KWG1405727	
Benzo(a)pyrene	ND	U	10	0.37	1	06/16/14	06/26/14	KWG1405727	
Indeno(1,2,3-cd)pyrene	ND	U	10	0.45	1	06/16/14	06/26/14	KWG1405727	
Dibenz(a,h)anthracene	ND	U	10	0.41	1	06/16/14	06/26/14	KWG1405727	
Benzo(g,h,i)perylene	ND	U	10	0.41	1	06/16/14	06/26/14	KWG1405727	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	81	34-112	06/26/14	Acceptable
Phenol-d6	80	34-116	06/26/14	Acceptable
Nitrobenzene-d5	74	43-120	06/26/14	Acceptable
2-Fluorobiphenyl	82	45-115	06/26/14	Acceptable
2,4,6-Tribromophenol	61	47-128	06/26/14	Acceptable
Terphenyl-d14	78	28-147	06/26/14	Acceptable

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1405727-5	**Basis:**	NA

† **Analyte Comments**

1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406028
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C **Units:** Percent
Analysis Method: 625 **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4	Sur5	Sur6
MOA14ORG001	K1406028-001	75	79	74	75	62	57
MOA14ORG002	K1406028-002	78	71	72	86	70	81
Method Blank	KWG1405727-5	81	80	74	82	61	78
MOA14ORG001MS	KWG1405727-1	84	86	85	73	68	55
MOA14ORG001DMS	KWG1405727-2	80	82	78	83	68	72
Lab Control Sample	KWG1405727-3	74	73	72	84	70	68
Duplicate Lab Control Sample	KWG1405727-4	81	78	75	85	71	71

Surrogate Recovery Control Limits (%)

Sur1 =	2-Fluorophenol	34-112	Sur5 =	2,4,6-Tribromophenol	47-128
Sur2 =	Phenol-d6	34-116	Sur6 =	Terphenyl-d14	28-147
Sur3 =	Nitrobenzene-d5	43-120			
Sur4 =	2-Fluorobiphenyl	45-115			

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/16/2014
Sample Matrix:	Water	**Date Analyzed:**	06/26/2014

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG001	**Units:**	ug/L
Lab Code:	K1406028-001	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625	**Extraction Lot:**	KWG1405727

		MOA14ORG001MS KWG1405727-1 Matrix Spike			MOA14ORG001DMS KWG1405727-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	24	126	102	100	115	104	88	53-101	9	30
2-Chlorophenol	ND	98.1	102	96	94.0	104	90	59-101	4	30
N-Nitrosodi-n-propylamine	ND	94.7	102	93	86.6	104	83	59-105	9	30
1,2,4-Trichlorobenzene	ND	83.8	102	82	89.0	104	85	53-101	6	30
4-Chloro-3-methylphenol	ND	90.2	102	88	84.4	104	81	60-112	7	30
Acenaphthene	ND	80.0	102	78	85.5	104	82	60-109	7	30
4-Nitrophenol	ND	87.6	102	86	96.9	104	93	51-125	10	30
2,4-Dinitrotoluene	ND	88.2	102	86	92.4	104	89	56-127	5	30
Pentachlorophenol	ND	80.8	102	79	89.2	104	86	52-117	10	30
Pyrene	ND	57.4	102	56 *	68.5	104	66	57-115	18	30

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/16/2014
Sample Matrix:	Water	**Date Analyzed:**	06/26/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3520C	**Units:**	ug/L
Analysis Method:	625	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1405727

	Lab Control Sample KWG1405727-3 Lab Control Spike			Duplicate Lab Control Sample KWG1405727-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
N-Nitrosodimethylamine	67.1	100	67	65.2	100	65	47-110	3	30
Bis(2-chloroethyl) Ether	75.9	100	76	78.8	100	79	55-102	4	30
Phenol	75.8	100	76	78.4	100	78	53-101	3	30
2-Chlorophenol	78.4	100	78	83.0	100	83	59-101	6	30
Bis(2-chloroisopropyl) Ether	73.2	100	73	75.9	100	76	51-105	4	30
Hexachloroethane	67.2	100	67	73.6	100	74	50-98	9	30
N-Nitrosodi-n-propylamine	72.0	100	72	71.8	100	72	59-105	0	30
Nitrobenzene	72.9	100	73	73.0	100	73	58-105	0	30
Isophorone	77.5	100	78	77.8	100	78	57-108	0	30
2-Nitrophenol	91.8	100	92	93.2	100	93	61-105	2	30
2,4-Dimethylphenol	71.1	100	71	65.2	100	65	29-105	9	30
Bis(2-chloroethoxy)methane	83.0	100	83	81.6	100	82	56-106	2	30
2,4-Dichlorophenol	87.3	100	87	88.1	100	88	59-106	1	30
1,2,4-Trichlorobenzene	79.1	100	79	83.3	100	83	53-101	5	30
Naphthalene	76.9	100	77	83.1	100	83	55-102	8	30
Hexachlorobutadiene	75.2	100	75	79.5	100	80	52-101	6	30
4-Chloro-3-methylphenol	85.1	100	85	83.4	100	83	60-112	2	30
Hexachlorocyclopentadiene	12.0	100	12	13.4	100	13	10-63	11	30
2,4,6-Trichlorophenol	86.3	100	86	88.2	100	88	65-112	2	30
2-Chloronaphthalene	83.8	100	84	85.7	100	86	57-106	2	30
Acenaphthylene	82.5	100	82	88.3	100	88	57-112	7	30
Dimethyl Phthalate	80.5	100	81	87.6	100	88	62-122	8	30
2,6-Dinitrotoluene	85.9	100	86	91.4	100	91	63-122	6	30
Acenaphthene	82.8	100	83	89.4	100	89	60-109	8	30
2,4-Dinitrophenol	59.0	100	59	66.1	100	66	32-123	11	30
4-Nitrophenol	67.0	100	67	71.4	100	71	51-125	6	30
2,4-Dinitrotoluene	85.7	100	86	92.2	100	92	56-127	7	30
Fluorene	84.0	100	84	89.3	100	89	56-115	6	30
4-Chlorophenyl Phenyl Ether	83.6	100	84	88.1	100	88	57-116	5	30
Diethyl Phthalate	80.8	100	81	88.6	100	89	54-135	9	30
2-Methyl-4,6-dinitrophenol	74.3	100	74	84.3	100	84	49-128	13	30
N-Nitrosodiphenylamine	82.8	100	83	86.2	100	86	48-122	4	30
1,2-Diphenylhydrazine	75.4	100	75	81.5	100	81	54-117	8	30
4-Bromophenyl Phenyl Ether	87.5	100	88	89.0	100	89	64-116	2	30
Hexachlorobenzene	84.3	100	84	87.3	100	87	61-116	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/16/2014
Sample Matrix:	Water	**Date Analyzed:**	06/26/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3520C	**Units:**	ug/L
Analysis Method:	625	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1405727

	Lab Control Sample KWG1405727-3 Lab Control Spike			Duplicate Lab Control Sample KWG1405727-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Pentachlorophenol	65.6	100	66	66.3	100	66	52-117	1	30
Phenanthrene	87.2	100	87	88.4	100	88	64-113	1	30
Anthracene	91.7	100	92	89.9	100	90	62-114	2	30
Di-n-butyl Phthalate	92.9	100	93	91.5	100	91	63-125	2	30
Fluoranthene	82.5	100	83	83.0	100	83	60-120	1	30
Benzidine	177	150	118	194	150	129	6-160	9	30
Pyrene	69.5	100	70	69.4	100	69	57-115	0	30
Butyl Benzyl Phthalate	84.9	100	85	84.1	100	84	65-115	1	30
3,3'-Dichlorobenzidine	78.1	100	78	79.1	100	79	42-120	1	30
Benz(a)anthracene	94.9	100	95	94.0	100	94	66-113	1	30
Chrysene	88.6	100	89	89.6	100	90	64-113	1	30
Bis(2-ethylhexyl) Phthalate	89.9	100	90	89.3	100	89	61-120	1	30
Di-n-octyl Phthalate	106	100	106	105	100	105	64-128	1	30
Benzo(b)fluoranthene	97.8	100	98	93.9	100	94	64-115	4	30
Benzo(k)fluoranthene	91.9	100	92	92.0	100	92	62-119	0	30
Benzo(a)pyrene	89.4	100	89	89.5	100	90	57-119	0	30
Indeno(1,2,3-cd)pyrene	81.2	100	81	84.9	100	85	65-116	4	30
Dibenz(a,h)anthracene	81.1	100	81	83.3	100	83	64-119	3	30
Benzo(g,h,i)perylene	78.2	100	78	80.0	100	80	65-115	2	30

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Organochlorine Pesticides

Sample Name:	MOA14ORG001	**Units:**	ug/L
Lab Code:	K1406028-001	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.011	0.00048	1	06/17/14	06/27/14	KWG1406828	
Heptachlor	ND	Ui	0.017	0.017	1	06/17/14	06/27/14	KWG1406828	
Aldrin	ND	U	0.011	0.00044	1	06/17/14	06/27/14	KWG1406828	
Heptachlor Epoxide	ND	U	0.011	0.00035	1	06/17/14	06/27/14	KWG1406828	
gamma-Chlordane†	ND	Ui	0.011	0.0053	1	06/17/14	06/27/14	KWG1406828	
Endosulfan I	ND	U	0.011	0.00048	1	06/17/14	06/27/14	KWG1406828	
alpha-Chlordane	ND	Ui	0.017	0.017	1	06/17/14	06/27/14	KWG1406828	
Dieldrin	ND	U	0.011	0.00038	1	06/17/14	06/27/14	KWG1406828	
4,4'-DDE	ND	U	0.011	0.00039	1	06/17/14	06/27/14	KWG1406828	
Endrin	ND	U	0.011	0.00074	1	06/17/14	06/27/14	KWG1406828	
Endosulfan II	ND	Ui	0.011	0.0080	1	06/17/14	06/27/14	KWG1406828	
4,4'-DDD	ND	U	0.011	0.0017	1	06/17/14	06/27/14	KWG1406828	
Endrin Aldehyde	ND	Ui	0.011	0.0063	1	06/17/14	06/27/14	KWG1406828	
Endosulfan Sulfate	ND	U	0.011	0.00051	1	06/17/14	06/27/14	KWG1406828	
4,4'-DDT	ND	Ui	0.011	0.0017	1	06/17/14	06/27/14	KWG1406828	
Endrin Ketone	ND	Ui	0.011	0.0049	1	06/17/14	06/27/14	KWG1406828	
Methoxychlor	ND	Ui	0.011	0.011	1	06/17/14	06/27/14	KWG1406828	
Toxaphene	ND	Ui	0.54	0.47	1	06/17/14	06/27/14	KWG1406828	
Chlordane	ND	Ui	1.1	1.1	1	06/17/14	06/27/14	KWG1406828	
Mirex	ND	Ui	0.011	0.011	1	06/17/14	06/27/14	KWG1406828	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	67	20-106	06/27/14	Acceptable
Decachlorobiphenyl	85	19-127	06/27/14	Acceptable

† Analyte Comments

gamma-Chlordane	For this analyte (CAS Registry No. 5103-74-2), USEPA has corrected the name to be beta-Chlordane, also known as trans-Chlordane.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Organochlorine Pesticides

Sample Name:	MOA14ORG002	**Units:**	ug/L
Lab Code:	K1406028-002	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.012	0.00051	1	06/17/14	06/27/14	KWG1406828	
Heptachlor	ND	Ui	0.012	0.0043	1	06/17/14	06/27/14	KWG1406828	
Aldrin	ND	U	0.012	0.00046	1	06/17/14	06/27/14	KWG1406828	
Heptachlor Epoxide	ND	U	0.012	0.00037	1	06/17/14	06/27/14	KWG1406828	
gamma-Chlordane†	ND	Ui	0.012	0.0019	1	06/17/14	06/27/14	KWG1406828	
Endosulfan I	ND	U	0.012	0.00051	1	06/17/14	06/27/14	KWG1406828	
alpha-Chlordane	ND	Ui	0.013	0.013	1	06/17/14	06/27/14	KWG1406828	
Dieldrin	ND	Ui	0.017	0.017	1	06/17/14	06/27/14	KWG1406828	
4,4'-DDE	ND	U	0.012	0.00041	1	06/17/14	06/27/14	KWG1406828	
Endrin	ND	Ui	0.012	0.0023	1	06/17/14	06/27/14	KWG1406828	
Endosulfan II	ND	Ui	0.012	0.011	1	06/17/14	06/27/14	KWG1406828	
4,4'-DDD	ND	Ui	0.012	0.0091	1	06/17/14	06/27/14	KWG1406828	
Endrin Aldehyde	ND	U	0.012	0.00053	1	06/17/14	06/27/14	KWG1406828	
Endosulfan Sulfate	ND	U	0.012	0.00054	1	06/17/14	06/27/14	KWG1406828	
4,4'-DDT	ND	Ui	0.012	0.0014	1	06/17/14	06/27/14	KWG1406828	
Endrin Ketone	ND	Ui	0.012	0.0031	1	06/17/14	06/27/14	KWG1406828	
Methoxychlor	ND	Ui	0.012	0.0079	1	06/17/14	06/27/14	KWG1406828	
Toxaphene	ND	Ui	0.64	0.64	1	06/17/14	06/27/14	KWG1406828	
Chlordane	ND	Ui	0.35	0.35	1	06/17/14	06/27/14	KWG1406828	
Mirex	ND	U	0.012	0.00093	1	06/17/14	06/27/14	KWG1406828	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	53	20-106	06/27/14	Acceptable
Decachlorobiphenyl	64	19-127	06/27/14	Acceptable

† Analyte Comments

gamma-Chlordane	For this analyte (CAS Registry No. 5103-74-2), USEPA has corrected the name to be beta-Chlordane, also known as trans-Chlordane.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1406828-5	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.010	0.00044	1	06/17/14	06/27/14	KWG1406828	
Heptachlor	ND	Ui	0.010	0.00058	1	06/17/14	06/27/14	KWG1406828	
Aldrin	ND	U	0.010	0.00040	1	06/17/14	06/27/14	KWG1406828	
Heptachlor Epoxide	ND	U	0.010	0.00032	1	06/17/14	06/27/14	KWG1406828	
gamma-Chlordane†	ND	U	0.010	0.00032	1	06/17/14	06/27/14	KWG1406828	
Endosulfan I	ND	U	0.010	0.00044	1	06/17/14	06/27/14	KWG1406828	
alpha-Chlordane	ND	U	0.010	0.0040	1	06/17/14	06/27/14	KWG1406828	
Dieldrin	ND	U	0.010	0.00035	1	06/17/14	06/27/14	KWG1406828	
4,4'-DDE	ND	U	0.010	0.00036	1	06/17/14	06/27/14	KWG1406828	
Endrin	ND	U	0.010	0.00068	1	06/17/14	06/27/14	KWG1406828	
Endosulfan II	ND	U	0.010	0.00040	1	06/17/14	06/27/14	KWG1406828	
4,4'-DDD	ND	U	0.010	0.0015	1	06/17/14	06/27/14	KWG1406828	
Endrin Aldehyde	ND	U	0.010	0.00046	1	06/17/14	06/27/14	KWG1406828	
Endosulfan Sulfate	ND	U	0.010	0.00047	1	06/17/14	06/27/14	KWG1406828	
4,4'-DDT	ND	U	0.010	0.00058	1	06/17/14	06/27/14	KWG1406828	
Endrin Ketone	ND	U	0.010	0.00066	1	06/17/14	06/27/14	KWG1406828	
Methoxychlor	ND	U	0.010	0.00093	1	06/17/14	06/27/14	KWG1406828	
Toxaphene	ND	U	0.50	0.051	1	06/17/14	06/27/14	KWG1406828	
Chlordane	ND	U	0.20	0.022	1	06/17/14	06/27/14	KWG1406828	
Mirex	ND	U	0.010	0.00081	1	06/17/14	06/27/14	KWG1406828	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	57	20-106	06/27/14	Acceptable
Decachlorobiphenyl	64	19-127	06/27/14	Acceptable

† Analyte Comments

gamma-Chlordane	For this analyte (CAS Registry No. 5103-74-2), USEPA has corrected the name to be beta-Chlordane, also known as trans-Chlordane.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/12/2014
Sample Matrix:	Sludge, solid	**Date Received:**	06/14/2014

Organochlorine Pesticides

Sample Name:	MOA14SLG001	**Units:**	ug/Kg
Lab Code:	K1406028-018	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	Ui	8.3	4.3	1	06/18/14	06/27/14	KWG1406806	
Heptachlor	ND	Ui	8.3	1.8	1	06/18/14	06/27/14	KWG1406806	
Aldrin	ND	U	8.3	0.57	1	06/18/14	06/27/14	KWG1406806	
Heptachlor Epoxide	ND	Ui	8.3	1.8	1	06/18/14	06/27/14	KWG1406806	
gamma-Chlordane†	ND	Ui	8.3	2.1	1	06/18/14	06/27/14	KWG1406806	
Endosulfan I	ND	Ui	8.3	3.0	1	06/18/14	06/27/14	KWG1406806	
alpha-Chlordane	ND	Ui	8.3	2.9	1	06/18/14	06/27/14	KWG1406806	
Dieldrin	ND	U	8.3	0.80	1	06/18/14	06/27/14	KWG1406806	
4,4'-DDE	ND	U	8.3	2.7	1	06/18/14	06/27/14	KWG1406806	
Endrin	ND	Ui	8.3	5.3	1	06/18/14	06/27/14	KWG1406806	
Endosulfan II	ND	Ui	8.3	3.3	1	06/18/14	06/27/14	KWG1406806	
4,4'-DDD	ND	Ui	8.3	2.0	1	06/18/14	06/27/14	KWG1406806	
Endrin Aldehyde	ND	U	8.3	2.4	1	06/18/14	06/27/14	KWG1406806	
Endosulfan Sulfate	ND	Ui	8.3	4.1	1	06/18/14	06/27/14	KWG1406806	
4,4'-DDT	ND	Ui	8.3	2.0	1	06/18/14	06/27/14	KWG1406806	
Endrin Ketone	ND	U	8.3	0.91	1	06/18/14	06/27/14	KWG1406806	
Methoxychlor	ND	U	8.3	1.1	1	06/18/14	06/27/14	KWG1406806	
Toxaphene	ND	Ui	470	470	1	06/18/14	06/27/14	KWG1406806	
Chlordane	ND	Ui	220	220	1	06/18/14	06/27/14	KWG1406806	
Mirex	ND	Ui	8.3	3.0	1	06/18/14	06/27/14	KWG1406806	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	54	21-112	06/27/14	Acceptable
Decachlorobiphenyl	49	15-130	06/27/14	Acceptable

† Analyte Comments

gamma-Chlordane	For this analyte (CAS Registry No. 5103-74-2), USEPA has corrected the name to be beta-Chlordane, also known as trans-Chlordane.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1406806-7	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	2.5	0.45	1	06/18/14	06/28/14	KWG1406806	
Heptachlor	ND	U	2.5	0.83	1	06/18/14	06/28/14	KWG1406806	
Aldrin	ND	U	2.5	0.34	1	06/18/14	06/28/14	KWG1406806	
Heptachlor Epoxide	ND	U	2.5	0.39	1	06/18/14	06/28/14	KWG1406806	
gamma-Chlordane†	ND	U	2.5	0.60	1	06/18/14	06/28/14	KWG1406806	
Endosulfan I	ND	U	2.5	1.7	1	06/18/14	06/28/14	KWG1406806	
alpha-Chlordane	ND	U	2.5	1.2	1	06/18/14	06/28/14	KWG1406806	
Dieldrin	ND	U	2.5	0.48	1	06/18/14	06/28/14	KWG1406806	
4,4'-DDE	ND	U	2.5	1.6	1	06/18/14	06/28/14	KWG1406806	
Endrin	ND	U	2.5	0.45	1	06/18/14	06/28/14	KWG1406806	
Endosulfan II	ND	U	2.5	0.86	1	06/18/14	06/28/14	KWG1406806	
4,4'-DDD	ND	U	2.5	1.0	1	06/18/14	06/28/14	KWG1406806	
Endrin Aldehyde	ND	U	2.5	1.4	1	06/18/14	06/28/14	KWG1406806	
Endosulfan Sulfate	ND	U	2.5	0.57	1	06/18/14	06/28/14	KWG1406806	
4,4'-DDT	ND	U	2.5	0.85	1	06/18/14	06/28/14	KWG1406806	
Endrin Ketone	ND	U	2.5	0.55	1	06/18/14	06/28/14	KWG1406806	
Methoxychlor	ND	U	2.5	0.61	1	06/18/14	06/28/14	KWG1406806	
Toxaphene	ND	U	130	37	1	06/18/14	06/28/14	KWG1406806	
Chlordane	ND	U	50	22	1	06/18/14	06/28/14	KWG1406806	
Mirex	ND	U	2.5	0.68	1	06/18/14	06/28/14	KWG1406806	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	60	21-112	06/28/14	Acceptable
Decachlorobiphenyl	63	15-130	06/28/14	Acceptable

† Analyte Comments

gamma-Chlordane	For this analyte (CAS Registry No. 5103-74-2), USEPA has corrected the name to be beta-Chlordane, also known as trans-Chlordane.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406028
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Organochlorine Pesticides

Extraction Method: EPA 3535A **Units:** Percent
Analysis Method: 8081B **Level:** Low

Sample Name	Lab Code	Sur1	Sur2
MOA14ORG001	K1406028-001	67	85
MOA14ORG002	K1406028-002	53	64
Method Blank	KWG1406828-5	57	64
Lab Control Sample	KWG1406828-1	59	54
Duplicate Lab Control Sample	KWG1406828-2	58	52

Surrogate Recovery Control Limits (%)

Sur1	=	Tetrachloro-m-xylene	20-106
Sur2	=	Decachlorobiphenyl	19-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406028
Project: 516.01
Sample Matrix: Sludge, solid

Surrogate Recovery Summary
Organochlorine Pesticides

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8081B **Level:** Low

Sample Name	Lab Code	Sur1	Sur2
MOA14SLG001	K1406028-018	54	49
Method Blank	KWG1406806-7	60	63
MOA14SLG001MS	KWG1406806-1	44	38
MOA14SLG001DMS	KWG1406806-2	50	47
Lab Control Sample	KWG1406806-3	58	58

Surrogate Recovery Control Limits (%)

Sur1	=	Tetrachloro-m-xylene	21-112
Sur2	=	Decachlorobiphenyl	15-130

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Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	06/27/2014 - 06/28/2014

Matrix Spike/Duplicate Matrix Spike Summary
Organochlorine Pesticides

Sample Name:	MOA14SLG001	**Units:**	ug/Kg
Lab Code:	K1406028-018	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B	**Extraction Lot:**	KWG1406806

		MOA14SLG001MS KWG1406806-1 Matrix Spike				MOA14SLG001DMS KWG1406806-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**		**%Rec Limits**	**RPD**	**RPD Limit**
gamma-BHC (Lindane)	ND	73.0	165	44		87.0	166	53		26-135	18	40
Heptachlor	ND	73.9	165	45		89.4	166	54		21-136	19	40
Aldrin	ND	65.2	165	39		79.6	166	48		22-135	20	40
Heptachlor Epoxide	ND	69.9	165	42		86.4	166	52		25-129	21	40
gamma-Chlordane	ND	71.6	165	43		106	166	64		24-133	38	40
Endosulfan I	ND	44.1	165	27		57.8	166	35		15-119	27	40
alpha-Chlordane	ND	65.4	165	40		79.7	166	48		24-132	20	40
Dieldrin	ND	72.3	165	44		87.7	166	53		26-133	19	40
4,4'-DDE	ND	66.7	165	40		82.1	166	50		22-142	21	40
Endrin	ND	77.1	165	47		92.7	166	56		22-145	18	40
Endosulfan II	ND	65.2	165	39		76.7	166	46		13-129	16	40
4,4'-DDD	ND	77.8	165	47		91.7	166	55		19-143	16	40
Endrin Aldehyde	ND	45.6	165	28		53.2	166	32		10-129	16	40
Endosulfan Sulfate	ND	78.9	165	48		94.0	166	57		20-134	17	40
4,4'-DDT	ND	69.4	165	42		87.7	166	53		19-154	23	40
Endrin Ketone	ND	72.5	165	44		88.1	166	53		19-139	19	40
Methoxychlor	ND	79.6	165	48		98.3	166	59		24-151	21	40
Toxaphene	ND	552	827	67	#	518	828	63	#	20-155	6	40
Chlordane	ND	519	827	63	#	494	828	60	#	46-139	5	40
Mirex	ND	58.4	165	35		70.9	166	43		10-131	19	40

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Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/17/2014
Sample Matrix:	Water	**Date Analyzed:**	06/27/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Organochlorine Pesticides

Extraction Method:	EPA 3535A	**Units:**	ug/L
Analysis Method:	8081B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1406828

	Lab Control Sample KWG1406828-1 Lab Control Spike			Duplicate Lab Control Sample KWG1406828-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
gamma-BHC (Lindane)	0.142	0.200	71	0.130	0.200	65	44-117	9	30
Heptachlor	0.133	0.200	67	0.124	0.200	62	40-115	7	30
Aldrin	0.118	0.200	59	0.109	0.200	55	10-102	8	30
Heptachlor Epoxide	0.130	0.200	65	0.122	0.200	61	49-109	7	30
gamma-Chlordane	0.128	0.200	64	0.120	0.200	60	47-113	6	30
Endosulfan I	0.106	0.200	53	0.0992	0.200	50	35-115	6	30
alpha-Chlordane	0.126	0.200	63	0.120	0.200	60	45-115	5	30
Dieldrin	0.131	0.200	66	0.125	0.200	62	50-115	5	30
4,4'-DDE	0.130	0.200	65	0.123	0.200	62	41-116	5	30
Endrin	0.142	0.200	71	0.133	0.200	67	48-126	6	30
Endosulfan II	0.117	0.200	58	0.111	0.200	55	28-128	5	30
4,4'-DDD	0.138	0.200	69	0.131	0.200	65	33-132	5	30
Endrin Aldehyde	0.106	0.200	53	0.107	0.200	54	27-104	2	30
Endosulfan Sulfate	0.136	0.200	68	0.137	0.200	68	38-118	1	30
4,4'-DDT	0.135	0.200	68	0.128	0.200	64	42-143	6	30
Endrin Ketone	0.125	0.200	63	0.121	0.200	61	30-124	3	30
Methoxychlor	0.141	0.200	71	0.137	0.200	68	43-143	3	30
Toxaphene	0.761	1.00	76	0.763	1.00	76	36-137	0	30
Chlordane	0.811	1.00	81	0.778	1.00	78	45-148	4	30
Mirex	0.110	0.200	55	0.108	0.200	54	43-126	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	06/28/2014

Lab Control Spike Summary
Organochlorine Pesticides

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8081B	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1406806

	Lab Control Sample KWG1406806-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
gamma-BHC (Lindane)	66.5	100	67	40-142
Heptachlor	61.8	100	62	39-135
Aldrin	58.0	100	58	37-134
Heptachlor Epoxide	60.5	100	60	45-118
gamma-Chlordane	61.8	100	62	41-135
Endosulfan I	46.3	100	46	35-121
alpha-Chlordane	61.3	100	61	41-134
Dieldrin	65.3	100	65	46-136
4,4'-DDE	61.5	100	62	46-141
Endrin	65.8	100	66	40-152
Endosulfan II	56.4	100	56	39-128
4,4'-DDD	71.7	100	72	46-146
Endrin Aldehyde	64.9	100	65	32-132
Endosulfan Sulfate	71.1	100	71	43-138
4,4'-DDT	63.0	100	63	46-151
Endrin Ketone	69.1	100	69	47-135
Methoxychlor	66.8	100	67	42-147
Toxaphene	326	500	65	53-133
Chlordane	333	500	67	52-140
Mirex	58.2	100	58	38-123

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	MOA14ORG001	**Units:**	ug/L
Lab Code:	K1406028-001	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	0.22	0.059	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1221	ND	Ui	0.44	0.13	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1232	ND	Ui	0.22	0.067	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1242	ND	Ui	0.22	0.067	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1248	ND	Ui	0.22	0.030	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1254	ND	Ui	0.22	0.020	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1260	ND	Ui	0.22	0.036	1	06/17/14	07/01/14	KWG1406829	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	102	36-113	07/01/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	MOA14ORG002	**Units:**	ug/L
Lab Code:	K1406028-002	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	0.23	0.20	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1221	ND	Ui	0.46	0.23	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1232	ND	Ui	0.23	0.21	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1242	ND	Ui	0.23	0.18	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1248	ND	Ui	0.23	0.060	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1254	ND	Ui	0.23	0.039	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1260	ND	Ui	0.23	0.023	1	06/17/14	07/01/14	KWG1406829	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	84	36-113	07/01/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1406829-3	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.0094	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1221	ND	U	0.40	0.0094	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1232	ND	U	0.20	0.0094	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1242	ND	U	0.20	0.0094	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1248	ND	U	0.20	0.0094	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1254	ND	U	0.20	0.0094	1	06/17/14	07/01/14	KWG1406829	
Aroclor 1260	ND	U	0.20	0.0094	1	06/17/14	07/01/14	KWG1406829	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	94	36-113	07/01/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/12/2014
Sample Matrix:	Sludge, solid	**Date Received:**	06/14/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	MOA14SLG001	**Units:**	mg/Kg
Lab Code:	K1406028-018	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	0.17	0.062	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1221	ND	Ui	0.34	0.064	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1232	ND	Ui	0.17	0.079	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1242	ND	Ui	0.17	0.035	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1248	ND	Ui	0.17	0.051	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1254	ND	Ui	0.17	0.018	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1260	ND	Ui	0.17	0.017	1	06/18/14	07/01/14	KWG1406823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	77	43-148	07/01/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1406823-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.050	0.0085	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1221	ND	U	0.099	0.0085	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1232	ND	U	0.050	0.0085	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1242	ND	U	0.050	0.0085	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1248	ND	U	0.050	0.0085	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1254	ND	U	0.050	0.0085	1	06/18/14	07/01/14	KWG1406823	
Aroclor 1260	ND	U	0.050	0.0085	1	06/18/14	07/01/14	KWG1406823	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	86	43-148	07/01/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406028
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3535A **Units:** Percent
Analysis Method: 8082A **Level:** Low

Sample Name	Lab Code	Sur1
MOA14ORG001	K1406028-001	102
MOA14ORG002	K1406028-002	84
Method Blank	KWG1406829-3	94
Lab Control Sample	KWG1406829-1	80
Duplicate Lab Control Sample	KWG1406829-2	81

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 36-113

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406028
Project: 516.01
Sample Matrix: Sludge, solid

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8082A **Level:** Low

Sample Name	Lab Code	Sur1
MOA14SLG001	K1406028-018	77
Method Blank	KWG1406823-4	86
MOA14SLG001MS	KWG1406823-1	70
MOA14SLG001DMS	KWG1406823-2	72
Lab Control Sample	KWG1406823-3	76

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 43-148

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	07/01/2014

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	MOA14SLG001	**Units:**	mg/Kg
Lab Code:	K1406028-018	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A	**Extraction Lot:**	KWG1406823

		MOA14SLG001MS KWG1406823-1 Matrix Spike			MOA14SLG001DMS KWG1406823-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	ND	1.03	1.67	62	1.17	1.68	70	23-145	13	40
Aroclor 1260	ND	1.07	1.67	64	1.15	1.68	68	24-148	7	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/17/2014
Sample Matrix:	Water	**Date Analyzed:**	07/01/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3535A	**Units:**	ug/L
Analysis Method:	8082A	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1406829

	Lab Control Sample KWG1406829-1 Lab Control Spike			Duplicate Lab Control Sample KWG1406829-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	1.54	2.00	77	1.49	2.00	75	41-113	3	30
Aroclor 1260	1.89	2.00	94	1.89	2.00	95	47-117	0	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	07/01/2014

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8082A	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1406823

	Lab Control Sample KWG1406823-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Aroclor 1016	0.611	1.00	61	42-122
Aroclor 1260	0.773	1.00	77	50-124

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Organophosphorus Pesticides

Sample Name:	MOA14ORG001	**Units:**	ug/L
Lab Code:	K1406028-001	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8141B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	2.2	0.043	1	06/18/14	06/25/14	KWG1406249	
Methyl Parathion	ND	U	0.53	0.043	1	06/18/14	06/25/14	KWG1406249	
Malathion	ND	U	0.22	0.043	1	06/18/14	06/25/14	KWG1406249	
Ethyl Parathion	ND	U	0.53	0.043	1	06/18/14	06/25/14	KWG1406249	
Azinphos-methyl (Guthion)	ND	U	1.1	0.043	1	06/18/14	06/25/14	KWG1406249	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tributyl Phosphate	90	54-115	06/25/14	Acceptable
Triphenyl Phosphate	77	57-112	06/25/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Organophosphorus Pesticides

Sample Name:	MOA14ORG002	**Units:**	ug/L
Lab Code:	K1406028-002	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8141B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	2.4	0.048	1	06/18/14	06/25/14	KWG1406249	
Methyl Parathion	ND	Ui	0.60	0.11	1	06/18/14	06/25/14	KWG1406249	
Malathion	ND	U	0.24	0.048	1	06/18/14	06/25/14	KWG1406249	
Ethyl Parathion	ND	U	0.60	0.048	1	06/18/14	06/25/14	KWG1406249	
Azinphos-methyl (Guthion)	ND	Ui	1.2	0.072	1	06/18/14	06/25/14	KWG1406249	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tributyl Phosphate	136	54-115	06/25/14	Outside Control Limits
Triphenyl Phosphate	113	57-112	06/25/14	Outside Control Limits

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Organophosphorus Pesticides

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1406249-3	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8141B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	2.0	0.040	1	06/18/14	06/25/14	KWG1406249	
Methyl Parathion	ND	U	0.50	0.040	1	06/18/14	06/25/14	KWG1406249	
Malathion	ND	U	0.20	0.040	1	06/18/14	06/25/14	KWG1406249	
Ethyl Parathion	ND	U	0.50	0.040	1	06/18/14	06/25/14	KWG1406249	
Azinphos-methyl (Guthion)	ND	U	1.0	0.040	1	06/18/14	06/25/14	KWG1406249	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tributyl Phosphate	111	54-115	06/25/14	Acceptable
Triphenyl Phosphate	101	57-112	06/25/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/12/2014
Sample Matrix:	Sludge, solid	**Date Received:**	06/14/2014

Organophosphorus Pesticides

Sample Name:	MOA14SLG001	**Units:**	mg/Kg
Lab Code:	K1406028-018	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8141B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	5.6	0.13	10	06/18/14	06/30/14	KWG1407252	
Methyl Parathion	ND	U	5.6	0.088	10	06/18/14	06/30/14	KWG1407252	
Malathion	ND	U	5.6	0.13	10	06/18/14	06/30/14	KWG1407252	
Ethyl Parathion	ND	U	5.6	0.11	10	06/18/14	06/30/14	KWG1407252	
Azinphos-methyl (Guthion)	ND	U	5.6	5.6	10	06/18/14	06/30/14	KWG1407252	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tributyl Phosphate	120	70-130	06/30/14	Acceptable
Triphenyl Phosphate	160	70-130	06/30/14	Outside Control Limits

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Organophosphorus Pesticides

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1407252-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8141B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	0.034	0.0011	1	06/18/14	07/01/14	KWG1407252	
Methyl Parathion	ND	U	0.050	0.00078	1	06/18/14	07/01/14	KWG1407252	
Malathion	ND	U	0.050	0.0011	1	06/18/14	07/01/14	KWG1407252	
Ethyl Parathion	ND	U	0.050	0.00093	1	06/18/14	07/01/14	KWG1407252	
Azinphos-methyl (Guthion)	ND	U	0.034	0.034	1	06/18/14	07/01/14	KWG1407252	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tributyl Phosphate	83	70-130	07/01/14	Acceptable
Triphenyl Phosphate	84	70-130	07/01/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406028
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Organophosphorus Pesticides

Extraction Method: EPA 3535A **Units:** Percent
Analysis Method: 8141B **Level:** Low

Sample Name	Lab Code	Sur1		Sur2	
MOA14ORG001	K1406028-001	90		77	
MOA14ORG002	K1406028-002	136	*	113	*
Method Blank	KWG1406249-3	111		101	
Lab Control Sample	KWG1406249-1	101		103	
Duplicate Lab Control Sample	KWG1406249-2	98		100	

Surrogate Recovery Control Limits (%)

Sur1	=	Tributyl Phosphate	54-115
Sur2	=	Triphenyl Phosphate	57-112

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406028
Project: 516.01
Sample Matrix: Sludge, solid

Surrogate Recovery Summary
Organophosphorus Pesticides

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8141B **Level:** Low

Sample Name	Lab Code	Sur1	Sur2
MOA14SLG001	K1406028-018	120 D #	160 D #
Method Blank	KWG1407252-4	83	84
MOA14SLG001MS	KWG1407252-1	124 D #	164 D #
MOA14SLG001DMS	KWG1407252-2	88 D #	172 D #
Lab Control Sample	KWG1407252-3	86	86

Surrogate Recovery Control Limits (%)

Sur1	=	Tributyl Phosphate	70-130
Sur2	=	Triphenyl Phosphate	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	06/30/2014

Matrix Spike/Duplicate Matrix Spike Summary
Organophosphorus Pesticides

Sample Name:	MOA14SLG001	**Units:**	mg/Kg
Lab Code:	K1406028-018	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8141B	**Extraction Lot:**	KWG1407252

		MOA14SLG001MS KWG1407252-1 Matrix Spike			MOA14SLG001DMS KWG1407252-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Demeton-O,S	ND	0.424	0.446	95	0.404	0.449	90	70-130	5	40
Methyl Parathion	ND	0.379	0.446	85	0.314	0.449	70	70-130	19	40
Malathion	ND	0.290	0.446	65 *	0.314	0.449	70	70-130	8	40
Ethyl Parathion	ND	0.334	0.446	75	0.314	0.449	70	70-130	6	40
Azinphos-methyl (Guthion)	ND	ND	0.446	0 *	ND	0.449	0 *	70-130	NC	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Water	**Date Analyzed:**	06/25/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Organophosphorus Pesticides

Extraction Method:	EPA 3535A	**Units:**	ug/L
Analysis Method:	8141B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1406249

	Lab Control Sample KWG1406249-1 Lab Control Spike			Duplicate Lab Control Sample KWG1406249-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Demeton-O,S	1.67	2.00	83	1.59	2.00	79	16-100	5	30
Methyl Parathion	2.11	2.00	105	2.05	2.00	103	44-127	3	30
Malathion	1.86	2.00	93	1.82	2.00	91	43-116	2	30
Ethyl Parathion	1.96	2.00	98	1.99	2.00	100	46-127	2	30
Azinphos-methyl (Guthion)	3.57	2.00	179 *	3.44	2.00	172 *	30-151	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	07/01/2014

Lab Control Spike Summary
Organophosphorus Pesticides

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8141B	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1407252

	Lab Control Sample KWG1407252-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Demeton-O,S	0.224	0.267	84	70-130
Methyl Parathion	0.221	0.267	83	70-130
Malathion	0.205	0.267	77	70-130
Ethyl Parathion	0.216	0.267	81	70-130
Azinphos-methyl (Guthion)	0.359	0.267	135 *	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/12/2014
Sample Matrix:	Sludge, solid	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP019	**Units:**	ug/Kg
Lab Code:	K1406028-020	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	16	0.39	1	06/18/14	06/18/14	KWG1406158	
Chloromethane	ND	U	16	0.58	1	06/18/14	06/18/14	KWG1406158	
Vinyl Chloride	ND	U	16	0.58	1	06/18/14	06/18/14	KWG1406158	
Bromomethane	ND	U	16	0.64	1	06/18/14	06/18/14	KWG1406158	*
Chloroethane	ND	U	16	2.4	1	06/18/14	06/18/14	KWG1406158	
Trichlorofluoromethane	ND	U	16	0.27	1	06/18/14	06/18/14	KWG1406158	
Acrolein	ND	U	320	5.4	1	06/18/14	06/18/14	KWG1406158	*
Trichlorotrifluoroethane	ND	U	16	0.77	1	06/18/14	06/18/14	KWG1406158	
1,1-Dichloroethene	ND	U	16	0.80	1	06/18/14	06/18/14	KWG1406158	
Acetone	ND	U	64	9.3	1	06/18/14	06/18/14	KWG1406158	
Carbon Disulfide	**60**		16	0.30	1	06/18/14	06/18/14	KWG1406158	
Methylene Chloride	**12**	J	32	0.51	1	06/18/14	06/18/14	KWG1406158	
Acrylonitrile	ND	U	64	1.4	1	06/18/14	06/18/14	KWG1406158	
trans-1,2-Dichloroethene	ND	U	16	0.39	1	06/18/14	06/18/14	KWG1406158	
1,1-Dichloroethane	ND	U	16	0.39	1	06/18/14	06/18/14	KWG1406158	
Vinyl Acetate	ND	U	64	0.99	1	06/18/14	06/18/14	KWG1406158	
cis-1,2-Dichloroethene	ND	U	16	0.39	1	06/18/14	06/18/14	KWG1406158	
2-Butanone (MEK)	**1500**		64	2.9	1	06/18/14	06/18/14	KWG1406158	
Chloroform	**1.1**	J	16	0.35	1	06/18/14	06/18/14	KWG1406158	
1,1,1-Trichloroethane (TCA)	ND	U	16	0.35	1	06/18/14	06/18/14	KWG1406158	
Carbon Tetrachloride	ND	U	16	0.30	1	06/18/14	06/18/14	KWG1406158	
Benzene	**2.8**	J	16	0.18	1	06/18/14	06/18/14	KWG1406158	
1,2-Dichloroethane (EDC)	ND	U	16	0.23	1	06/18/14	06/18/14	KWG1406158	
Trichloroethene (TCE)	ND	U	16	0.48	1	06/18/14	06/18/14	KWG1406158	
1,2-Dichloropropane	ND	U	16	0.42	1	06/18/14	06/18/14	KWG1406158	
Bromodichloromethane	ND	U	16	0.51	1	06/18/14	06/18/14	KWG1406158	
2-Chloroethyl Vinyl Ether	ND	U	32	1.4	1	06/18/14	06/18/14	KWG1406158	
cis-1,3-Dichloropropene	ND	U	16	0.42	1	06/18/14	06/18/14	KWG1406158	
4-Methyl-2-pentanone (MIBK)	ND	U	64	5.8	1	06/18/14	06/18/14	KWG1406158	
Toluene	**210**		16	0.48	1	06/18/14	06/18/14	KWG1406158	
trans-1,3-Dichloropropene	ND	U	16	0.35	1	06/18/14	06/18/14	KWG1406158	
1,1,2-Trichloroethane	ND	U	16	0.48	1	06/18/14	06/18/14	KWG1406158	
Tetrachloroethene (PCE)	**19**		16	0.51	1	06/18/14	06/18/14	KWG1406158	
2-Hexanone	**640**		64	3.0	1	06/18/14	06/18/14	KWG1406158	

Comments:

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2:56 pm, Jan 09, 2015

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Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/12/2014
Sample Matrix:	Sludge, solid	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP019	**Units:**	ug/Kg
Lab Code:	K1406028-020	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	16	0.58	1	06/18/14	06/18/14	KWG1406158	
Chlorobenzene	ND	U	16	0.21	1	06/18/14	06/18/14	KWG1406158	
Ethylbenzene	**11**	J	16	0.30	1	06/18/14	06/18/14	KWG1406158	
m,p-Xylenes	**36**		16	0.32	1	06/18/14	06/18/14	KWG1406158	
o-Xylene	**14**	J	16	0.26	1	06/18/14	06/18/14	KWG1406158	
Styrene	**0.86**	J	16	0.45	1	06/18/14	06/18/14	KWG1406158	
Bromoform	ND	U	16	0.45	1	06/18/14	06/18/14	KWG1406158	
1,1,2,2-Tetrachloroethane	ND	U	16	0.42	1	06/18/14	06/18/14	KWG1406158	
1,3-Dichlorobenzene	ND	U	16	0.30	1	06/18/14	06/18/14	KWG1406158	
1,4-Dichlorobenzene	**12**	J	16	0.28	1	06/18/14	06/18/14	KWG1406158	
1,2-Dichlorobenzene	ND	U	16	0.25	1	06/18/14	06/18/14	KWG1406158	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	82-146	06/18/14	Acceptable
Toluene-d8	89	90-142	06/18/14	Outside Control Limits
4-Bromofluorobenzene	96	88-127	06/18/14	Acceptable

Comments:

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ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1406158-9	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	5.0	0.12	1	06/18/14	06/18/14	KWG1406158	
Chloromethane	ND	U	5.0	0.18	1	06/18/14	06/18/14	KWG1406158	
Vinyl Chloride	ND	U	5.0	0.18	1	06/18/14	06/18/14	KWG1406158	
Bromomethane	ND	U	5.0	0.20	1	06/18/14	06/18/14	KWG1406158	*
Chloroethane	ND	U	5.0	0.74	1	06/18/14	06/18/14	KWG1406158	
Trichlorofluoromethane	ND	U	5.0	0.085	1	06/18/14	06/18/14	KWG1406158	
Acrolein	ND	U	100	1.7	1	06/18/14	06/18/14	KWG1406158	*
Trichlorotrifluoroethane	ND	U	5.0	0.24	1	06/18/14	06/18/14	KWG1406158	
1,1-Dichloroethene	ND	U	5.0	0.25	1	06/18/14	06/18/14	KWG1406158	
Acetone	**14**	J	20	2.9	1	06/18/14	06/18/14	KWG1406158	*
Carbon Disulfide	ND	U	5.0	0.092	1	06/18/14	06/18/14	KWG1406158	
Methylene Chloride	**2.6**	J	10	0.16	1	06/18/14	06/18/14	KWG1406158	
Acrylonitrile	ND	U	20	0.43	1	06/18/14	06/18/14	KWG1406158	
trans-1,2-Dichloroethene	ND	U	5.0	0.12	1	06/18/14	06/18/14	KWG1406158	
1,1-Dichloroethane	ND	U	5.0	0.12	1	06/18/14	06/18/14	KWG1406158	
Vinyl Acetate	ND	U	20	0.31	1	06/18/14	06/18/14	KWG1406158	
cis-1,2-Dichloroethene	ND	U	5.0	0.12	1	06/18/14	06/18/14	KWG1406158	
2-Butanone (MEK)	ND	U	20	0.90	1	06/18/14	06/18/14	KWG1406158	
Chloroform	ND	U	5.0	0.11	1	06/18/14	06/18/14	KWG1406158	
1,1,1-Trichloroethane (TCA)	ND	U	5.0	0.11	1	06/18/14	06/18/14	KWG1406158	
Carbon Tetrachloride	ND	U	5.0	0.094	1	06/18/14	06/18/14	KWG1406158	
Benzene	ND	U	5.0	0.054	1	06/18/14	06/18/14	KWG1406158	
1,2-Dichloroethane (EDC)	ND	U	5.0	0.070	1	06/18/14	06/18/14	KWG1406158	
Trichloroethene (TCE)	ND	U	5.0	0.15	1	06/18/14	06/18/14	KWG1406158	
1,2-Dichloropropane	ND	U	5.0	0.13	1	06/18/14	06/18/14	KWG1406158	
Bromodichloromethane	ND	U	5.0	0.16	1	06/18/14	06/18/14	KWG1406158	
2-Chloroethyl Vinyl Ether	ND	U	10	0.43	1	06/18/14	06/18/14	KWG1406158	
cis-1,3-Dichloropropene	ND	U	5.0	0.13	1	06/18/14	06/18/14	KWG1406158	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1.8	1	06/18/14	06/18/14	KWG1406158	
Toluene	**0.19**	J	5.0	0.15	1	06/18/14	06/18/14	KWG1406158	
trans-1,3-Dichloropropene	ND	U	5.0	0.11	1	06/18/14	06/18/14	KWG1406158	
1,1,2-Trichloroethane	ND	U	5.0	0.15	1	06/18/14	06/18/14	KWG1406158	
Tetrachloroethene (PCE)	ND	U	5.0	0.16	1	06/18/14	06/18/14	KWG1406158	
2-Hexanone	ND	U	20	0.93	1	06/18/14	06/18/14	KWG1406158	

Comments:

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Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1406158-9	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibromochloromethane	ND	U	5.0	0.18	1	06/18/14	06/18/14	KWG1406158	
Chlorobenzene	ND	U	5.0	0.065	1	06/18/14	06/18/14	KWG1406158	
Ethylbenzene	ND	U	5.0	0.094	1	06/18/14	06/18/14	KWG1406158	
m,p-Xylenes	ND	U	5.0	0.10	1	06/18/14	06/18/14	KWG1406158	
o-Xylene	ND	U	5.0	0.081	1	06/18/14	06/18/14	KWG1406158	
Styrene	ND	U	5.0	0.14	1	06/18/14	06/18/14	KWG1406158	
Bromoform	ND	U	5.0	0.14	1	06/18/14	06/18/14	KWG1406158	
1,1,2,2-Tetrachloroethane	ND	U	5.0	0.13	1	06/18/14	06/18/14	KWG1406158	
1,3-Dichlorobenzene	ND	U	5.0	0.094	1	06/18/14	06/18/14	KWG1406158	
1,4-Dichlorobenzene	**0.13**	J	5.0	0.086	1	06/18/14	06/18/14	KWG1406158	
1,2-Dichlorobenzene	**0.12**	J	5.0	0.077	1	06/18/14	06/18/14	KWG1406158	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	82-146	06/18/14	Acceptable
Toluene-d8	97	90-142	06/18/14	Acceptable
4-Bromofluorobenzene	95	88-127	06/18/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406028
Project: 516.01
Sample Matrix: Sludge, solid

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030A **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2		Sur3
MOA14VOP019	K1406028-020	104	89	*	96
Method Blank	KWG1406158-9	102	97		95
MOA14VOP019MS	KWG1406158-3	111	92		90
MOA14VOP019DMS	KWG1406158-4	105	89	*	92
Lab Control Sample	KWG1406158-7	100	96		96
Duplicate Lab Control Sample	KWG1406158-8	107	104		96

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	82-146
Sur2	=	Toluene-d8	90-142
Sur3	=	4-Bromofluorobenzene	88-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

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QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	06/18/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	MOA14VOP019	**Units:**	ug/Kg
Lab Code:	K1406028-020	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1406158

		MOA14VOP019MS KWG1406158-3 Matrix Spike				MOA14VOP019DMS KWG1406158-4 Duplicate Matrix Spike						
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**		**%Rec Limits**	**RPD**	**RPD Limit**
Vinyl Chloride	ND	116	166	70		80.8	161	50		31-140	36	40
1,1-Dichloroethene	ND	72.5	166	44		57.3	161	36		31-153	23	40
Chloroform	1.1	53.8	166	32	*	39.5	161	24	*	43-133	31	40
Carbon Tetrachloride	ND	30.4	166	18		24.6	161	15		10-144	21	40
Benzene	2.8	49.8	166	28	*	37.3	161	21	*	30-137	29	40
Trichloroethene (TCE)	ND	31.0	166	19		23.4	161	15	*	18-145	28	40
Bromodichloromethane	ND	28.2	166	17		19.8	161	12	*	14-146	35	40
Toluene	210	369	166	96		260	161	31		24-142	35	40
1,1,2-Trichloroethane	ND	44.0	166	26	*	30.3	161	19	*	35-130	37	40
2-Hexanone	640	1020	831	46		680	807	5	*	15-162	40	40
Chlorobenzene	ND	16.4	166	10	*	13.8	161	9	*	15-124	17	40
Ethylbenzene	11	29.6	166	11	*	23.3	161	8	*	13-128	24	40
1,2-Dichlorobenzene	ND	7.75	166	5	*	6.13	161	4	*	10-124	23	40

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	06/18/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030A	**Units:**	ug/Kg
Analysis Method:	8260C	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1406158

	Lab Control Sample KWG1406158-7 Lab Control Spike				Duplicate Lab Control Sample KWG1406158-8 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dichlorodifluoromethane	49.1	50.0	98		48.3	50.0	97	38-160	2	40
Chloromethane	52.7	50.0	105		52.4	50.0	105	37-146	1	40
Vinyl Chloride	52.1	50.0	104		51.5	50.0	103	54-127	1	40
Bromomethane	38.2	50.0	76		37.0	50.0	74	22-180	3	40
Chloroethane	50.0	50.0	100		50.9	50.0	102	51-122	2	40
Trichlorofluoromethane	46.7	50.0	93		46.2	50.0	92	51-140	1	40
Acrolein	ND	100	0	*	21.5	100	22	10-218	NC	40
Trichlorotrifluoroethane	48.0	50.0	96		47.6	50.0	95	53-135	1	40
1,1-Dichloroethene	57.4	50.0	115		56.4	50.0	113	64-152	2	40
Acetone	209	250	83		261	250	105	32-135	22	40
Carbon Disulfide	114	100	114		115	100	115	55-141	1	40
Methylene Chloride	48.1	50.0	96		49.5	50.0	99	65-122	3	40
Acrylonitrile	132	100	132		151	100	151	18-179	14	40
trans-1,2-Dichloroethene	53.2	50.0	106		53.7	50.0	107	63-127	1	40
1,1-Dichloroethane	50.8	50.0	102		53.1	50.0	106	59-137	4	40
Vinyl Acetate	164	180	91		175	180	97	45-158	6	40
cis-1,2-Dichloroethene	50.2	50.0	100		51.3	50.0	103	62-138	2	40
2-Butanone (MEK)	213	250	85		255	250	102	54-116	18	40
Chloroform	49.3	50.0	99		50.9	50.0	102	61-137	3	40
1,1,1-Trichloroethane (TCA)	50.5	50.0	101		49.8	50.0	100	59-146	1	40
Carbon Tetrachloride	52.1	50.0	104		52.4	50.0	105	51-135	1	40
Benzene	52.4	50.0	105		53.6	50.0	107	68-122	2	40
1,2-Dichloroethane (EDC)	50.9	50.0	102		54.5	50.0	109	65-121	7	40
Trichloroethene (TCE)	54.1	50.0	108		52.6	50.0	105	67-126	3	40
1,2-Dichloropropane	53.3	50.0	107		54.3	50.0	109	71-121	2	40
Bromodichloromethane	51.9	50.0	104		53.5	50.0	107	61-143	3	40
2-Chloroethyl Vinyl Ether	47.2	50.0	94		50.2	50.0	100	63-130	6	40
cis-1,3-Dichloropropene	47.9	50.0	96		49.5	50.0	99	58-138	3	40
4-Methyl-2-pentanone (MIBK)	264	250	106		295	250	118	69-126	11	40
Toluene	49.3	50.0	99		50.3	50.0	101	75-117	2	40
trans-1,3-Dichloropropene	48.6	50.0	97		48.1	50.0	96	63-121	1	40
1,1,2-Trichloroethane	52.1	50.0	104		53.2	50.0	106	72-118	2	40
Tetrachloroethene (PCE)	52.5	50.0	105		50.4	50.0	101	66-126	4	40
2-Hexanone	238	250	95		253	250	101	67-121	6	40
Dibromochloromethane	54.4	50.0	109		53.9	50.0	108	69-120	1	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/18/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	06/18/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030A	**Units:**	ug/Kg
Analysis Method:	8260C	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1406158

	Lab Control Sample KWG1406158-7 Lab Control Spike			Duplicate Lab Control Sample KWG1406158-8 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chlorobenzene	51.9	50.0	104	50.6	50.0	101	70-116	3	40
Ethylbenzene	52.4	50.0	105	49.8	50.0	100	70-118	5	40
m,p-Xylenes	104	100	104	101	100	101	69-127	3	40
o-Xylene	50.4	50.0	101	49.0	50.0	98	69-124	3	40
Styrene	53.0	50.0	106	51.9	50.0	104	62-135	2	40
Bromoform	53.9	50.0	108	54.9	50.0	110	62-134	2	40
1,1,2,2-Tetrachloroethane	50.8	50.0	102	52.8	50.0	106	60-128	4	40
1,3-Dichlorobenzene	51.7	50.0	103	49.7	50.0	99	69-128	4	40
1,4-Dichlorobenzene	51.0	50.0	102	49.6	50.0	99	69-125	3	40
1,2-Dichlorobenzene	49.7	50.0	99	48.3	50.0	97	67-124	3	40

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/12/2014
Sample Matrix:	Sludge, solid	**Date Received:**	06/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14SLG001	**Units:**	mg/Kg
Lab Code:	K1406028-018	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	38	0.48	1	06/23/14	06/26/14	KWG1406329	
Bis(2-chloroethyl) Ether	ND	U	6.3	0.23	1	06/23/14	06/26/14	KWG1406329	
Phenol	ND	Ui	6.3	0.73	1	06/23/14	06/26/14	KWG1406329	
2-Chlorophenol	ND	U	6.3	0.19	1	06/23/14	06/26/14	KWG1406329	
Bis(2-chloroisopropyl) Ether	ND	U	6.3	0.27	1	06/23/14	06/26/14	KWG1406329	
Hexachloroethane	ND	U	6.3	0.42	1	06/23/14	06/26/14	KWG1406329	
N-Nitrosodi-n-propylamine	ND	U	6.3	0.36	1	06/23/14	06/26/14	KWG1406329	
Nitrobenzene	ND	U	6.3	0.50	1	06/23/14	06/26/14	KWG1406329	
Isophorone	ND	U	6.3	0.27	1	06/23/14	06/26/14	KWG1406329	
2-Nitrophenol	ND	U	6.3	0.27	1	06/23/14	06/26/14	KWG1406329	
2,4-Dimethylphenol	ND	U	6.3	0.29	1	06/23/14	06/26/14	KWG1406329	
Bis(2-chloroethoxy)methane	ND	U	6.3	0.21	1	06/23/14	06/26/14	KWG1406329	
2,4-Dichlorophenol	ND	U	6.3	0.31	1	06/23/14	06/26/14	KWG1406329	
1,2,4-Trichlorobenzene	ND	U	6.3	0.21	1	06/23/14	06/26/14	KWG1406329	
Naphthalene	**0.29**	J	6.3	0.27	1	06/23/14	06/26/14	KWG1406329	
Hexachlorobutadiene	ND	U	6.3	0.27	1	06/23/14	06/26/14	KWG1406329	
4-Chloro-3-methylphenol	ND	U	6.3	0.33	1	06/23/14	06/26/14	KWG1406329	
Hexachlorocyclopentadiene	ND	U	6.3	0.23	1	06/23/14	06/26/14	KWG1406329	
2,4,6-Trichlorophenol	ND	U	6.3	0.27	1	06/23/14	06/26/14	KWG1406329	
2-Chloronaphthalene	ND	U	6.3	0.19	1	06/23/14	06/26/14	KWG1406329	
Acenaphthylene	ND	U	6.3	0.31	1	06/23/14	06/26/14	KWG1406329	
Dimethyl Phthalate	ND	U	6.3	0.31	1	06/23/14	06/26/14	KWG1406329	
2,6-Dinitrotoluene	ND	U	6.3	0.31	1	06/23/14	06/26/14	KWG1406329	
Acenaphthene	ND	U	6.3	0.25	1	06/23/14	06/26/14	KWG1406329	
2,4-Dinitrophenol	ND	U	38	2.1	1	06/23/14	06/26/14	KWG1406329	
4-Nitrophenol	ND	U	38	2.9	1	06/23/14	06/26/14	KWG1406329	
2,4-Dinitrotoluene	ND	U	6.3	0.29	1	06/23/14	06/26/14	KWG1406329	
Fluorene	**0.32**	J	6.3	0.25	1	06/23/14	06/26/14	KWG1406329	
4-Chlorophenyl Phenyl Ether	ND	U	6.3	0.31	1	06/23/14	06/26/14	KWG1406329	
Diethyl Phthalate	ND	U	6.3	0.27	1	06/23/14	06/26/14	KWG1406329	
2-Methyl-4,6-dinitrophenol	ND	U	38	2.7	1	06/23/14	06/26/14	KWG1406329	
N-Nitrosodiphenylamine	ND	U	6.3	0.34	1	06/23/14	06/26/14	KWG1406329	
1,2-Diphenylhydrazine†	ND	U	6.3	0.27	1	06/23/14	06/26/14	KWG1406329	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/12/2014
Sample Matrix:	Sludge, solid	**Date Received:**	06/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14SLG001	**Units:**	mg/Kg
Lab Code:	K1406028-018	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Bromophenyl Phenyl Ether	ND	U	6.3	0.23	1	06/23/14	06/26/14	KWG1406329	
Hexachlorobenzene	ND	U	6.3	0.29	1	06/23/14	06/26/14	KWG1406329	
Pentachlorophenol	ND	U	38	2.5	1	06/23/14	06/26/14	KWG1406329	
Phenanthrene	**2.2**	J	6.3	0.19	1	06/23/14	06/26/14	KWG1406329	
Anthracene	**0.31**	J	6.3	0.27	1	06/23/14	06/26/14	KWG1406329	
Di-n-butyl Phthalate	**0.84**	J	6.3	0.23	1	06/23/14	06/26/14	KWG1406329	
Fluoranthene	**2.2**	J	6.3	0.21	1	06/23/14	06/26/14	KWG1406329	
Benzidine	ND	U	38	8.0	1	06/23/14	06/26/14	KWG1406329	*
Pyrene	**1.4**	J	6.3	0.27	1	06/23/14	06/26/14	KWG1406329	
Butyl Benzyl Phthalate	ND	U	6.3	0.31	1	06/23/14	06/26/14	KWG1406329	
3,3'-Dichlorobenzidine	ND	U	6.3	0.51	1	06/23/14	06/26/14	KWG1406329	
Benz(a)anthracene	**0.53**	J	6.3	0.23	1	06/23/14	06/26/14	KWG1406329	
Chrysene	**0.52**	J	6.3	0.23	1	06/23/14	06/26/14	KWG1406329	
Bis(2-ethylhexyl) Phthalate	**21**		6.3	0.36	1	06/23/14	06/26/14	KWG1406329	
Di-n-octyl Phthalate	ND	U	6.3	0.46	1	06/23/14	06/26/14	KWG1406329	
Benzo(b)fluoranthene	**0.63**	J	6.3	0.33	1	06/23/14	06/26/14	KWG1406329	
Benzo(k)fluoranthene	ND	U	6.3	0.36	1	06/23/14	06/26/14	KWG1406329	
Benzo(a)pyrene	**0.44**	J	6.3	0.38	1	06/23/14	06/26/14	KWG1406329	
Indeno(1,2,3-cd)pyrene	ND	U	6.3	0.74	1	06/23/14	06/26/14	KWG1406329	
Dibenz(a,h)anthracene	ND	U	6.3	0.51	1	06/23/14	06/26/14	KWG1406329	
Benzo(g,h,i)perylene	ND	U	6.3	0.38	1	06/23/14	06/26/14	KWG1406329	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	53	20-83	06/26/14	Acceptable
Phenol-d6	65	26-106	06/26/14	Acceptable
Nitrobenzene-d5	66	29-116	06/26/14	Acceptable
2-Fluorobiphenyl	87	32-104	06/26/14	Acceptable
2,4,6-Tribromophenol	65	20-123	06/26/14	Acceptable
Terphenyl-d14	31	37-133	06/26/14	Outside Control Limits

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	06/12/2014
Sample Matrix:	Sludge, solid	**Date Received:**	06/14/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14SLG001	**Units:**	mg/Kg
Lab Code:	K1406028-018	**Basis:**	Dry

† **Analyte Comments**

1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1406329-3	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	2.0	0.025	1	06/23/14	06/26/14	KWG1406329	
Bis(2-chloroethyl) Ether	ND	U	0.33	0.012	1	06/23/14	06/26/14	KWG1406329	
Phenol	ND	U	0.33	0.019	1	06/23/14	06/26/14	KWG1406329	
2-Chlorophenol	ND	U	0.33	0.0099	1	06/23/14	06/26/14	KWG1406329	
Bis(2-chloroisopropyl) Ether	ND	U	0.33	0.014	1	06/23/14	06/26/14	KWG1406329	
Hexachloroethane	ND	U	0.33	0.022	1	06/23/14	06/26/14	KWG1406329	
N-Nitrosodi-n-propylamine	ND	U	0.33	0.019	1	06/23/14	06/26/14	KWG1406329	
Nitrobenzene	ND	U	0.33	0.026	1	06/23/14	06/26/14	KWG1406329	
Isophorone	ND	U	0.33	0.014	1	06/23/14	06/26/14	KWG1406329	
2-Nitrophenol	ND	U	0.33	0.014	1	06/23/14	06/26/14	KWG1406329	
2,4-Dimethylphenol	ND	U	0.33	0.015	1	06/23/14	06/26/14	KWG1406329	
Bis(2-chloroethoxy)methane	ND	U	0.33	0.011	1	06/23/14	06/26/14	KWG1406329	
2,4-Dichlorophenol	ND	U	0.33	0.016	1	06/23/14	06/26/14	KWG1406329	
1,2,4-Trichlorobenzene	ND	U	0.33	0.011	1	06/23/14	06/26/14	KWG1406329	
Naphthalene	ND	U	0.33	0.014	1	06/23/14	06/26/14	KWG1406329	
Hexachlorobutadiene	ND	U	0.33	0.014	1	06/23/14	06/26/14	KWG1406329	
4-Chloro-3-methylphenol	ND	U	0.33	0.017	1	06/23/14	06/26/14	KWG1406329	
Hexachlorocyclopentadiene	ND	U	0.34	0.012	1	06/23/14	06/26/14	KWG1406329	
2,4,6-Trichlorophenol	ND	U	0.33	0.014	1	06/23/14	06/26/14	KWG1406329	
2-Chloronaphthalene	ND	U	0.33	0.010	1	06/23/14	06/26/14	KWG1406329	
Acenaphthylene	ND	U	0.33	0.016	1	06/23/14	06/26/14	KWG1406329	
Dimethyl Phthalate	ND	U	0.33	0.016	1	06/23/14	06/26/14	KWG1406329	
2,6-Dinitrotoluene	ND	U	0.33	0.016	1	06/23/14	06/26/14	KWG1406329	
Acenaphthene	ND	U	0.33	0.013	1	06/23/14	06/26/14	KWG1406329	
2,4-Dinitrophenol	ND	U	2.0	0.11	1	06/23/14	06/26/14	KWG1406329	
4-Nitrophenol	ND	U	2.0	0.15	1	06/23/14	06/26/14	KWG1406329	
2,4-Dinitrotoluene	ND	U	0.33	0.015	1	06/23/14	06/26/14	KWG1406329	
Fluorene	ND	U	0.33	0.013	1	06/23/14	06/26/14	KWG1406329	
4-Chlorophenyl Phenyl Ether	ND	U	0.33	0.016	1	06/23/14	06/26/14	KWG1406329	
Diethyl Phthalate	ND	U	0.33	0.014	1	06/23/14	06/26/14	KWG1406329	
2-Methyl-4,6-dinitrophenol	ND	U	2.0	0.14	1	06/23/14	06/26/14	KWG1406329	
N-Nitrosodiphenylamine	ND	U	0.33	0.018	1	06/23/14	06/26/14	KWG1406329	
1,2-Diphenylhydrazine†	ND	U	0.33	0.014	1	06/23/14	06/26/14	KWG1406329	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1406329-3	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Bromophenyl Phenyl Ether	ND	U	0.33	0.012	1	06/23/14	06/26/14	KWG1406329	
Hexachlorobenzene	ND	U	0.33	0.015	1	06/23/14	06/26/14	KWG1406329	
Pentachlorophenol	ND	U	2.0	0.13	1	06/23/14	06/26/14	KWG1406329	
Phenanthrene	ND	U	0.33	0.010	1	06/23/14	06/26/14	KWG1406329	
Anthracene	ND	U	0.33	0.014	1	06/23/14	06/26/14	KWG1406329	
Di-n-butyl Phthalate	ND	U	0.33	0.012	1	06/23/14	06/26/14	KWG1406329	
Fluoranthene	ND	U	0.33	0.011	1	06/23/14	06/26/14	KWG1406329	
Benzidine	ND	U	2.0	0.42	1	06/23/14	06/26/14	KWG1406329	*
Pyrene	ND	U	0.33	0.014	1	06/23/14	06/26/14	KWG1406329	
Butyl Benzyl Phthalate	ND	U	0.33	0.016	1	06/23/14	06/26/14	KWG1406329	
3,3'-Dichlorobenzidine	ND	U	0.33	0.027	1	06/23/14	06/26/14	KWG1406329	
Benz(a)anthracene	ND	U	0.33	0.012	1	06/23/14	06/26/14	KWG1406329	
Chrysene	ND	U	0.33	0.012	1	06/23/14	06/26/14	KWG1406329	
Bis(2-ethylhexyl) Phthalate	ND	U	0.33	0.019	1	06/23/14	06/26/14	KWG1406329	
Di-n-octyl Phthalate	ND	U	0.33	0.024	1	06/23/14	06/26/14	KWG1406329	
Benzo(b)fluoranthene	ND	U	0.33	0.017	1	06/23/14	06/26/14	KWG1406329	
Benzo(k)fluoranthene	ND	U	0.33	0.019	1	06/23/14	06/26/14	KWG1406329	
Benzo(a)pyrene	ND	U	0.33	0.020	1	06/23/14	06/26/14	KWG1406329	
Indeno(1,2,3-cd)pyrene	ND	U	0.33	0.039	1	06/23/14	06/26/14	KWG1406329	
Dibenz(a,h)anthracene	ND	U	0.33	0.027	1	06/23/14	06/26/14	KWG1406329	
Benzo(g,h,i)perylene	ND	U	0.33	0.020	1	06/23/14	06/26/14	KWG1406329	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	53	20-83	06/26/14	Acceptable
Phenol-d6	55	26-106	06/26/14	Acceptable
Nitrobenzene-d5	52	29-116	06/26/14	Acceptable
2-Fluorobiphenyl	62	32-104	06/26/14	Acceptable
2,4,6-Tribromophenol	53	20-123	06/26/14	Acceptable
Terphenyl-d14	74	37-133	06/26/14	Acceptable

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1406329-3	**Basis:**	Dry

† **Analyte Comments**

1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406028
Project: 516.01
Sample Matrix: Sludge, solid

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8270D **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4	Sur5	Sur6	
MOA14SLG001	K1406028-018	53	65	66	87	65	31	*
Method Blank	KWG1406329-3	53	55	52	62	53	74	
Lab Control Sample	KWG1406329-1	57	62	60	72	66	63	
Duplicate Lab Control Sample	KWG1406329-2	60	62	59	71	64	59	

Surrogate Recovery Control Limits (%)

Sur1 =	2-Fluorophenol	20-83	Sur5 =	2,4,6-Tribromophenol	20-123
Sur2 =	Phenol-d6	26-106	Sur6 =	Terphenyl-d14	37-133
Sur3 =	Nitrobenzene-d5	29-116			
Sur4 =	2-Fluorobiphenyl	32-104			

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/23/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	06/26/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8270D	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1406329

	Lab Control Sample KWG1406329-1 Lab Control Spike			Duplicate Lab Control Sample KWG1406329-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
N-Nitrosodimethylamine	1.78	3.33	54	1.85	3.33	55	35-105	3	40
Bis(2-chloroethyl) Ether	2.24	3.33	67	2.14	3.33	64	42-97	5	40
Phenol	2.22	3.33	67	2.22	3.33	67	40-87	0	40
2-Chlorophenol	2.13	3.33	64	2.15	3.33	64	43-93	1	40
Bis(2-chloroisopropyl) Ether	2.23	3.33	67	2.06	3.33	62	39-94	8	40
Hexachloroethane	2.03	3.33	61	2.11	3.33	63	40-96	4	40
N-Nitrosodi-n-propylamine	2.13	3.33	64	2.13	3.33	64	46-103	0	40
Nitrobenzene	2.11	3.33	63	1.99	3.33	60	46-99	6	40
Isophorone	2.16	3.33	65	2.12	3.33	64	42-93	2	40
2-Nitrophenol	2.42	3.33	73	2.42	3.33	72	44-95	0	40
2,4-Dimethylphenol	2.36	3.33	71	2.27	3.33	68	29-93	4	40
Bis(2-chloroethoxy)methane	2.36	3.33	71	2.20	3.33	66	45-93	7	40
2,4-Dichlorophenol	2.32	3.33	70	2.37	3.33	71	43-94	2	40
1,2,4-Trichlorobenzene	2.35	3.33	71	2.21	3.33	66	42-91	6	40
Naphthalene	2.41	3.33	72	2.26	3.33	68	44-92	7	40
Hexachlorobutadiene	2.18	3.33	65	2.17	3.33	65	42-99	1	40
4-Chloro-3-methylphenol	2.46	3.33	74	2.30	3.33	69	44-101	7	40
Hexachlorocyclopentadiene	1.51	3.33	45	1.47	3.33	44	10-68	3	40
2,4,6-Trichlorophenol	2.60	3.33	78	2.43	3.33	73	46-101	7	40
2-Chloronaphthalene	2.52	3.33	76	2.50	3.33	75	44-95	1	40
Acenaphthylene	2.72	3.33	82	2.48	3.33	74	48-105	9	40
Dimethyl Phthalate	2.79	3.33	84	2.49	3.33	75	48-113	12	40
2,6-Dinitrotoluene	2.84	3.33	85	2.60	3.33	78	49-114	9	40
Acenaphthene	2.56	3.33	77	2.48	3.33	74	49-97	3	40
2,4-Dinitrophenol	2.56	3.33	77	2.26	3.33	68	28-116	12	40
4-Nitrophenol	2.53	3.33	76	2.27	3.33	68	41-121	11	40
2,4-Dinitrotoluene	3.01	3.33	90	2.67	3.33	80	48-119	12	40
Fluorene	2.85	3.33	86	2.61	3.33	78	46-103	9	40
4-Chlorophenyl Phenyl Ether	2.84	3.33	85	2.54	3.33	76	46-105	11	40
Diethyl Phthalate	2.78	3.33	84	2.52	3.33	76	45-121	10	40
2-Methyl-4,6-dinitrophenol	2.82	3.33	85	2.64	3.33	79	41-119	6	40
N-Nitrosodiphenylamine	3.02	3.33	91	2.63	3.33	79	44-113	14	40
1,2-Diphenylhydrazine	2.63	3.33	79	2.27	3.33	68	45-111	15	40
4-Bromophenyl Phenyl Ether	2.77	3.33	83	2.67	3.33	80	49-110	4	40
Hexachlorobenzene	2.75	3.33	82	2.59	3.33	78	50-109	6	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Extracted:**	06/23/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	06/26/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8270D	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1406329

	Lab Control Sample KWG1406329-1 Lab Control Spike				Duplicate Lab Control Sample KWG1406329-2 Duplicate Lab Control Spike						
Analyte Name	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**		**%Rec Limits**	**RPD**	**RPD Limit**
Pentachlorophenol	2.36	3.33	71		2.27	3.33	68		44-109	4	40
Phenanthrene	2.91	3.33	87		2.82	3.33	85		52-108	3	40
Anthracene	2.96	3.33	89		2.91	3.33	87		53-106	1	40
Di-n-butyl Phthalate	2.95	3.33	89		2.77	3.33	83		52-117	6	40
Fluoranthene	2.71	3.33	81		2.61	3.33	78		47-117	4	40
Benzidine	3.26	5.00	65	*	3.04	5.00	61	*	70-130	7	40
Pyrene	2.28	3.33	68		2.18	3.33	66		53-124	4	40
Butyl Benzyl Phthalate	2.85	3.33	85		2.74	3.33	82		53-114	4	40
3,3'-Dichlorobenzidine	3.18	3.33	95		2.98	3.33	89		50-112	7	40
Benz(a)anthracene	3.16	3.33	95		2.91	3.33	87		54-109	8	40
Chrysene	2.90	3.33	87		2.72	3.33	82		53-109	7	40
Bis(2-ethylhexyl) Phthalate	2.95	3.33	89		2.72	3.33	82		51-115	8	40
Di-n-octyl Phthalate	3.16	3.33	95		3.04	3.33	91		51-121	4	40
Benzo(b)fluoranthene	3.02	3.33	91		2.88	3.33	86		53-110	5	40
Benzo(k)fluoranthene	2.95	3.33	89		2.82	3.33	85		52-112	5	40
Benzo(a)pyrene	3.03	3.33	91		2.91	3.33	87		51-114	4	40
Indeno(1,2,3-cd)pyrene	2.77	3.33	83		2.58	3.33	77		53-112	7	40
Dibenz(a,h)anthracene	2.72	3.33	82		2.48	3.33	74		53-114	9	40
Benzo(g,h,i)perylene	2.74	3.33	82		2.46	3.33	74		50-110	11	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

10450 Stancliff Rd., Suite 210
Houston, TX 77099
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www.alsglobal.com

July 07, 2014 Service Request No: K1406028

Howard Holmes.

ALS Environmental
1317 South 13th Avenue
Kelso, WA 98626

Laboratory Results for: Kinnetic Laboratories, Incorporated.

Dear Howard:

Enclosed are the results of the sample(s) submitted to our laboratory on June 18, 2014. For Your reference, these analyses have been assigned our service request number: **K1406028**.

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.
All results are intended to be considered in their entirety, and 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. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My direct line is 281-575-2279. You may also contact me via email at Arthi.Kodur@alsglobal.com

Respectfully submitted,

ALS Group USA Corp., dba ALS Environmental

for

Arthi Kodur
Project Manager

For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com.

RIGHT SOLUTIONS | RIGHT PARTNER

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories, Incorporated	**Service Request No.:**	K1406028
Project:	516.01	**Date Received:**	6/18/14
Sample Matrix:	Water and Sludge		

ALS ENVIRONMENTAL NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Two water samples and one sludge sample were received for analysis at ALS Environmental on 6/18/14.

Please note the reporting forms are currently referencing the date ALS Environmental-Jacksonville received the samples (6/14/14) and not the date ALS Environmental-Houston received the samples (7/7/14).

The samples were received at 0°C in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

MS/MSD

EQ1400322: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of an MS/MSD for this extraction batch. The batch quality control criteria were met.

EQ1400344: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of an MS/MSD for this extraction batch. The batch quality control criteria were met.

2378-TCDF

Samples analyzed on the DB-5MSUI column were analyzed under conditions were sufficient separation between 2,3,7,8-TCDF and its closest eluter was achieved. Confirmation of this result was not required.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Service Request Summary

Folder #: **K1406028**
Client Name: Kinnetic Laboratories, Incorporated
Project Name: 516.01
Project Number:

Report To: Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501
Phone Number: 907-276-6178
Cell Number: 907-632-4108
Fax Number:
E-mail: glawley@kinneticlabs.com

Project Chemist: Arthi Kodur
Originating Lab: KELSO
Logged By: ARYNEVICH
Date Received: 6/14/14
Internal Due Date: 7/3/14
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N,Y
Report to MDL?: N,Y
P.O. Number: AK14-1003
EDD: BASIC_WQC

8 - 1000 mL-Glass Bottle NM AMBER Ascorbic Acid
6 - 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserv
4 - 500 mL-Plastic Bottle NM CLEAR HNO3
4 - 500 mL-Fluoropoly Blue Label HCL
3 - 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
2 - 500 ml-Plastic Bottle WM CLEAR NaOH
2 - 1000 mL-Glass Bottle NM AMBER Teflon Liner HCL
2 - 16 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
2 - 1000 mL-Plastic Bottle NM CLEAR Unpreserved

Location: K-Delilah-23, K-Disposed, SampleCustodian, EHRMS-WIC 3A, SUBBED, K-PETUNIA-01

NPDES

				KELSO			KELSO								KELSO	
Lab Samp No.	**Client Samp No.**	**Matrix**	**Collected**	1664A/ OG HEM	9012B/ CN Tot	SM 4500-CN- E/ CN T LL	1631E/ Hg LL D	1631E/ Hg LL T	200.8/ Metals D	200.8/ Metals T	245.1/ Hg D	245.1/ Hg T	6020A/ Metals T	7471B/ Hg	8081B/ Pest OC	8082/ PCB
K1406028-001	MOA14ORG001	Water	6/11/14 0900												II	II
K1406028-002	MOA14ORG002	Water	6/11/14 0900												II	II
K1406028-003	MOA14O&G001	Water	6/11/14 0900	II												
K1406028-004	MOA14O&G002	Water	6/11/14 0900	II												
K1406028-005	MOA14MET005	Water	6/11/14 0900							II		II				
K1406028-006	MOA14MET006	Water	6/11/14 0900						II		II					
K1406028-007	MOA14MET007	Water	6/11/14 0900							II		II				
K1406028-008	MOA14MET008	Water	6/11/14 0900						II		II					
K1406028-009	MOA14TCN011	Water	6/11/14 0900			II										
K1406028-010	MOA14TCN012	Water	6/11/14 0900			II										
K1406028-011	MOA14ASB001	Water	6/11/14 0900													
K1406028-012	MOA14ASB002	Water	6/11/14 0900													
K1406028-013	MOA14MRC005	Water	6/11/14 0900					II								
K1406028-014	MOA14MRC006	Water	6/11/14 0900				II									
K1406028-015	MOA14MRC007	Water	6/11/14 0900					II								
K1406028-016	MOA14MRC008	Water	6/11/14 0900				II									
K1406028-017	MOA14DXN001	Sludge,	6/12/14 1000													
K1406028-018	MOA14SLG001	Sludge,	6/12/14 1000		II								II	II	II	II
K1406028-019	MOA14ASB003	Sludge,	6/12/14 1000													
K1406028-020	MOA14VOP019	Sludge,	6/12/14 1000													

Run QC on sample K1406028-002 for 625/SVO

Folder #: **K1406028**
Client Name: Kinnetic Laboratories, Incorporated
Project Name: 516.01
Project Number:

				KELSO	KELSO		KELSO	KELSO		SVM	Cincinnati
Lab Samp No.	**Client Samp No.**	**Matrix**	**Collected**	8141A/ PEST_OP	625/ SVO	8270D/ SVO	TS-MET/ Total Solids	8260C/ VOC FP	Screen VOA GCMS/ SCREEN_VOAG CMS	8290/ PCDD PCDF	None/ Misc Out 1
K1406028-001	MOA14ORG001	Water	6/11/14 0900	**II**	**II**					**II**	
K1406028-002	MOA14ORG002	Water	6/11/14 0900	**II**	**II**					**II**	
K1406028-003	MOA14O&G001	Water	6/11/14 0900								
K1406028-004	MOA14O&G002	Water	6/11/14 0900								
K1406028-005	MOA14MET005	Water	6/11/14 0900								
K1406028-006	MOA14MET006	Water	6/11/14 0900								
K1406028-007	MOA14MET007	Water	6/11/14 0900								
K1406028-008	MOA14MET008	Water	6/11/14 0900								
K1406028-009	MOA14TCN011	Water	6/11/14 0900								
K1406028-010	MOA14TCN012	Water	6/11/14 0900								
K1406028-011	MOA14ASB001	Water	6/11/14 0900								**II**
K1406028-012	MOA14ASB002	Water	6/11/14 0900								**II**
K1406028-013	MOA14MRC005	Water	6/11/14 0900								
K1406028-014	MOA14MRC006	Water	6/11/14 0900								
K1406028-015	MOA14MRC007	Water	6/11/14 0900								
K1406028-016	MOA14MRC008	Water	6/11/14 0900								
K1406028-017	MOA14DXN001	Sludge,	6/12/14 1000							**II**	
K1406028-018	MOA14SLG001	Sludge,	6/12/14 1000	**II**		**II**	**II**				
K1406028-019	MOA14ASB003	Sludge,	6/12/14 1000								**II**
K1406028-020	MOA14VOP019	Sludge,	6/12/14 1000				**II**	**II**	**II**		

Service Request Summary

Folder #:	**K1406028**
Client Name:	Kinnetic Laboratories, Incorporated
Project Name:	516.01
Project Number:	
Report To:	Gary Lawley Kinnetic Laboratories, Incorporated 704 W. 2nd Ave Anchorage, AK 99501
Phone Number:	907-276-6178
Cell Number:	907-632-4108
Fax Number:	
E-mail:	glawley@kinneticlabs.com

Project Chemist:	Arthi Kodur
Originating Lab:	KELSO
Logged By:	ARYNEVICH
Date Received:	6/14/14
Internal Due Date:	7/3/14
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	N,Y
Report to MDL?:	N,Y
P.O. Number:	AK14-1003
EDD:	BASIC_WQC

8	- 1000 mL-Glass Bottle NM AMBER Ascorbic Acid
6	- 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserv
4	- 500 mL-Plastic Bottle NM CLEAR HNO3
4	- 500 mL-Fluoropoly Blue Label HCL
3	- 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
2	- 500 ml-Plastic Bottle WM CLEAR NaOH
2	- 1000 mL-Glass Bottle NM AMBER Teflon Liner HCL
2	- 16 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
2	- 1000 mL-Plastic Bottle NM CLEAR Unpreserved

Location: K-Delilah-23, K-Disposed, SampleCustodian, EHRMS-WIC 3A, SUBBED, K-PETUNIA-01

NPDES

Test Comments:

Group	Test/Method	Samples	Comments
Metals	Metals D/200.8	6, 8	Ag,As,Be,Cd,Cr,Cu,Mo,Ni,Pb,Sb, Se,Tl,Zn
Metals	Metals T/200.8	5, 7	Ag,As,Be,Cd,Cr,Cu,Mo,Ni,Pb,Sb,Se,Tl,Zn
Metals	Metals T/6020A	18	Ag,As,Be,Cd,Cr,Cu,Mo,Ni,Pb,Sb,Se,Tl,Zn
Semivoa GC	PCB/8082	1-2	Co-extract with 8081 Pest
Semivoa GC	Pest OC/8081B	18	608 list + Mirex
Semivoa GC	Pest OC/8081B	1-2	608 list + Mirex Co-extract with 8082 PCB
Semivoa GC	PEST_OP/8141A	1-2, 18	Demeton,Guthion,Malathion & Parathion only
Semivoa GCMS	PCDD PCDF/8290	1-2	2,3,7,8 TCDD
Semivoa GCMS	PCDD PCDF/8290	17	2,3,7,8 TCDD only
Semivoa GCMS	SVO/8270D	18	Report 625 list
SubLab	Misc Out 1/None	19	Asbestos by PLM-EPA 600 to ALS Cincinnati
SubLab	Misc Out 1/None	11-12	Asbestos by TEM 100.2 to ALS Cincinnati
VOA GCMS	VOC FP/8260C	20	use LJ12972

Test/Method	Samples	Elements
200.8/Metals D	6, 8	Antimony / Arsenic / Beryllium / Cadmium / Chromium / Copper / Lead / Molybdenum / Nickel / Selenium / Silver / Thallium / Zinc
200.8/Metals T	5, 7	Antimony / Arsenic / Beryllium / Cadmium / Chromium / Copper / Lead / Molybdenum / Nickel / Selenium / Silver / Thallium / Zinc
6020A/Metals T	18	Antimony / Arsenic / Beryllium / Cadmium / Chromium / Copper / Lead / Molybdenum / Nickel / Selenium / Silver / Thallium / Zinc

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406028
Project: 516.01

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
K1406028-001	MOA14ORG001	6/11/14	09:00
K1406028-002	MOA14ORG002	6/11/14	09:00
K1406028-003	MOA14O&G001	6/11/14	09:00
K1406028-004	MOA14O&G002	6/11/14	09:00
K1406028-005	MOA14MET005	6/11/14	09:00
K1406028-006	MOA14MET006	6/11/14	09:00
K1406028-007	MOA14MET007	6/11/14	09:00
K1406028-008	MOA14MET008	6/11/14	09:00
K1406028-009	MOA14TCN011	6/11/14	09:00
K1406028-010	MOA14TCN012	6/11/14	09:00
K1406028-011	MOA14ASB001	6/11/14	09:00
K1406028-012	MOA14ASB002	6/11/14	09:00
K1406028-013	MOA14MRC005	6/11/14	09:00
K1406028-014	MOA14MRC006	6/11/14	09:00
K1406028-015	MOA14MRC007	6/11/14	09:00
K1406028-016	MOA14MRC008	6/11/14	09:00
K1406028-017	MOA14DXN001	6/12/14	10:00
K1406028-018	MOA14SLG001	6/12/14	10:00
K1406028-019	MOA14ASB003	6/12/14	10:00
K1406028-020	MOA14VOP019	6/12/14	10:00

Laboratory Certifications
2014-2015

STATE/PROGRAM	AGENCY	CERT#	EXP DATE	CERTIFIED?
ARIZONA	AZ-DHS	AZ0725	05/27/14	Yes
ARKANSAS	ADEQ	12-035-0	06/16/14	Yes
CALIFORNIA	CA-ELAP	2452	02/28/15	Yes
DOD ELAP	A2LA	2897.01	11/30/14	Yes
FLORIDA/NELAP	FL-DOHS	E87611	06/30/14	Yes
HAWAII	HI-DOH	N/A	06/30/14	Yes
ILLINOIS/NELAP	IL-EPA	003004	10/06/14	Yes
ISO 17025	A2LA	2897.01	01/31/14	Yes
KANSAS	KS-DHE	E-10406	11/30/14	Yes
LOUISIANA/NELAP	LELAP	03048	06/30/14	Yes
LOUISIANA/NELAP	LDHH	LA120014	12/31/14	Yes
MAINE	ME-DOHS	2012017	06/05/14	Yes
MARYLAND	MDE	343	06/30/14	Yes
MICHIGAN	MIDEQ	9971	06/30/14	Yes
MINNESOTA	MDH	048-999-427	12/31/14	Yes
NEVADA	NDEP	TX014112013A	07/31/14	Yes
NEW JERSEY	NJDEP	TX008	06/30/14	Yes
NEW MEXICO	NMED-DWB	N/A	06/30/14	Yes
NEW YORK/NELAP	NY-DOH	11707	04/01/14	Yes
OKLAHOMA	OKDEQ	2012-133	08/31/14	Yes
OREGON/NELAP	ORELAP	TX200002-009	03/24/14	Yes
PENNSYLVANIA/NELAP	PLAP	68-03441	06/30/14	Yes
SOIL IMPORT PERMIT	USDA	P330-12-00002	01/13/15	Yes
TENNESSEE	TNDEC	TN04016	06/30/14	Yes
TEXAS/NELAP	TCEQ	T104704216-12-3	06/30/14	Yes
UTAH/NELAP	UTELCP	TX014112013-2	06/30/14	Yes
WASHINGTON/NELAP	WA-Ecology	C819-12	11/14/14	Yes
WEST VIRGINIA	WVDEP	347	07/31/14	Yes

Abbreviations, Acronyms & Definitions

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

Data Qualifier Flags – Dioxin/Furans

B Indicates the associated analyte is found in the method blank, as well as in the sample

C 2378-TCDF is detected on the DB-5 column above the MRL, confirmation analysis was performed on a second column (DB-225.) The results from both the DB-5 column and the DB-225 column are included in this data package. The results from the DB-225 analyses should be used to evaluate the 2378-TCDF in the samples. The confirmed result are used in determining the TEQ value for TCDF.

E The reported result is above the instrument calibration range and is an estimated value.

J Indicates an estimated value – used when the analyte concentration is below the method reporting limit (MRL) and above the estimated detection limit (EDL)

K Ion abundance ratios between the primary and secondary ions were outside of theoretical acceptance limits. The reported result is an estimated maximum possible concentration (EMPC)

i The associated MRL/MDL has been elevated due to matrix interference.

U Indicates the compound was analyzed for, but not detected (ND)

Y C13-Labeled standard percent recoveries are outside of method acceptance limits

S Peak is saturated; data not reportable

P Indicates chlorodiphenyl ether interference present at the retention time of the target compound.

X See case narrative

ALS Environmental – Houston HRMS
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K1406028 DB-5MSUI DB-225 SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
07/07/14	JC	-001, -002

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
07/07/14	MM	001, 002

PEER REVIEW PAGE

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K1406028 DB-5 (DB-5MSUI) DB-225 SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
06/25/14	Jc	017

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
06/26/14	MM	017

Analytical Results

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	6/11/14 0900
Sample Matrix:	Water	**Date Received:**	6/14/14
Sample Name:	MOA14ORG001	**Units:**	pg/L
Lab Code:	K1406028-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	7/4/14 1521
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	6/30/14
Sample Amount:	934mL	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-5MSUI
Data File Name:	U149863	**Blank File Name:**	P229923
ICAL Date:	05/21/2014	**Cal Ver. File Name:**	U149855

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	4.65	5.35			1

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1161.567	58		40-135	0.75	1.020
37Cl-2,3,7,8-TCDD	800	414.057	52		40-135	NA	1.021

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	6/11/14 0900
Sample Matrix:	Water	**Date Received:**	6/14/14
Sample Name:	MOA14ORG002	**Units:**	pg/L
Lab Code:	K1406028-002	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	7/4/14 1610
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	6/30/14
Sample Amount:	885mL	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-5MSUI
Data File Name:	U149864	**Blank File Name:**	P229923
ICAL Date:	05/21/2014	**Cal Ver. File Name:**	U149855

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	3.56	5.65			1

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1298.724	65		40-135	0.78	1.020
37Cl-2,3,7,8-TCDD	800	460.724	58		40-135	NA	1.021

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	6/12/14 1000
Sample Matrix:	Sludge, Solid	**Date Received:**	6/14/14
Sample Name:	MOA14DXN001	**Units:**	ng/Kg
Lab Code:	K1406028-017	**Basis:**	As Received

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	6/24/14 1450
Prep Method:	Method	**Date Extracted:**	6/18/14
Sample Amount:	10.119g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-5MSUI
Data File Name:	U149706	**Blank File Name:**	P171737
ICAL Date:	05/21/2014	**Cal Ver. File Name:**	U149698

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.271	0.494			1

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1112.170	56		40-135	0.77	1.020
37Cl-2,3,7,8-TCDD	800	372.898	47		40-135	NA	1.020

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, Solid	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1400322-07	**Basis:**	As Received

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	6/23/14 1901
Prep Method:	Method	**Date Extracted:**	6/18/14
Sample Amount:	10.000g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P171737	**Blank File Name:**	P171737
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P171735

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.0841	0.500			1

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1012.879	51		40-135	0.79	1.018
37Cl-2,3,7,8-TCDD	800	319.119	40		40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	pg/L
Lab Code:	EQ1400344-01	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	7/2/14 1723
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	6/30/14
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5MSUI
Data File Name:	P229923	**Blank File Name:**	P229923
ICAL Date:	02/01/14	**Cal Ver. File Name:**	P229921

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	3.47	5.00			1

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1173.739	59		40-135	0.76	1.020
37Cl-2,3,7,8-TCDD	800	398.888	50		40-135	NA	1.021

Accuracy & Precision

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Analyzed:**	6/24/14
Sample Matrix:	Sludge, Solid		

Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Units:**	ng/Kg
Prep Method:	Method	**Basis:**	As Received
		Extraction Lot:	211078

	Lab Control Sample EQ1400322-08			
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
2,3,7,8-TCDD	24.2	19.8	122	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Analyzed:**	7/ 2/14
Sample Matrix:	Water		

Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Units:**	pg/L
Prep Method:	Method Sep Funnel/Jar	**Basis:**	NA
		Extraction Lot:	211943

	Lab Control Sample EQ1400344-02			Duplicate Lab Control Sample EQ1400344-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,3,7,8-TCDD	250	200	125	239	200	119	70 - 130	4	25

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, Solid	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1400322-08	**Basis:**	As Received

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	6/24/14 0214
Prep Method:	Method	**Date Extracted:**	6/18/14
Sample Amount:	10.080g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P171746	**Blank File Name:**	P171737
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P171735

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	**24.2**		0.177	0.496	0.82	1.001	1

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	961.667	48		40-135	0.78	1.018
37Cl-2,3,7,8-TCDD	800	302.648	38	Y	40-135	NA	1.019

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	pg/L
Lab Code:	EQ1400344-02	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	7/2/14 2256
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	6/30/14
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5MSUI
Data File Name:	P229930	**Blank File Name:**	P229923
ICAL Date:	02/01/14	**Cal Ver. File Name:**	P229921

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	**250**		2.44	5.00	0.78	1.001	1

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1234.048	62		40-135	0.78	1.021
37Cl-2,3,7,8-TCDD	800	388.684	49		40-135	NA	1.021

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406028
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	pg/L
Lab Code:	EQ1400344-03	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analytical Method:	8290	**Date Analyzed:**	7/2/14 2344
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	6/30/14
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5MSUI
Data File Name:	P229931	**Blank File Name:**	P229923
ICAL Date:	02/01/14	**Cal Ver. File Name:**	P229921

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	**239**		2.40	5.00	0.78	1.001	1

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	%Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1146.481	57		40-135	0.76	1.021
37Cl-2,3,7,8-TCDD	800	375.534	47		40-135	NA	1.021

Chain of Custody

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Intra-Network Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Howard Holmes

Project Name:
Project Number: 516.01
Project Manager: Gary Lawley
Company: Kinnetic Laboratories, Incorporated

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Date Received	Send To	PCDD PCDF 8290
K1406028-001	MOA14ORG001	1	Water	6/11/14	0900	6/14/14	HOUSTON	II
K1406028-002	MOA14ORG002	1	Water	6/11/14	0900	6/14/14	HOUSTON	II
K1406028-017	MOA14DXN001	1	Sludge, Solid	6/12/14	1000	6/14/14	HOUSTON	II

Test Comments

PCDD PCDF - 8290	K1406028-001,2	2,3,7,8 TCDD
PCDD PCDF - 8290	K1406028-017	2,3,7,8 TCDD only

Special Instructions/Comments

Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.

pH Checked _____

Turnaround Requirements

_____ **RUSH** (Surcharges Apply)

PLEASE CIRCLE WORK DAYS

1 2 3 4 5

____ **STANDARD**

Requested FAX Date: _____

Requested Report Date: 07/03/14

Report Requirements

____ I. Results Only

X II. Results + QC Summaries

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

PQL/MDL/J Y

EDD Y

Invoice Information

PO# K1406028

Bill to

Relinquished By: 6/17/14 1245 Received By: 6/18/14 1005 Airbill Number: _____

Cooler Receipt Form

ALS Environmental

Project Chemist AK

Client/Project Kinnetic Laboratories

Thermometer ID SMO

Date/Time Received: 6/18/14 1005 Initials: AC

Date/Time Logged in: 6/18/14 Initials AC

1. Method of delivery: ○ US Mail ✓ Fed Ex ○ UPS ○ DHL ○ Courier ○ Client

2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other

3. Were custody seals on coolers? ✓ Yes ○ No

Were they intact? ✓ Yes ○ No ○ N/A

Were they signed and dated? ✓ Yes ○ No ○ N/A

If yes, how many and where? 1 seal

4. Packing Material: ○ Inserts ○ Baggies ✓ Bubble Wrap ✓ Gel Packs ○ Wet Ice ○ Sleeves ○ Other

5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
5478 9734 4302		6/18/14	1007	AC	0/0	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ○ Yes ○ No

7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ○ Yes ○ No

8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ○ Yes ○ No

9. Were appropriate bottles/containers and volumes received for the requested tests? ○ Yes ○ No

10. Did sample labels and tags agree with custody documents? ○ Yes ○ No

Notes, Discrepancies, & Resolutions:

# of containers on COC:

# of containers received:

Service request Label:

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheet

Prep Run#: 211078 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped
Team: Semivoa GCMS/WMCDONOUGH **Prep Method:** Method **Prep Date/Time:** 6/18/14 09:45 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Sample Description
1	EQ1400322-01	MB		8290A/PCDD PCDF		Solid	10.00g	
2	EQ1400322-02	LCS		8290A/PCDD PCDF		Solid	10.080g	
3	EQ1400322-03	BA11.0-4 MS	.08	8290A/PCDD PCDF		Solid	15.130g	
4	EQ1400322-04	BA11.0-4 DMS	.08	8290A/PCDD PCDF		Solid	15.010g	
5	EQ1400322-05	CRS14-1 MS	.23	8290A/PCDD PCDF		Solid	10.359g	
6	EQ1400322-06	CRS14-1 DMS	.23	8290A/PCDD PCDF		Solid	10.106g	
7	EQ1400322-07	MB		8290/PCDD PCDF		Solid	10.000g	
8	EQ1400322-08	LCS		8290/PCDD PCDF		Solid	10.080g	
9	K1405319-001	BA11.0-4	.08	8290A/PCDD PCDF		Soil	15.020g	Fine, Red Dirt
10	K1405319-002	BA12.0-4	.03	8290A/PCDD PCDF		Soil	15.090g	Fine, Red Dirt
11	K1405319-003	BA13.0-4	.03	8290A/PCDD PCDF		Soil	15.170g	Fine, Red Dirt
12	K1405319-004	BA14.0-4	.03	8290A/PCDD PCDF		Soil	15.040g	Fine, Red Dirt
13	K1405319-005	BA15.0-4	.03	8290A/PCDD PCDF		Soil	15.060g	Fine, Red Dirt
14	K1405919-001	CRS14-1	.23	8290A/PCDD PCDF		Sediment	10.430g	Grey/Black Sludge
15	K1405919-002	CRS14-2	.15	8290A/PCDD PCDF		Sediment	10.381g	Grey/Black Sludge
16	K1405919-003	CRS14-3	.24	8290A/PCDD PCDF		Sediment	10.103g	Grey/Black Sludge
17	K1405919-004	CRS14-4	.18	8290A/PCDD PCDF		Sediment	10.289g	Wet Soil/Mud (w/ seashells)
18	K1405919-005	CRS14-5	.14	8290A/PCDD PCDF		Sediment	10.143g	Grey/Black Sludge
19	K1406028-017	MOA14DXN001	.05	8290/PCDD PCDF		Sludge, Solid	10.119g	Soft, Black Solid

Preparation Information Benchsheet

Prep Run#: 211078 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped
Team: Semivoa GCMS/WMCDONOUGH **Prep Method:** Method **Prep Date/Time:** 6/18/14 09:45 AM

Spiking Solutions

Name:	1613B Matrix Working Standard	Inventory ID	71502	Logbook Ref:	71502 TL 6/11/14	Expires On:	06/11/2015

EQ1400322-02	100.00µL	EQ1400322-03	100.00µL	EQ1400322-04	100.00µL	EQ1400322-05	100.00µL	EQ1400322-06	100.00µL	EQ1400322-08	100.00µL

Name:	8290/1613B Cleanup Working Standard	Inventory ID	71611	Logbook Ref:	71611 CID 06/16/2014	Expires On:	12/13/2014

EQ1400322-01	100.00µL	EQ1400322-02	100.00µL	EQ1400322-03	100.00µL	EQ1400322-04	100.00µL	EQ1400322-05	100.00µL	EQ1400322-06	100.00µL
EQ1400322-07	100.00µL	EQ1400322-08	100.00µL	K1405319-001	100.00µL	K1405319-001.F	100.00µL	K1405319-002	100.00µL	K1405319-002.F	100.00µL
K1405319-003	100.00µL	K1405319-003.F	100.00µL	K1405319-004	100.00µL	K1405319-004.F	100.00µL	K1405319-005	100.00µL	K1405319-005.F	100.00µL
K1405919-001	100.00µL	K1405919-002	100.00µL	K1405919-003	100.00µL	K1405919-004	100.00µL	K1405919-005	100.00µL	K1406028-017	100.00µL

Name:	1613B Labeled Working Standard	Inventory ID	71672	Logbook Ref:	71672 WM 6/17/14	Expires On:	08/04/2016

EQ1400322-01	1,000.00µL	EQ1400322-02	1,000.00µL	EQ1400322-03	1,000.00µL	EQ1400322-04	1,000.00µL	EQ1400322-05	1,000.00µL	EQ1400322-06	1,000.00µL
EQ1400322-07	1,000.00µL	EQ1400322-08	1,000.00µL	K1405319-001	1,000.00µL	K1405319-001.F	1,000.00µL	K1405319-002	1,000.00µL	K1405319-002.F	1,000.00µL
K1405319-003	1,000.00µL	K1405319-003.F	1,000.00µL	K1405319-004	1,000.00µL	K1405319-004.F	1,000.00µL	K1405319-005	1,000.00µL	K1405319-005.F	1,000.00µL
K1405919-001	1,000.00µL	K1405919-002	1,000.00µL	K1405919-003	1,000.00µL	K1405919-004	1,000.00µL	K1405919-005	1,000.00µL	K1406028-017	1,000.00µL

Preparation Materials

Carbon, High Purity	AL 05/19/14 (70615)	Ethyl Acetate 99.9% Minimum EtOAc	AL 04/01/14 (71228)	Glass Wool	AL 05/19/14 (70618)
Sulfuric Acid Reagent Grade H2SO4	AL 05/21/14 (70716)	Hexanes 95%	AL 05/30/14 (71078)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	AL 05/14/14 (70509)
Sodium Chloride Reagent Grade NaCl	C2-65-5 (38670)	Sodium Sulfate Anhydrous Reagent Grade Na2SO4	AL 05/28/14 (71000)	Tridecane (n-Tridecane)	WM 6/10/14 (71503)
Silica Gel Reagent Grade	AL 05/21/14 (70718)	Toluene 99.9% Minimum	AL 6/18/14 (71725)	Sodium Hydroxide Reagent Grade NaOH	C2-73-7 (53023)

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	6/18/14 09:45	Started:	6/19/14 10:00	Started:	6/23/14 08:00	Started:	6/23/14 13:00
Finished:	6/19/14 05:30	Finished:	6/19/14 11:25	Finished:	6/23/14 10:00	Finished:	6/23/14 13:45
By:	WMCDONOUGH	By:	CDIAZ	By:	CDIAZ	By:	CDIAZ
Comments		Comments		Comments		Comments	

Comments: _____

Preparation Information Benchsheet

Prep Run#: 211078 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped
Team: Semivoa GCMS/WMCDONOUGH **Prep Method:** Method **Prep Date/Time:** 6/18/14 09:45 AM

Reviewed By: TL Date: 7/7/14

Chain of Custody

Relinquished By: _____ Date: _____

Received By: _____ Date: _____

Extracts Examined

Yes No

Preparation Information Benchsheet

Prep Run#: 211943 **Prep WorkFlow:** OrgExtDioxAq-30 **Status:** Prepped
Team: Semivoa GCMS/HLEUNG **Prep Method:** Method Sep Funnel/Jar **Prep Date/Time:** 6/30/14 02:45 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Sample Description
1	E1400655-001	CU-LCRS-061214-01-01NS	.01	8290/PCDD PCDF	7	Water	1034mL	Light yellow liquid
2	E1400655-002	CU-LDCRS-061214-01-01NS	.01	8290/PCDD PCDF	7	Water	937mL	Light yellow liquid
3	E1400655-003	CU-LYSIM-061214-01-01NS	.01	8290/PCDD PCDF	7	Water	1047mL	Light yellow liquid
4	E1400668-001	MW-11	.01	8290/PCDD PCDF	7	Water	967mL	Clear liquid
5	E1400668-002	MW-17	.01	8290/PCDD PCDF	7	Water	974mL	Light yellow liquid
6	E1400668-003	MW-16	.01	8290/PCDD PCDF	7	Water	983mL	Brown liquid
7	E1400668-004	MW-22	.01	8290/PCDD PCDF	7	Water	966mL	Orange liquid
8	E1400677-001	Wastewater Discharge	.01	8290/PCDD PCDF	7	Wastewater	864mL	Brown liquid
9	E1400683-005	CS22-WPCS-F23-01EB	.01	8290/PCDD PCDF	5	Water	1029mL	Clear liquid
10	E1400687-001	CS22-WPCS-F09-01EB	.01	8290/PCDD PCDF	5	Water	992mL	Clear liquid
11	E1400687-010	CS22-WPCS-W17-01EB	.01	8290/PCDD PCDF	5	Water	1002mL	Clear liquid
12	E1400692-001	CS22-WPCS-F12-01EB	.01	8290/PCDD PCDF	5	Water	996mL	Clear liquid
13	E1400692-006	CS22-WPCS-F19-01EB	.01	8290/PCDD PCDF	5	Water	1048mL	Clear liquid
14	E1400692-012	CS22-WPCS-W26-01EB	.01	8290/PCDD PCDF	5	Water	1038mL	Clear liquid
15	EQ1400344-01	MB		8290A/PCDD PCDF	5	Liquid	1000mL	
16	EQ1400344-02	LCS		8290A/PCDD PCDF	5	Liquid	1000mL	
17	EQ1400344-03	DLCS		8290A/PCDD PCDF	5	Liquid	1000mL	
18	K1406028-001	MOA14ORG001	.01	8290/PCDD PCDF	7	Water	934mL	Dark grey liquid
19	K1406028-002	MOA14ORG002	.01	8290/PCDD PCDF	7	Water	885mL	Light brown liquid
20	K1406200-004	3039-GW-082	.02	8290/PCDD PCDF	7	Water	1041mL	Clear liquid
21	R1404652-001	1406040815 200-SB-20	.01	8290A/PCDD PCDF	5	Water	1049mL	Clear liquid
22	R1404652-002	1406090816 200-SB-21	.01	8290A/PCDD PCDF	5	Water	1044mL	Clear liquid
23	R1404652-003	1406111440 200-SB-7	.01	8290A/PCDD PCDF	5	Water	1045mL	Clear liquid

Preparation Information Benchsheet

Prep Run#: 211943 **Prep WorkFlow:** OrgExtDioxAq-30 **Status:** Prepped
Team: Semivoa GCMS/HLEUNG **Prep Method:** Method **Prep Date/Time:** 6/30/14 02:45 PM

Spiking Solutions

Name:	1613B Matrix Working Standard	Inventory ID	71502	Logbook Ref:	71502 TL 6/11/14	Expires On:	06/11/2015

EQ1400344-02	100.00µL	EQ1400344-02	100.00µL	EQ1400344-03	100.00µL	EQ1400344-03	100.00µL

Name:	1613B Labeled Working Standard	Inventory ID	71667	Logbook Ref:	71667 TL 6/16/14	Expires On:	08/04/2016

E1400655-001	1,000.00µL	E1400655-002	1,000.00µL	E1400655-003	1,000.00µL	E1400668-001	1,000.00µL	E1400668-002	1,000.00µL	E1400668-003	1,000.00µL
E1400668-004	1,000.00µL	E1400677-001	1,000.00µL	E1400683-005	1,000.00µL	E1400687-001	1,000.00µL	E1400687-010	1,000.00µL	E1400692-001	1,000.00µL
E1400692-006	1,000.00µL	E1400692-012	1,000.00µL	EQ1400344-01	1,000.00µL	EQ1400344-01	1,000.00µL	EQ1400344-02	1,000.00µL	EQ1400344-02	1,000.00µL
EQ1400344-03	1,000.00µL	EQ1400344-03	1,000.00µL	K1406028-001	1,000.00µL	K1406028-002	1,000.00µL	K1406200-004	1,000.00µL	R1404652-001	1,000.00µL
R1404652-002	1,000.00µL	R1404652-003	1,000.00µL								

Name:	8290/1613B Cleanup Working Standard	Inventory ID	72014	Logbook Ref:	72014CID 06/26/14	Expires On:	12/23/2014

E1400655-001	100.00µL	E1400655-002	100.00µL	E1400655-003	100.00µL	E1400668-001	100.00µL	E1400668-002	100.00µL	E1400668-003	100.00µL
E1400668-004	100.00µL	E1400677-001	100.00µL	E1400683-005	100.00µL	E1400687-001	100.00µL	E1400687-010	100.00µL	E1400692-001	100.00µL
E1400692-006	100.00µL	E1400692-012	100.00µL	EQ1400344-01	100.00µL	EQ1400344-01	100.00µL	EQ1400344-02	100.00µL	EQ1400344-02	100.00µL
EQ1400344-03	100.00µL	EQ1400344-03	100.00µL	K1406028-001	100.00µL	K1406028-002	100.00µL	K1406200-004	100.00µL	R1404652-001	100.00µL
R1404652-002	100.00µL	R1404652-003	100.00µL								

Preparation Materials

Sensafe Free Chlorine WTR CHK	AL 06/10/14 (71458)	Carbon, High Purity	AL 05/19/14 (70615)	Ethyl Acetate 99.9% Minimum EtOAc	AL 04/01/14 (71228)
Glass Wool	AL 05/19/14 (70618)	Sulfuric Acid Reagent Grade H2SO4	AL 05/21/14 (70716)	Silica Gel Reagent Grade	AL 05/21/14 (70718)
Hexanes 95%	AL 06/24/14 (71920)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	AL 05/14/14 (70509)	Sodium Sulfate Anhydrous Reagent Grade Na2SO4	AL 05/28/14 (71000)
Toluene 99.9% Minimum	AL 06/06/14 (71345)	Sodium Hydroxide Reagent Grade NaOH	C2-73-7 (53023)	ColorpHast pH-Indicator Strips	6/14/13 MR (58995)
Sodium Chloride Reagent Grade NaCl	C2-65-5 (38670)				

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	6/30/14 14:45	Started:	7/1/14 11:00	Started:	7/1/14 13:15	Started:	7/2/14 15:00
Finished:	6/30/14 19:00	Finished:	7/1/14 11:15	Finished:	7/1/14 15:00	Finished:	7/2/14 16:00
By:	HLEUNG	By:	CDIAZ	By:	CDIAZ	By:	JPLASSARD
Comments		Comments		Comments		Comments	

Preparation Information Benchsheet

Prep Run#: 211943 **Prep WorkFlow:** OrgExtDioxAq-30 **Status:** Prepped
Team: Semivoa GCMS/HLEUNG **Prep Method:** Method **Prep Date/Time:** 6/30/14 02:45 PM

Comments:

Reviewed By: JWP 070314 Date:

Chain of Custody

Relinquished By: Date:

Received By: Date:

Extracts Examined

Yes No

09-Jul-2014

Howard Holmes
ALS Environmental
1317 South 13th Avenue
Kelso, WA 98626

Tel: (360) 577-7222
Fax: (360) 636-1068

Re: K1406028 Work Order: **1406519**

Dear Howard,

ALS Environmental received 3 samples on 18-Jun-2014 10:22 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 6.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ALS Environmental

Date: 09-Jul-14

Client: ALS Environmental
Project: K1406028
Work Order: **1406519**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1406519-01	K1406028-011	Water		6/11/2014 09:00	6/18/2014 10:22	☐
1406519-02	K1406028-012	Water		6/11/2014 09:00	6/18/2014 10:22	☐
1406519-03	K1406028-019	Soil		6/12/2014 10:00	6/18/2014 10:22	☐

Client: ALS Environmental
Project: K1406028
Work Order: 1406519

Case Narrative

All values are in area percent by visual estimate.

Some samples may contain fibers that are not visible by PLM and can only be discovered by electron microscopy techniques.

Reporting Limit = 1%. Results reported as Trace are <1%.

ALS Environmental

Date: *09-Jul-14*

Client: ALS Environmental
Project: K1406028

Work Order: 1406519

Lab ID: 1406519-03A
Client Sample ID: K1406028-019

Collection Date: 6/12/2014 10:00:00 AM
Matrix: SOIL

Analytical Results

Analyses	Result	Units	
Asbestos by PLM ALS ENV004			Date Analyzed **6/25/2014**
Macroscopic Examination	Prep Date: **6/25/2014**		**ALSENV-004** Analyst: **AFS**
Color	Brown		
Description	Soil		
Homogeneity	Heterogenous		
Texture	Granular		
Other Materials			**ALSENV-004**
Cellulose	>50<=60	%	
Fiberglass	ND	%	
Non-Fibrous	>30<=40	%	
Other Fibers	ND	%	
Resin/Binder	ND	%	
Asbestiform Minerals			**ALSENV-004**
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - Actinolite	ND	%	
Total Asbestos	**ND**	**%**	

Note:

ALS Environmental

Date: 09-Jul-14

Client: ALS Environmental
Project: K1406028
WorkOrder: **1406519**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
%	

ALS Environmental

Sample Receipt Checklist

Client Name: ALS-KELSO

Date/Time Received: 18-Jun-14 10:22

Work Order: 1406519

Received by: SNH

Checklist completed by Stephanie Harrington (eSignature) 18-Jun-14 (Date)

Reviewed by: Rob Nieman (eSignature) 30-Jun-14 (Date)

Matrices:

Carrier name: FedEx

	Yes	No	Not Present
Shipping container/cooler in good condition?	☑	☐	☐
Custody seals intact on shipping container/cooler?	☑	☐	☐
Custody seals intact on sample bottles?	☐	☐	☑
Chain of custody present?	☑	☐	
Chain of custody signed when relinquished and received?	☑	☐	
Chain of custody agrees with sample labels?	☑	☐	
Samples in proper container/bottle?	☑	☐	
Sample containers intact?	☑	☐	
Sufficient sample volume for indicated test?	☑	☐	
All samples received within holding time?	☑	☐	
Container/Temp Blank temperature in compliance?	☑	☐	

Temperature(s)/Thermometer(s): 2.6

Cooler(s)/Kit(s):

	Yes	No		
Water - VOA vials have zero headspace?	☐	☐	No VOA vials submitted	☑
Water - pH acceptable upon receipt?	☐	☐	N/A	☑
pH adjusted?	☐	☐	N/A	☑

pH adjusted by: -

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Submitted To: Reporting
ALS Environmental
1317 South 13th Avenue
Kelso WA 98626

Test Report
Page 1 of 2
6/27/14

REFERENCE DATA	**Asbestos in Water by TEM**
Sample Type:	Waste Water
Method Reference:	EPA Method 100.2
Client Sample No.:	K1406028-011 through K1406028-012
Sample Location:	K1406028
PO No.:	K1406028
ALS Work Order No.:	1406519
ALS Sample No.:	1406519-01 through 1406519-02
Date Received:	6/18/2014
Preparation Date:	6/18/2014 & 10:45
Analysis Date:	6/27/2014

The samples indicated on the following data sheets were analyzed by Transmission Electron Microscopy (TEM) for asbestos fibers in water using EPA Method 100.2. The sample was ultrasonically treated in its original container for 15 minutes to suspend the solids. An aliquot of this suspension was added to 100mL of de-ionized water and filtered onto a 0.22 μm MCE filter. Portions of this filter were then mounted on grids for TEM analysis. Analysis was performed on an FEI Tecnair G2 Spirit Twin TEM with EDAX Genesis System providing energy dispersive X-ray analysis (EDXA) capabilities.

Results apply only to portions of samples analyzed and are tabulated on the following data sheet(s). Representative EDXA spectra and selected area electron diffraction (SAED) measurements of asbestos types detected are included and are referenced to the fiber identification numbers listed on the count sheets. The limit of detection (LOD) for this method has been determined to be one confirmed asbestos fiber in the total number of grid openings analyzed. The number of openings analyzed is dependent on the sample volume.

Pamela Johnson
Analyst

for Shawn Smythe
Project Manager

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ALS Environmental
4388 Glendale-Milford Road, Cincinnati, Ohio 45242
Phone (513) 733 5336 Fax (513) 733 5347 www.alsenviro.com
A Campbell Brothers Limited Company

CLIENT: ALS Environmental
SAMPLE LOCATION: K1406028

SAMPLE PREP DATA

Date Received:	6/18/2014
Date Filtered:	6/18/2014
Time Filtered:	10:45
Filter Type:	MCE 0.22 μm
Filter Size:	47 mm
Collection Area:	1075 mm^2

ANALYSIS DATA

Date Analyzed:	6/27/2014 & 12:00
Magnification:	9,700 X
Calibration Constant:	1 cm = 1.03 μm
EDXA Resolution:	130.0 eV
Accelerating Voltage:	100 keV
Camera Constant:	129.25 mm-Å

SAMPLE IDENTIFICATION		
Client Sample No.:	K1406028-011	K1406028-012
ALS Sample No.:	1406519-01	1406519-02
Date Sampled:	6/11/2014	6/11/2014
Time Sampled:	9:00	9:00
Volume Filtered (L):	0.001	0.005
No. Grid Openings Analyzed:	25	25
Average Grid Opening Area:	0.0106	0.0106
LOD (MFL):	4.06	0.81
Asbestos Fibers ≥ 10 microns		
Chrysotile:	0	0
Amosite:	0	0
Crocidolite:	0	0
Actinolite-Tremolite:	0	0
Anthophyllite:	0	0
TOTAL ASBESTOS		
Count:	**0**	**0**
Concentration (MFL):	**<LOD**	**<LOD**

ND= None Detected *LOD= Limit of Detection* *MFL= Millions of Fibers per Liter*

NOTE: Samples arrived past the EPA method 100.1 48-hour hold time but were still analyzed, per client request. Because the samples contained a large amount of suspended solids, we could only filter a small volume without overloading the filters. Therefore it was not possible to attain the EPA method LOD of 0.20 MFL.

Pamela Johnson
Analyst

Shawn Smythe
Project Manager

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ALS Environmental
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Kelso, WA 98626
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F: +1 360 636 1068
www.alsglobal.com

July 2, 2014 Analytical Report for Service Request No: K1406034

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.01

Dear Gary:

Enclosed are the results of the samples submitted to our laboratory on June 14, 2014. For your reference, these analyses have been assigned our service request number K1406034.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/mj

RIGHT SOLUTIONS | RIGHT PARTNER

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	4704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories, Incorporated	**Service Request No.:**	K1406034
Project:	516.01	**Date Received:**	06/14/14
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Matrix/Duplicate Matrix Spike (MS/DMS).

Sample Receipt

Ten water samples were received for analysis at ALS Environmental on 06/14/14. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

Total Cyanide by Standard Method 4500-CN-E:
The matrix spike recoveries for sample Batch QC were outside control criteria because of suspected matrix interference. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. No further corrective action was taken.

No other anomalies associated with the analysis of these samples were observed.

Total and Dissolved Metals

No anomalies associated with the analysis of these samples were observed.

Approved by_____

Kinnetic Laboratories, Inc. Chain of Custody Record

K1406034

LABORATORY:	FROM:
ALS Environmental **1317 South 13th Ave.** **Kelso, Washington 98626** **Attn: Howard Holmes** **Ph: 1-360-577-7222** DAY 1	**Kinnetic Laboratories, Inc.** **704 West 2nd Avenue** **Anchorage, AK 99501** **Attn: Gary Lawley** **(907) 276.6178 phone (907) 278-6881 fax**

Required Completion date: 30 Days	**MATRIX**: Water (Inf & Eff), Solids (Sludge)	P.O. #: AK14-1003	KLI Project Number: 516.01

Sample ID	Sample Location	Sample date & time	No. of contain	Container type	Preservative	EPA 625/8270	8081 A/B Pest OC	8141 A/B PEST_OP	PCBs - 8082	8290/PCDD PCDF	EPA 1664 Oil & Gr.	Metals	Mercury (1631E)	EPA 8260	Total Cyanide LL	Asbestos TEM	Asbestos PLM	Condition upon receipt	Comments
MOA14MET001	Influent	6/10/14 0900	1	500ml HDPE	6°C, HNO3							X							For total metals
MOA14MET002	Influent		1	500ml HDPE	6°C, HNO3							X							Prefiltered for dissolved metals
MOA14MET003	Effluent		1	500ml HDPE	6°C, HNO3							X							For total metals
MOA14MET004	Effluent		1	500ml HDPE	6°C, HNO3							X							Prefiltered for dissolved metals
MOA14TCN009	Influent		1	500ml HDPE	NaOH, 6°C										X				SM 4500-CN-E low level
MOA14TCN010	Effluent	0900	1	500ml HDPE	NaOH, 6°C Eff samp contain L-Ascorbic Acid										X				SM 4500-CN-E low level
MOA14MRC001	Influent		1	500ml HDPE	HCl 6°C								X						Total LL Hg
MOA14MRC002	Influent		1	500ml HDPE	HCl 6°C								X						Dissolved LL Hg
MOA14MRC003	Effluent		1	500ml HDPE	HCl 6°C								X						Total LL Hg
MOA14MRC004	Effluent		1	500ml HDPE	HCl 6°C								X						Dissolved LL Hg

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID, ANALYTICAL METHOD, MDL, DATE OF EXTRACTION & ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

Comments: Metals to include Ag, As, Be, Cd, Cr, Cu, Mo, Ni, Pb, Sb, Se, Tl, Zn, Hg. Report results to MDL.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
	6/12/14 0950	hand		6/12/14 0950
	6/13/14 1300	FedEx	MS 6/14/14 0845	

SAMPLED BY (NAME/SIGNATURE):

ALS

PC HJ

Cooler Receipt and Preservation Form

Client / Project: KINNETIC Service Request K14 6034

Received: 6/14/14 Opened: 6/14/14 By: [illegible] Unloaded: 6/14/14 By: [illegible]

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 4 FRONT

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.9	2.6	N/P	—	-0.3	308		770301283826 (MASTER)	
4.1	3.9	N/P	—	-0.2	341			
2.2	2.1	1.0	0.9	-0.1	316			
4.5	4.6	3.2	3.3	0.1	342			

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Page ____ *of* ____

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406034
Project:		**Date Collected:**	06/10/14
Sample Matrix:	Water	**Date Received:**	06/14/14
Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA

Cyanide, Total

Sample Name	Lab Code	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
MOA14TCN009	K1406034-005	**0.0009**	**J**	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
MOA14TCN010	K1406034-006	**0.0012**	**J**	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
Method Blank	K1406034-MB	ND	U	0.0047	0.0009	1	06/18/14 09:53	6/17/14	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406034
Project		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	06/18/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1406678-03	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1406678-03DUP Result	Average	RPD	RPD Limit
Cyanide, Total	SM 4500-CN- E	0.0047	0.0009	ND	ND	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406034
Project:		**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	06/18/14
		Date Extracted:	06/17/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1406678-03	**Basis:**	NA
Analysis Method:	SM 4500-CN- E		
Prep Method:	SM 4500-CN-C		

		Matrix Spike KQ1406678-03MS			Duplicate Matrix Spike KQ1406678-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	ND	0.100	0 *	ND	0.100	0 *	23-148	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406034
Project:		**Date Analyzed:**	06/18/14
Sample Matrix:	Water	**Date Extracted:**	06/17/14

Lab Control Sample Summary
Cyanide, Total

Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA
		Analysis Lot:	397714

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1406034-LCS	0.152	0.150	101	84-115

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406034
Project:	516.01	**Date Collected:**	06/10/14
Sample Matrix:	Water	**Date Received:**	06/14/14

Mercury, Total

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631E	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MOA14MRC001	K1406034-007	2.5	0.30	5	06/18/14	06/19/14	130	
MOA14MRC003	K1406034-009	2.5	0.30	5	06/18/14	06/19/14	35.8	
Method Blank 1	K1406034-MB1	0.5	0.06	1	06/18/14	06/19/14	ND	
Method Blank 2	K1406034-MB2	0.5	0.06	1	06/18/14	06/19/14	ND	
Method Blank 3	K1406034-MB3	0.5	0.06	1	06/18/14	06/19/14	ND	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406034
Project:	516.01	**Date Collected:**	06/10/14
Sample Matrix:	Water	**Date Received:**	06/14/14

Mercury, Dissolved

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631E	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MOA14MRC002	K1406034-008	0.5	0.06	1	06/18/14	06/19/14	15.5	
MOA14MRC004	K1406034-010	0.5	0.06	1	06/18/14	06/19/14	12.5	

ALS Group USA, Corp.
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QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406034
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	06/18/14
		Date Analyzed:	06/19/14

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	Batch QC	Units:	ng/L
Lab Code:	K1405946-001MS, K1405946-001MSD	Basis:	NA
Test Notes:			

									Percent Recovery				
	Prep	Analysis		Spike Level		Sample	Spike Result				ALS Acceptance	Relative Percent	Result
Analyte	**Method**	**Method**	**MRL**	**MS**	**DMS**	**Result**	**MS**	**DMS**	**MS**	**DMS**	**Limits**	**Difference**	**Notes**
Mercury	METHOD	1631E	0.5	50	50	1.63	48.5	48.0	94	93	71-125	1	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406034
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	06/19/14

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.03	101	77-123	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406034
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	06/19/14

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	4.91	98	77-123	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406034
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	06/19/14

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.13	103	77-123	

ALS Group USA, Corp.
dba ALS Environmental

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Kinnetic Laboratories, Incorporated
Project Name: 516.01
Project No.:

Service Request: K1406034

Sample Name:	Lab Code:
Batch QC1D	K1405981-001D
Batch QC1S	K1405981-001S
Batch QC2D	K1406028-007D
Batch QC2S	K1406028-007S
MOA14MET001	K1406034-001
MOA14MET002	K1406034-002DISS
MOA14MET003	K1406034-003
MOA14MET004	K1406034-004DISS
Method Blank	K1406034-MB

Comments:

Metals

INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406034
Project No.:	NA	**Date Collected:**	06/10/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET001** **Lab Code:** **K1406034-001**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.772		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	2.9		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.014	J	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.304		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	3.22		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	92.2		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	3.93		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.15	J	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	4.98		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	7.58		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.8	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	1.18		
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.006	J	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	206		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406034
Project No.:	NA	**Date Collected:**	06/10/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET002** **Lab Code:** **K1406034-002DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.438		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	1.9		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.051		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	0.92		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	19.3		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.659		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.02	J	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	4.20		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	4.65		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.5	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.676		
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	40.5		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406034
Project No.:	NA	**Date Collected:**	06/10/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET003** **Lab Code:** **K1406034-003**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.554		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	2.7		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.009	J	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.201		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	1.54		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	85.5		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	1.78		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.04	J	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	1.91		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	5.38		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.9	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.650		
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	104		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406034
Project No.:	NA	**Date Collected:**	06/10/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET004** **Lab Code:** **K1406034-004DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.448		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	2.3		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.098		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	0.99		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	46.1		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.639		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.02	U	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	1.59		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	4.76		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.8	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.289		
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	60.1		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Kinnetic Laboratories, Incorpora
Service Request: K1406034
Project No.: NA
Date Collected:
Project Name: 516.01
Date Received:
Matrix: WATER
Units: ug/L
Basis: NA

Sample Name: Method Blank
Lab Code: K1406034-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.005	U	
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	0.1	U	
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	0.02	U	
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	0.02	U	
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.02	U	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	0.007	U	
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	0.02	U	
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.3	U	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.004	U	
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	0.2	U	

Comments:

ALS Group USA, Corp.
dba ALS Environmental

Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406034

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC1S **Lab Code:** K1405981-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	70 - 130	0.99		0.02	U	1.00	99.0		245.1

An empty field in the Control Limit column indicates the control limit is not applicable

ALS Group USA, Corp.
dba ALS Environmental

Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406034

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC2S **Lab Code:** K1406028-007S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	51.4		0.675		50.00	101.4		200.8
Arsenic	70 - 130	58.5		2.9		50.00	111.2		200.8
Beryllium	70 - 130	2.65		0.011	J	2.50	105.6		200.8
Cadmium	70 - 130	26.5		0.187		25.00	105.3		200.8
Chromium	70 - 130	12.0		2.02		10.00	99.8		200.8
Copper	70 - 130	51.7		39.2		12.50	100.0		200.8
Lead	70 - 130	52.7		1.59		50.00	102.2		200.8
Molybdenum	70 - 130	25.6		5.34		20.00	101.3		200.8
Nickel	70 - 130	30.4		5.40		25.00	100.0		200.8
Selenium	70 - 130	53.2		0.8	J	50.00	104.8		200.8
Silver	70 - 130	12.2		0.296		12.50	95.2		200.8
Thallium	70 - 130	52.8		0.005	U	50.00	105.6		200.8
Zinc	70 - 130	122		94.7		25.00	109.2		200.8

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 6 -

DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406034

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC1D **Lab Code:** K1405981-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury		0.02	U	0.02	U			245.1

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 6 -

DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406034

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC2D **Lab Code:** K1406028-007D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	0.675		0.677		0.3		200.8
Arsenic	20	2.9		3.0		3.4		200.8
Beryllium		0.011	J	0.008	J	31.6		200.8
Cadmium	20	0.187		0.186		0.5		200.8
Chromium	20	2.02		1.97		2.5		200.8
Copper	20	39.2		39.5		0.8		200.8
Lead	20	1.59		1.59		0.0		200.8
Molybdenum	20	5.34		5.13		4.0		200.8
Nickel	20	5.40		5.52		2.2		200.8
Selenium		0.8	J	0.8	J	0.0		200.8
Silver	20	0.296		0.278		6.3		200.8
Thallium		0.005	U	0.005	U			200.8
Zinc	20	94.7		96.4		1.8		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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LABORATORY CONTROL SAMPLE

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406034

Project No.: NA

Project Name: 516.01

Aqueous LCS Source: ALS MIXED **Solid LCS Source:**

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits	%R
Antimony	50	52.0	104.0					
Arsenic	50	52.2	104.4					
Beryllium	2.5	2.56	102.4					
Cadmium	25	26.4	105.6					
Chromium	10	10.4	104.0					
Copper	12.5	12.9	103.2					
Lead	50	52.6	105.2					
Mercury	5	4.92	98.4					
Molybdenum	20	19.3	96.5					
Nickel	25	25.6	102.4					
Selenium	50	52.0	104.0					
Silver	12.5	13.1	104.8					
Thallium	50	54.1	108.2					
Zinc	25	26.3	105.2					

ALS Environmental
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July 2, 2014 Analytical Report for Service Request No: K1406037

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.01

Dear Gary:

Enclosed are the results of the samples submitted to our laboratory on June 14, 2014. For your reference, these analyses have been assigned our service request number K1406037.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/mj

RIGHT SOLUTIONS | RIGHT PARTNER

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	4704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories, Incorporated	**Service Request No.:**	K1406037
Project:	516.01	**Date Received:**	06/14/14
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Matrix/Duplicate Matrix Spike (MS/DMS).

Sample Receipt

Ten water samples were received for analysis at ALS Environmental on 06/14/14. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

Total Cyanide by Standard Method 4500-CN-E:
The matrix spike recoveries for sample Batch QC were outside control criteria because of suspected matrix interference. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. No further corrective action was taken.

No other anomalies associated with the analysis of these samples were observed.

Total and Dissolved Metals

No anomalies associated with the analysis of these samples were observed.

Approved by_____

KI406037

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	FROM:
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

DAY 3

Required Completion date: 30 Days	MATRIX: Water (Inf & Eff), Solids (Sludge)	P.O. #: AK14-1003	KLI Project Number: 516.01

Sample ID	Sample Location	Sample date & time	No. of contain	Container type	Preservative	EPA 625/8270	8081 A/B Pest OC	8141 A/B PEST_OP	PCBs - 8082	8290/PCDD PCDF	EPA 1664 Oil & Gr.	Metals	Mercury (1631E)	EPA 8260	Total Cyanide	Condition upon receipt	Comments
MOA14MET009	Influent	6/12/14 0900	1	500ml HDPE	6°C, HNO3							X					For total metals
MOA14MET010	Influent	0900	1	500ml HDPE	6°C, HNO3							X					Prefiltered for dissolved metals
MOA14MET011	Effluent	0859	1	500ml HDPE	6°C, HNO3							X					For total metals
MOA14MET012	Effluent	0859	1	500ml HDPE	6°C, HNO3							X					Prefiltered for dissolved metals
MOA14TCN013	Influent	0900	1	500ml HDPE	NaOH, 6°C										X		SM 4500-CN-E low level
MOA14TCN014	Effluent	0859	1	500ml HDPE	NaOH, 6°C Eff samp contain L-Ascorbic Acid										X		SM 4500-CN-E low level
MOA14MRC009	Influent	0900	1	500ml HDPE	HCl 6°C								X				Total LL Hg
MOA14MRC010	Influent	0900	1	500ml HDPE	HCl 6°C								X				Dissolved LL Hg
MOA14MRC011	Effluent	0859	1	500ml HDPE	HCl 6°C								X				Total LL Hg
MOA14MRC012	Effluent	6/12 0859	1	500ml HDPE	HCl 6°C								X				Dissolved LL Hg

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID, ANALYTICAL METHOD, MDL, DATE OF EXTRACTION & ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

Comments: Metals to include Ag, As, Be, Cd, Cr, Cu, Mo, Ni, Pb, Sb, Se, Tl, Zn, Hg. Report results to MDL.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6/12/14 0950	hand	[signature]	6/12 0950
[signature]	6/13/14 1300	Fed Ex	[signature] ALS 6/14/14 0945	

SAMPLED BY (NAME/SIGNATURE): [signature]

ALS

PC 114

Cooler Receipt and Preservation Form

Client / Project: KINNETIC Service Request K14 6037

Received: 6/14/14 Opened: 6/14/14 By: [illegible] Unloaded: 6/14/14 By: [illegible]

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 4 FRONT

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.9	2.6	N/P	—	-0.3	308		770301283826 (MASTER)	
4.1	3.9	N/P	—	-0.2	341			
2.2	2.1	1.0	0.9	-0.1	316			
4.5	4.6	3.2	3.3	0.1	342			

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Page ____ *of* ____

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406037
Project:		**Date Collected:**	06/12/14
Sample Matrix:	Water	**Date Received:**	06/14/14
Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA

Cyanide, Total

Sample Name	Lab Code	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
MOA14TCN013	K1406037-005	**0.001**	**J**	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
MOA14TCN014	K1406037-006	**0.0016**	**J**	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
Method Blank	K1406037-MB	ND	U	0.0047	0.0009	1	06/18/14 09:53	6/17/14	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406037
Project		**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	06/18/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1406678-03	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1406678-03DUP Result	Average	RPD	RPD Limit
Cyanide, Total	SM 4500-CN- E	0.0047	0.0009	ND	ND	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406037
Project:		**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	06/18/14
		Date Extracted:	06/17/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1406678-03	**Basis:**	NA
Analysis Method:	SM 4500-CN- E		
Prep Method:	SM 4500-CN-C		

		Matrix Spike KQ1406678-03MS			Duplicate Matrix Spike KQ1406678-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	ND	0.100	0 *	ND	0.100	0 *	23-148	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406037
Project:		**Date Analyzed:**	06/18/14
Sample Matrix:	Water	**Date Extracted:**	06/17/14

Lab Control Sample Summary
Cyanide, Total

Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA
		Analysis Lot:	397714

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1406037-LCS	0.152	0.150	101	84-115

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406037
Project:	516.01	**Date Collected:**	06/12/14
Sample Matrix:	Water	**Date Received:**	06/14/14

Mercury, Total

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631E	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MOA14MRC009	K1406037-007	2.5	0.30	5	06/18/14	06/19/14	297	
MOA14MRC011	K1406037-009	2.5	0.30	5	06/18/14	06/19/14	29.8	
Method Blank 1	K1406037-MB1	0.5	0.06	1	06/18/14	06/19/14	ND	
Method Blank 2	K1406037-MB2	0.5	0.06	1	06/18/14	06/19/14	ND	
Method Blank 3	K1406037-MB3	0.5	0.06	1	06/18/14	06/19/14	ND	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406037
Project:	516.01	**Date Collected:**	06/12/14
Sample Matrix:	Water	**Date Received:**	06/14/14

Mercury, Dissolved

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631E	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MOA14MRC010	K1406037-008	0.5	0.06	1	06/18/14	06/19/14	10.3	
MOA14MRC012	K1406037-010	0.5	0.06	1	06/18/14	06/19/14	4.35	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406037
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	06/18/14
		Date Analyzed:	06/19/14

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	Batch QC	Units:	ng/L
Lab Code:	K1405946-001MS, K1405946-001MSD	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	ALS Acceptance Limits	Relative Percent Difference	Result Notes
Mercury	METHOD	1631E	0.5	50	50	1.63	48.5	48.0	94	93	71-125	1	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406037
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	06/19/14

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.03	101	77-123	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406037
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	06/19/14

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	4.91	98	77-123	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406037
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	06/19/14

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.13	103	77-123	

ALS Group USA, Corp.
dba ALS Environmental

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: Kinnetic Laboratories, Incorporated
Project Name: 516.01
Project No.:

Service Request: K1406037

Sample Name:	Lab Code:
Batch QC1D	K1405981-001D
Batch QC1S	K1405981-001S
Batch QC2D	K1406028-007D
Batch QC2S	K1406028-007S
MOA14MET009	K1406037-001
MOA14MET010	K1406037-002DISS
MOA14MET011	K1406037-003
MOA14MET012	K1406037-004DISS
Method Blank	K1406037-MB

Comments:

Metals

INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406037
Project No.:	NA	**Date Collected:**	06/12/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET009** **Lab Code:** **K1406037-001**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.287		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	3.2		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.017	J	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.276		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	3.19		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	52.9		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	3.14		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.06	J	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	2.89		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	8.63		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.7	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.004	U	
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	J	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	215		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406037
Project No.:	NA	**Date Collected:**	06/12/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET010** **Lab Code:** **K1406037-002DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.404		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	1.8		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.050		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	1.28		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	16.9		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.498		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.02	U	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	3.49		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	5.35		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.6	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.092		
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	32.9		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406037
Project No.:	NA	**Date Collected:**	06/12/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET011** **Lab Code:** **K1406037-003**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.547		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	2.9		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.185		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	1.61		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	34.8		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	1.60		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.03	J	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	3.97		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	5.51		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.9	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.287		
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	92.9		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1406037
Project No.:	NA	**Date Collected:**	06/12/14
Project Name:	516.01	**Date Received:**	06/14/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET012** **Lab Code:** **K1406037-004DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.457		
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	2.5		
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.088		
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	1.23		
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	20.5		
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.478		
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.02	U	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	3.67		
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	4.89		
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.8	J	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.082		
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	50.7		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: Kinnetic Laboratories, Incorpora
Service Request: K1406037
Project No.: NA
Date Collected:
Project Name: 516.01
Date Received:
Matrix: WATER
Units: ug/L
Basis: NA

Sample Name: Method Blank
Lab Code: K1406037-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	06/18/14	06/25/14	0.005	U	
Arsenic	200.8	0.5	0.1	1.0	06/18/14	06/25/14	0.1	U	
Beryllium	200.8	0.020	0.006	1.0	06/18/14	06/25/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Chromium	200.8	0.20	0.02	1.0	06/18/14	06/25/14	0.02	U	
Copper	200.8	0.10	0.02	1.0	06/18/14	06/25/14	0.02	U	
Lead	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Mercury	245.1	0.20	0.02	1.0	06/18/14	06/19/14	0.02	U	
Molybdenum	200.8	0.050	0.007	1.0	06/18/14	06/25/14	0.007	U	
Nickel	200.8	0.20	0.02	1.0	06/18/14	06/25/14	0.02	U	
Selenium	200.8	1.0	0.3	1.0	06/18/14	06/25/14	0.3	U	
Silver	200.8	0.020	0.004	1.0	06/18/14	06/25/14	0.004	U	
Thallium	200.8	0.020	0.005	1.0	06/18/14	06/25/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	06/18/14	06/25/14	0.2	U	

Comments:

ALS Group USA, Corp.
dba ALS Environmental

Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406037

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC1S **Lab Code:** K1405981-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	70 - 130	0.99		0.02	U	1.00	99.0		245.1

An empty field in the Control Limit column indicates the control limit is not applicable

ALS Group USA, Corp.
dba ALS Environmental

Metals
- 5A -
SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406037

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC2S **Lab Code:** K1406028-007S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	51.4		0.675		50.00	101.4		200.8
Arsenic	70 - 130	58.5		2.9		50.00	111.2		200.8
Beryllium	70 - 130	2.65		0.011	J	2.50	105.6		200.8
Cadmium	70 - 130	26.5		0.187		25.00	105.3		200.8
Chromium	70 - 130	12.0		2.02		10.00	99.8		200.8
Copper	70 - 130	51.7		39.2		12.50	100.0		200.8
Lead	70 - 130	52.7		1.59		50.00	102.2		200.8
Molybdenum	70 - 130	25.6		5.34		20.00	101.3		200.8
Nickel	70 - 130	30.4		5.40		25.00	100.0		200.8
Selenium	70 - 130	53.2		0.8	J	50.00	104.8		200.8
Silver	70 - 130	12.2		0.296		12.50	95.2		200.8
Thallium	70 - 130	52.8		0.005	U	50.00	105.6		200.8
Zinc	70 - 130	122		94.7		25.00	109.2		200.8

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

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DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406037

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC1D **Lab Code:** K1405981-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury		0.02	U	0.02	U			245.1

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406037

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC2D **Lab Code:** K1406028-007D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	0.675		0.677		0.3		200.8
Arsenic	20	2.9		3.0		3.4		200.8
Beryllium		0.011	J	0.008	J	31.6		200.8
Cadmium	20	0.187		0.186		0.5		200.8
Chromium	20	2.02		1.97		2.5		200.8
Copper	20	39.2		39.5		0.8		200.8
Lead	20	1.59		1.59		0.0		200.8
Molybdenum	20	5.34		5.13		4.0		200.8
Nickel	20	5.40		5.52		2.2		200.8
Selenium		0.8	J	0.8	J	0.0		200.8
Silver	20	0.296		0.278		6.3		200.8
Thallium		0.005	U	0.005	U			200.8
Zinc	20	94.7		96.4		1.8		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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LABORATORY CONTROL SAMPLE

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1406037

Project No.: NA

Project Name: 516.01

Aqueous LCS Source: ALS MIXED **Solid LCS Source:**

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits	%R
Antimony	50	52.0	104.0					
Arsenic	50	52.2	104.4					
Beryllium	2.5	2.56	102.4					
Cadmium	25	26.4	105.6					
Chromium	10	10.4	104.0					
Copper	12.5	12.9	103.2					
Lead	50	52.6	105.2					
Mercury	5	4.92	98.4					
Molybdenum	20	19.3	96.5					
Nickel	25	25.6	102.4					
Selenium	50	52.0	104.0					
Silver	12.5	13.1	104.8					
Thallium	50	54.1	108.2					
Zinc	25	26.3	105.2					

APPENDIX A

Toxic Pollutant and Pesticide Monitoring, June Sampling

A2 Enterococci

Anchorage Water & Wastewater Utility, Asplund Laboratory

ANCHORAGE WATER AND WASTEWATER UTILITY

WATER QUALITY SECTION

Analytical Report

Date collected	Labworks ID	Sample ID	Sample Location	Parameter	Result	Unit	Method	Analyst
6/11/14	AB00332	MOA14ENT001	Pt. Woronzof WWTF - F.Effluent	Enterococci - Chromogenic	**1918**	mpn/100 mL	ASTM D6503-99	S. TRASK
6/11/14	AB00333	MOA14ENT002	Pt. Woronzof WWTF - F.Effluent	Enterococci - Chromogenic	**3609**	mpn/100 mL	ASTM D6503-99	S. TRASK
6/11/14	AB00487	MOA14ENT001-ii	Pt. Woronzof WWTF - F.Effluent	Enterococci - Chromogenic	**2415**	mpn/100 mL	ASTM D6503-99	S. TRASK
6/11/14	AB00488	MOA14ENT002-ii	Pt. Woronzof WWTF - F.Effluent	Enterococci - Chromogenic	**4884**	mpn/100 mL	ASTM D6503-99	S. TRASK

Reported by: _____ Date: 08/21/2014

Paul W. Smith, Water Quality Analyst

APPENDIX B

Toxic Pollutant and Pesticide Monitoring, August Sampling

B1 Oil & Grease, Cyanide, Metals, Priority Pollutants, Dioxin, Pesticides, Asbestos and Hydrocarbons

ALS Environmental

ALS Environmental
ALS Group USA, Corp.
1317 South 13th Avenue
Kelso, WA 98626
T: +1 360 577 7222
F: +1 360 636 1068
www.alsglobal.com

August 29, 2014 Analytical Report for Service Request No: K1408127

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.01

Dear Gary:

Enclosed are the results of the samples submitted to our laboratory on August 05, 2014. For your reference, these analyses have been assigned our service request number K1408127.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/kd

RIGHT SOLUTIONS | RIGHT PARTNER

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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/envserv/	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
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

K1408127

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion Date: 30 days.	P.O. #: AK14-1007	KLI Proj. #:516.01

ANALYSIS TYPE: EPA 624. Detection limits as per method.

MATRIX: Water	**Preservative:** HCl,6°C	**Type of Container:** 40-mL glass

	SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
✓	MOA14VOP020	INF CMP #1	3	8/3/14 ; 0305		
✓	MOA14VOP021	INF CMP #2	3	0600		
✓	MOA14VOP022	INF CMP #3	3	0900		
✓	MOA14VOP023	INF CMP #4	3	1200		
✓	MOA14VOP024	INF CMP #5	3	1503		
✓	MOA14VOP025	INF CMP #6	3	1800		
✓	MOA14VOP026	INF CMP #7	3	2100		
✓	MOA14VOP027	INF CMP #8	3	2400		

SAMPLES LISTED ON THIS COC SHOULD BE COMPOSITED IN AN EIGHT-PART COMPOSITE IN A VAPOR-TYPE SYRINGE PRIOR TO ANALYSIS.

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/4/14; 1224	hand	[signature]	8/4/14 1225
[signature]	8/4/14 1330	FedX	[signature]	8/5/14 0930

SAMPLED BY (NAME/SIGNATURE): _____

C:\Projects\MOA\MOA14\COCs\SummerWet

PC 112

Cooler Receipt and Preservation Form

Client / Project: Kinnetic Service Request K14 08127

Received: 8/5/14 Opened: 8/5/14 By: [illegible] Unloaded: 8/5/14 By: [illegible]

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.2	-0.6	1.8	1.4	-0.4	282		7707 5804 5017	
2.2	2.0	4.9	4.3	-0.2	339		" " 5028	

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
Eff Cmp #4	ALL VOA		X							
Eff Cmp #6	ALL VOA		X							

SHORT HOLD TIME

Notes, Discrepancies, & Resolutions:

Missing one cooler per waybill!

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408127
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Volatile Organic Compounds

Sample Name:	Composite	**Units:**	ug/L
Lab Code:	K1408127-009	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	08/07/14	08/07/14	KWG1411288	
Chloromethane	ND	U	0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
Vinyl Chloride	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Bromomethane	ND	U	0.50	0.072	1	08/07/14	08/07/14	KWG1411288	
Chloroethane	ND	U	0.50	0.14	1	08/07/14	08/07/14	KWG1411288	
Trichlorofluoromethane	ND	U	0.50	0.080	1	08/07/14	08/07/14	KWG1411288	
Acrolein†	ND	U	50	3.7	1	08/07/14	08/07/14	KWG1411288	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethene	ND	U	0.50	0.039	1	08/07/14	08/07/14	KWG1411288	
Acetone	**130**		20	3.1	1	08/07/14	08/07/14	KWG1411288	
Carbon Disulfide	**0.28**	J	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
Methylene Chloride	**1.4**	J	2.0	0.14	1	08/07/14	08/07/14	KWG1411288	
Acrylonitrile†	ND	U	10	0.14	1	08/07/14	08/07/14	KWG1411288	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethane	ND	U	0.50	0.025	1	08/07/14	08/07/14	KWG1411288	
Vinyl Acetate	ND	U	10	0.33	1	08/07/14	08/07/14	KWG1411288	
cis-1,2-Dichloroethene	**0.060**	J	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
2-Butanone (MEK)	**4.8**	J	20	3.0	1	08/07/14	08/07/14	KWG1411288	
Chloroform	**2.1**		0.50	0.062	1	08/07/14	08/07/14	KWG1411288	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	08/07/14	08/07/14	KWG1411288	
Carbon Tetrachloride	ND	U	0.50	0.12	1	08/07/14	08/07/14	KWG1411288	
Benzene	**0.20**	J	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
Trichloroethene (TCE)	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloropropane	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
Bromodichloromethane	ND	U	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	08/07/14	08/07/14	KWG1411288	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	08/07/14	08/07/14	KWG1411288	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	08/07/14	08/07/14	KWG1411288	
Toluene	**3.8**		0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
Tetrachloroethene (PCE)	**0.16**	J	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408127
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Volatile Organic Compounds

Sample Name:	Composite	**Units:**	ug/L
Lab Code:	K1408127-009	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	08/07/14	08/07/14	KWG1411288	
Dibromochloromethane	ND	U	0.50	0.081	1	08/07/14	08/07/14	KWG1411288	
Chlorobenzene	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Ethylbenzene	**0.22**	J	0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
m,p-Xylenes	**0.58**	J	1.0	0.14	1	08/07/14	08/07/14	KWG1411288	
o-Xylene	**0.25**	J	0.50	0.024	1	08/07/14	08/07/14	KWG1411288	
Styrene	**0.070**	J	0.50	0.023	1	08/07/14	08/07/14	KWG1411288	
Bromoform	ND	U	0.50	0.17	1	08/07/14	08/07/14	KWG1411288	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	08/07/14	08/07/14	KWG1411288	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	08/07/14	08/07/14	KWG1411288	
1,4-Dichlorobenzene	**0.68**		0.50	0.073	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	115	76-132	08/07/14	Acceptable
Toluene-d8	100	80-120	08/07/14	Acceptable
4-Bromofluorobenzene	90	68-120	08/07/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408127
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411288-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	08/07/14	08/07/14	KWG1411288	
Chloromethane	ND	U	0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
Vinyl Chloride	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Bromomethane	ND	U	0.50	0.072	1	08/07/14	08/07/14	KWG1411288	
Chloroethane	ND	U	0.50	0.14	1	08/07/14	08/07/14	KWG1411288	
Trichlorofluoromethane	ND	U	0.50	0.080	1	08/07/14	08/07/14	KWG1411288	
Acrolein†	ND	U	50	3.7	1	08/07/14	08/07/14	KWG1411288	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethene	ND	U	0.50	0.039	1	08/07/14	08/07/14	KWG1411288	
Acetone	**3.9**	J	20	3.1	1	08/07/14	08/07/14	KWG1411288	
Carbon Disulfide	**0.10**	J	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
Methylene Chloride	**0.26**	J	2.0	0.14	1	08/07/14	08/07/14	KWG1411288	
Acrylonitrile†	ND	U	10	0.14	1	08/07/14	08/07/14	KWG1411288	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethane	ND	U	0.50	0.025	1	08/07/14	08/07/14	KWG1411288	
Vinyl Acetate	ND	U	10	0.33	1	08/07/14	08/07/14	KWG1411288	
cis-1,2-Dichloroethene	ND	U	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
2-Butanone (MEK)	ND	U	20	3.0	1	08/07/14	08/07/14	KWG1411288	
Chloroform	ND	U	0.50	0.062	1	08/07/14	08/07/14	KWG1411288	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	08/07/14	08/07/14	KWG1411288	
Carbon Tetrachloride	ND	U	0.50	0.12	1	08/07/14	08/07/14	KWG1411288	
Benzene	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
Trichloroethene (TCE)	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloropropane	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
Bromodichloromethane	ND	U	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	08/07/14	08/07/14	KWG1411288	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	08/07/14	08/07/14	KWG1411288	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	08/07/14	08/07/14	KWG1411288	
Toluene	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
Tetrachloroethene (PCE)	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408127
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411288-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	08/07/14	08/07/14	KWG1411288	
Dibromochloromethane	ND	U	0.50	0.081	1	08/07/14	08/07/14	KWG1411288	
Chlorobenzene	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Ethylbenzene	ND	U	0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
m,p-Xylenes	ND	U	1.0	0.14	1	08/07/14	08/07/14	KWG1411288	
o-Xylene	ND	U	0.50	0.024	1	08/07/14	08/07/14	KWG1411288	
Styrene	ND	U	0.50	0.023	1	08/07/14	08/07/14	KWG1411288	
Bromoform	ND	U	0.50	0.17	1	08/07/14	08/07/14	KWG1411288	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	08/07/14	08/07/14	KWG1411288	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	08/07/14	08/07/14	KWG1411288	
1,4-Dichlorobenzene	ND	U	0.50	0.073	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	115	76-132	08/07/14	Acceptable
Toluene-d8	99	80-120	08/07/14	Acceptable
4-Bromofluorobenzene	90	68-120	08/07/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408127
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: METHOD **Units:** Percent
Analysis Method: 624 **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
Composite	K1408127-009	115	100	90
Batch QC	K1408252-003	119	100	90
Method Blank	KWG1411288-4	115	99	90
Batch QCMS	KWG1411288-1	110	106	98
Batch QCDMS	KWG1411288-2	109	107	99
Lab Control Sample	KWG1411288-3	112	109	99

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	76-132
Sur2	=	Toluene-d8	80-120
Sur3	=	4-Bromofluorobenzene	68-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408127
Project:	516.01	**Date Extracted:**	08/07/2014
Sample Matrix:	Water	**Date Analyzed:**	08/07/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1408252-003	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624	**Extraction Lot:**	KWG1411288

		Batch QCMS KWG1411288-1 Matrix Spike			Batch QCDMS KWG1411288-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene	ND	11.0	10.0	110	10.5	10.0	105	10-234	5	30
Benzene	0.20	9.39	10.0	92	9.34	10.0	91	37-151	1	30
Trichloroethene (TCE)	ND	9.34	10.0	93	9.05	10.0	91	71-157	3	30
Toluene	0.83	9.69	10.0	89	9.61	10.0	88	47-150	1	30
Chlorobenzene	0.050	8.25	10.0	82	8.23	10.0	82	37-160	0	30
1,2-Dichlorobenzene	ND	8.18	10.0	82	8.37	10.0	84	18-190	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408127
Project:	516.01	**Date Extracted:**	08/07/2014
Sample Matrix:	Water	**Date Analyzed:**	08/07/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411288

	Lab Control Sample KWG1411288-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	8.11	10.0	81	32-158
Chloromethane	8.69	10.0	87	10-273
Vinyl Chloride	9.64	10.0	96	10-251
Bromomethane	7.22	10.0	72	10-242
Chloroethane	11.5	10.0	115	14-230
Trichlorofluoromethane	8.48	10.0	85	17-181
Acrolein	90.4	100	90	27-200
Trichlorotrifluoroethane	8.29	10.0	83	65-153
1,1-Dichloroethene	10.8	10.0	108	10-234
Acetone	67.1	50.0	134	46-162
Carbon Disulfide	18.5	20.0	92	66-138
Methylene Chloride	10.3	10.0	103	10-221
Acrylonitrile	10.2	10.0	102	61-141
trans-1,2-Dichloroethene	10.1	10.0	101	54-156
1,1-Dichloroethane	10.4	10.0	104	59-155
Vinyl Acetate	19.6	20.0	98	62-141
cis-1,2-Dichloroethene	9.29	10.0	93	80-124
2-Butanone (MEK)	47.3	50.0	95	53-148
Chloroform	10.4	10.0	104	51-138
1,1,1-Trichloroethane (TCA)	9.26	10.0	93	52-162
Carbon Tetrachloride	9.34	10.0	93	70-140
Benzene	9.63	10.0	96	37-151
1,2-Dichloroethane (EDC)	11.7	10.0	117	49-155
Trichloroethene (TCE)	9.58	10.0	96	71-157
1,2-Dichloropropane	9.46	10.0	95	10-210
Bromodichloromethane	10.9	10.0	109	35-155
2-Chloroethyl Vinyl Ether	6.83	10.0	68	10-305
cis-1,3-Dichloropropene	8.28	10.0	83	10-227
4-Methyl-2-pentanone (MIBK)	48.4	50.0	97	46-129
Toluene	9.47	10.0	95	47-150
trans-1,3-Dichloropropene	7.11	10.0	71	17-183
1,1,2-Trichloroethane	9.06	10.0	91	52-150
Tetrachloroethene (PCE)	7.54	10.0	75	64-148
2-Hexanone	48.6	50.0	97	37-136
Dibromochloromethane	9.14	10.0	91	53-149

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408127
Project:	516.01	**Date Extracted:**	08/07/2014
Sample Matrix:	Water	**Date Analyzed:**	08/07/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411288

	Lab Control Sample KWG1411288-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Chlorobenzene	8.74	10.0	87	37-160
Ethylbenzene	8.63	10.0	86	37-162
m,p-Xylenes	17.8	20.0	89	80-126
o-Xylene	8.04	10.0	80	78-120
Styrene	9.08	10.0	91	80-120
Bromoform	10.7	10.0	107	45-169
1,1,2,2-Tetrachloroethane	9.61	10.0	96	46-157
1,3-Dichlorobenzene	8.33	10.0	83	59-156
1,4-Dichlorobenzene	8.28	10.0	83	18-190
1,2-Dichlorobenzene	8.45	10.0	85	18-190

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental
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August 29, 2014 Analytical Report for Service Request No: K1408128

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.01

Dear Gary:

Enclosed are the results of the samples submitted to our laboratory on August 05, 2014. For your reference, these analyses have been assigned our service request number K1408128.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard B. Holmes

Howard Holmes
Project Manager

HH/kd

RIGHT SOLUTIONS | RIGHT PARTNER

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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/envserv/	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
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

K1408128

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**	
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax	
Required Completion Date: 30 days.	P.O. #: AK14-1007	KLI Proj. #:516.01

ANALYSIS TYPE: EPA 624. Detection limits as per method. Please perform MS/SD on the composited sample.

MATRIX: Water	**Preservative:** HCl, 6°C Effluent samples contain L- Ascorbic Acid	**Type of Container:** 40-mL glass

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14VOP028	EFF CMP #1	3	8/3/14 ; 0310		
MOA14VOP029	EFF CMP #2	3	; 0600		
MOA14VOP030	EFF CMP #3	3	; 0900		
MOA14VOP031	EFF CMP #4	3	; 1200		
MOA14VOP032	EFF CMP #5	3	; 1455		
MOA14VOP033	EFF CMP #6	3	; 1800		
MOA14VOP034	EFF CMP #7	3	; 2100		
MOA14VOP035	EFF CMP #8	3	; 2400		

SAMPLES LISTED ON THIS COC SHOULD BE COMPOSITED IN AN EIGHT-PART COMPOSITE IN A VAPOR-TYPE SYRINGE PRIOR TO ANALYSIS.

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/4/14; 1224	hand	[signature]	8/4/14 1225
[signature]	8/4/14 1330	FedEx	[signature]	8/5/14 0930

SAMPLED BY (NAME/SIGNATURE): _____

C:\Projects\MOA\MOA14\COC\SummerWat

PC #2

Cooler Receipt and Preservation Form

Client / Project: Kinnetic Service Request K14 08128

Received: 8/5/14 Opened: 8/5/14 By: [illegible] Unloaded: 8/5/14 By: [illegible]

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.2	-0.6	1.8	1.4	-0.4	282		7707 5804 5017	
2.2	2.0	4.3	4.3	-0.2	334		" " 5028	

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
EPP Cmp #4	ALL VOA		X							
EPP Cmp #6	ALL VOA		X							

SHORT HOLD TIME

Notes, Discrepancies, & Resolutions:

Missing one cooler per waybill!

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408128
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Volatile Organic Compounds

Sample Name:	Composite	**Units:**	ug/L
Lab Code:	K1408128-009	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	08/07/14	08/07/14	KWG1411288	
Chloromethane	**1.2**		0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
Vinyl Chloride	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Bromomethane	ND	U	0.50	0.072	1	08/07/14	08/07/14	KWG1411288	
Chloroethane	ND	U	0.50	0.14	1	08/07/14	08/07/14	KWG1411288	
Trichlorofluoromethane	ND	U	0.50	0.080	1	08/07/14	08/07/14	KWG1411288	
Acrolein†	ND	U	50	3.7	1	08/07/14	08/07/14	KWG1411288	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethene	ND	U	0.50	0.039	1	08/07/14	08/07/14	KWG1411288	
Acetone	**140**		20	3.1	1	08/07/14	08/07/14	KWG1411288	
Carbon Disulfide	**0.52**		0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
Methylene Chloride	**3.0**		2.0	0.14	1	08/07/14	08/07/14	KWG1411288	
Acrylonitrile†	ND	U	10	0.14	1	08/07/14	08/07/14	KWG1411288	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethane	ND	U	0.50	0.025	1	08/07/14	08/07/14	KWG1411288	
Vinyl Acetate	ND	U	10	0.33	1	08/07/14	08/07/14	KWG1411288	
cis-1,2-Dichloroethene	ND	U	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
2-Butanone (MEK)	**16**	J	20	3.0	1	08/07/14	08/07/14	KWG1411288	
Chloroform	**4.2**		0.50	0.062	1	08/07/14	08/07/14	KWG1411288	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	08/07/14	08/07/14	KWG1411288	
Carbon Tetrachloride	ND	U	0.50	0.12	1	08/07/14	08/07/14	KWG1411288	
Benzene	**0.20**	J	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
Trichloroethene (TCE)	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloropropane	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
Bromodichloromethane	**0.20**	J	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	08/07/14	08/07/14	KWG1411288	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	08/07/14	08/07/14	KWG1411288	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	08/07/14	08/07/14	KWG1411288	
Toluene	**5.4**		0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
Tetrachloroethene (PCE)	**0.13**	J	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408128
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Volatile Organic Compounds

Sample Name:	Composite	**Units:**	ug/L
Lab Code:	K1408128-009	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	08/07/14	08/07/14	KWG1411288	
Dibromochloromethane	ND	U	0.50	0.081	1	08/07/14	08/07/14	KWG1411288	
Chlorobenzene	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Ethylbenzene	**0.23**	J	0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
m,p-Xylenes	**0.62**	J	1.0	0.14	1	08/07/14	08/07/14	KWG1411288	
o-Xylene	**0.26**	J	0.50	0.024	1	08/07/14	08/07/14	KWG1411288	
Styrene	**0.070**	J	0.50	0.023	1	08/07/14	08/07/14	KWG1411288	
Bromoform	ND	U	0.50	0.17	1	08/07/14	08/07/14	KWG1411288	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	08/07/14	08/07/14	KWG1411288	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	08/07/14	08/07/14	KWG1411288	
1,4-Dichlorobenzene	**0.58**		0.50	0.073	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	114	76-132	08/07/14	Acceptable
Toluene-d8	94	80-120	08/07/14	Acceptable
4-Bromofluorobenzene	92	68-120	08/07/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408128
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411288-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	08/07/14	08/07/14	KWG1411288	
Chloromethane	ND	U	0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
Vinyl Chloride	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Bromomethane	ND	U	0.50	0.072	1	08/07/14	08/07/14	KWG1411288	
Chloroethane	ND	U	0.50	0.14	1	08/07/14	08/07/14	KWG1411288	
Trichlorofluoromethane	ND	U	0.50	0.080	1	08/07/14	08/07/14	KWG1411288	
Acrolein†	ND	U	50	3.7	1	08/07/14	08/07/14	KWG1411288	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethene	ND	U	0.50	0.039	1	08/07/14	08/07/14	KWG1411288	
Acetone	**3.9**	J	20	3.1	1	08/07/14	08/07/14	KWG1411288	
Carbon Disulfide	**0.10**	J	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
Methylene Chloride	**0.26**	J	2.0	0.14	1	08/07/14	08/07/14	KWG1411288	
Acrylonitrile†	ND	U	10	0.14	1	08/07/14	08/07/14	KWG1411288	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethane	ND	U	0.50	0.025	1	08/07/14	08/07/14	KWG1411288	
Vinyl Acetate	ND	U	10	0.33	1	08/07/14	08/07/14	KWG1411288	
cis-1,2-Dichloroethene	ND	U	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
2-Butanone (MEK)	ND	U	20	3.0	1	08/07/14	08/07/14	KWG1411288	
Chloroform	ND	U	0.50	0.062	1	08/07/14	08/07/14	KWG1411288	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	08/07/14	08/07/14	KWG1411288	
Carbon Tetrachloride	ND	U	0.50	0.12	1	08/07/14	08/07/14	KWG1411288	
Benzene	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
Trichloroethene (TCE)	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloropropane	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
Bromodichloromethane	ND	U	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	08/07/14	08/07/14	KWG1411288	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	08/07/14	08/07/14	KWG1411288	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	08/07/14	08/07/14	KWG1411288	
Toluene	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
Tetrachloroethene (PCE)	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408128
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411288-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	08/07/14	08/07/14	KWG1411288	
Dibromochloromethane	ND	U	0.50	0.081	1	08/07/14	08/07/14	KWG1411288	
Chlorobenzene	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Ethylbenzene	ND	U	0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
m,p-Xylenes	ND	U	1.0	0.14	1	08/07/14	08/07/14	KWG1411288	
o-Xylene	ND	U	0.50	0.024	1	08/07/14	08/07/14	KWG1411288	
Styrene	ND	U	0.50	0.023	1	08/07/14	08/07/14	KWG1411288	
Bromoform	ND	U	0.50	0.17	1	08/07/14	08/07/14	KWG1411288	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	08/07/14	08/07/14	KWG1411288	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	08/07/14	08/07/14	KWG1411288	
1,4-Dichlorobenzene	ND	U	0.50	0.073	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	115	76-132	08/07/14	Acceptable
Toluene-d8	99	80-120	08/07/14	Acceptable
4-Bromofluorobenzene	90	68-120	08/07/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408128
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: METHOD **Units:** Percent
Analysis Method: 624 **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
Composite	K1408128-009	114	94	92
Batch QC	K1408252-003	119	100	90
Method Blank	KWG1411288-4	115	99	90
Batch QCMS	KWG1411288-1	110	106	98
Batch QCDMS	KWG1411288-2	109	107	99
Lab Control Sample	KWG1411288-3	112	109	99

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	76-132
Sur2	=	Toluene-d8	80-120
Sur3	=	4-Bromofluorobenzene	68-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408128
Project:	516.01	**Date Extracted:**	08/07/2014
Sample Matrix:	Water	**Date Analyzed:**	08/07/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1408252-003	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624	**Extraction Lot:**	KWG1411288

		Batch QCMS KWG1411288-1 Matrix Spike			Batch QCDMS KWG1411288-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene	ND	11.0	10.0	110	10.5	10.0	105	10-234	5	30
Benzene	0.20	9.39	10.0	92	9.34	10.0	91	37-151	1	30
Trichloroethene (TCE)	ND	9.34	10.0	93	9.05	10.0	91	71-157	3	30
Toluene	0.83	9.69	10.0	89	9.61	10.0	88	47-150	1	30
Chlorobenzene	0.050	8.25	10.0	82	8.23	10.0	82	37-160	0	30
1,2-Dichlorobenzene	ND	8.18	10.0	82	8.37	10.0	84	18-190	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408128
Project:	516.01	**Date Extracted:**	08/07/2014
Sample Matrix:	Water	**Date Analyzed:**	08/07/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411288

	Lab Control Sample KWG1411288-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	8.11	10.0	81	32-158
Chloromethane	8.69	10.0	87	10-273
Vinyl Chloride	9.64	10.0	96	10-251
Bromomethane	7.22	10.0	72	10-242
Chloroethane	11.5	10.0	115	14-230
Trichlorofluoromethane	8.48	10.0	85	17-181
Acrolein	90.4	100	90	27-200
Trichlorotrifluoroethane	8.29	10.0	83	65-153
1,1-Dichloroethene	10.8	10.0	108	10-234
Acetone	67.1	50.0	134	46-162
Carbon Disulfide	18.5	20.0	92	66-138
Methylene Chloride	10.3	10.0	103	10-221
Acrylonitrile	10.2	10.0	102	61-141
trans-1,2-Dichloroethene	10.1	10.0	101	54-156
1,1-Dichloroethane	10.4	10.0	104	59-155
Vinyl Acetate	19.6	20.0	98	62-141
cis-1,2-Dichloroethene	9.29	10.0	93	80-124
2-Butanone (MEK)	47.3	50.0	95	53-148
Chloroform	10.4	10.0	104	51-138
1,1,1-Trichloroethane (TCA)	9.26	10.0	93	52-162
Carbon Tetrachloride	9.34	10.0	93	70-140
Benzene	9.63	10.0	96	37-151
1,2-Dichloroethane (EDC)	11.7	10.0	117	49-155
Trichloroethene (TCE)	9.58	10.0	96	71-157
1,2-Dichloropropane	9.46	10.0	95	10-210
Bromodichloromethane	10.9	10.0	109	35-155
2-Chloroethyl Vinyl Ether	6.83	10.0	68	10-305
cis-1,3-Dichloropropene	8.28	10.0	83	10-227
4-Methyl-2-pentanone (MIBK)	48.4	50.0	97	46-129
Toluene	9.47	10.0	95	47-150
trans-1,3-Dichloropropene	7.11	10.0	71	17-183
1,1,2-Trichloroethane	9.06	10.0	91	52-150
Tetrachloroethene (PCE)	7.54	10.0	75	64-148
2-Hexanone	48.6	50.0	97	37-136
Dibromochloromethane	9.14	10.0	91	53-149

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408128
Project:	516.01	**Date Extracted:**	08/07/2014
Sample Matrix:	Water	**Date Analyzed:**	08/07/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411288

	Lab Control Sample KWG1411288-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Chlorobenzene	8.74	10.0	87	37-160
Ethylbenzene	8.63	10.0	86	37-162
m,p-Xylenes	17.8	20.0	89	80-126
o-Xylene	8.04	10.0	80	78-120
Styrene	9.08	10.0	91	80-120
Bromoform	10.7	10.0	107	45-169
1,1,2,2-Tetrachloroethane	9.61	10.0	96	46-157
1,3-Dichlorobenzene	8.33	10.0	83	59-156
1,4-Dichlorobenzene	8.28	10.0	83	18-190
1,2-Dichlorobenzene	8.45	10.0	85	18-190

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental
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August 26, 2014 Analytical Report for Service Request No: K1408129

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.01

Dear Gary:

Enclosed are the results of the samples submitted to our laboratory on August 05, 2014. For your reference, these analyses have been assigned our service request number K1408129.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/aj

RIGHT SOLUTIONS | RIGHT PARTNER

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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/envserv/	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
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

K1408129

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion Date: 30 days.	P.O. #: AK14-1007	KLI Proj. #:516.01

ANALYSIS TYPE: EPA 624. Detection limits as per method.

MATRIX: Water	**Preservative:** HCl, 6°C Effluent samples contain L- Ascorbic Acid	**Type of Container:** 40-mL glass

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
✓ MOA14VOP036	C-Station	3			
✓ MOA14VOP037	Trip Blank	4			

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/4/14; 1224	hand	[signature]	8/4/14 1225
[signature]	8/4/14 1330	FedX	[signature]	8/5/14 0936

SAMPLED BY (NAME/SIGNATURE): _____

PC 42

Cooler Receipt and Preservation Form

Client / Project: Kinnetic Service Request K14 08129

Received: 8/5/14 Opened: 8/5/14 By: [illegible] Unloaded: 8/5/14 By: [illegible]

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
-0.2	-0.6	1.8	1.4	-0.4	282		7707 5804 5017	
2.2	2.0	4.9	4.3	-0.2	339		" " 5028	

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
EFF Cmp #4	ALL VOA		X							
EFF Cmp #6	ALL VOA		X							

SHORT HOLD TIME

Notes, Discrepancies, & Resolutions:

Missing one cooler per waybill!

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ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408129
Project:	516.01	**Date Collected:**	
Sample Matrix:	Water	**Date Received:**	08/05/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP036	**Units:**	ug/L
Lab Code:	K1408129-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	08/08/14	08/08/14	KWG1411288	
Chloromethane	**0.040**	J	0.50	0.030	1	08/08/14	08/08/14	KWG1411288	
Vinyl Chloride	ND	U	0.50	0.031	1	08/08/14	08/08/14	KWG1411288	
Bromomethane	ND	U	0.50	0.072	1	08/08/14	08/08/14	KWG1411288	
Chloroethane	ND	U	0.50	0.14	1	08/08/14	08/08/14	KWG1411288	
Trichlorofluoromethane	ND	U	0.50	0.080	1	08/08/14	08/08/14	KWG1411288	
Acrolein†	ND	U	50	3.7	1	08/08/14	08/08/14	KWG1411288	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	08/08/14	08/08/14	KWG1411288	
1,1-Dichloroethene	ND	U	0.50	0.039	1	08/08/14	08/08/14	KWG1411288	
Acetone	ND	U	20	3.1	1	08/08/14	08/08/14	KWG1411288	
Carbon Disulfide	**0.29**	J	0.50	0.032	1	08/08/14	08/08/14	KWG1411288	
Methylene Chloride	ND	U	2.0	0.14	1	08/08/14	08/08/14	KWG1411288	
Acrylonitrile†	ND	U	10	0.14	1	08/08/14	08/08/14	KWG1411288	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	08/08/14	08/08/14	KWG1411288	
1,1-Dichloroethane	ND	U	0.50	0.025	1	08/08/14	08/08/14	KWG1411288	
Vinyl Acetate	ND	U	10	0.33	1	08/08/14	08/08/14	KWG1411288	
cis-1,2-Dichloroethene	ND	U	0.50	0.036	1	08/08/14	08/08/14	KWG1411288	
2-Butanone (MEK)	ND	U	20	3.0	1	08/08/14	08/08/14	KWG1411288	
Chloroform	ND	U	0.50	0.062	1	08/08/14	08/08/14	KWG1411288	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	08/08/14	08/08/14	KWG1411288	
Carbon Tetrachloride	ND	U	0.50	0.12	1	08/08/14	08/08/14	KWG1411288	
Benzene	ND	U	0.50	0.031	1	08/08/14	08/08/14	KWG1411288	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	08/08/14	08/08/14	KWG1411288	
Trichloroethene (TCE)	ND	U	0.50	0.044	1	08/08/14	08/08/14	KWG1411288	
1,2-Dichloropropane	ND	U	0.50	0.044	1	08/08/14	08/08/14	KWG1411288	
Bromodichloromethane	ND	U	0.50	0.086	1	08/08/14	08/08/14	KWG1411288	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	08/08/14	08/08/14	KWG1411288	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	08/08/14	08/08/14	KWG1411288	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	08/08/14	08/08/14	KWG1411288	
Toluene	ND	U	0.50	0.032	1	08/08/14	08/08/14	KWG1411288	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	08/08/14	08/08/14	KWG1411288	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	08/08/14	08/08/14	KWG1411288	
Tetrachloroethene (PCE)	ND	U	0.50	0.032	1	08/08/14	08/08/14	KWG1411288	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408129
Project:	516.01	**Date Collected:**	
Sample Matrix:	Water	**Date Received:**	08/05/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP036	**Units:**	ug/L
Lab Code:	K1408129-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	08/08/14	08/08/14	KWG1411288	
Dibromochloromethane	ND	U	0.50	0.081	1	08/08/14	08/08/14	KWG1411288	
Chlorobenzene	ND	U	0.50	0.031	1	08/08/14	08/08/14	KWG1411288	
Ethylbenzene	ND	U	0.50	0.030	1	08/08/14	08/08/14	KWG1411288	
m,p-Xylenes	ND	U	1.0	0.14	1	08/08/14	08/08/14	KWG1411288	
o-Xylene	ND	U	0.50	0.024	1	08/08/14	08/08/14	KWG1411288	
Styrene	ND	U	0.50	0.023	1	08/08/14	08/08/14	KWG1411288	
Bromoform	ND	U	0.50	0.17	1	08/08/14	08/08/14	KWG1411288	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	08/08/14	08/08/14	KWG1411288	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	08/08/14	08/08/14	KWG1411288	
1,4-Dichlorobenzene	ND	U	0.50	0.073	1	08/08/14	08/08/14	KWG1411288	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	08/08/14	08/08/14	KWG1411288	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	118	76-132	08/08/14	Acceptable
Toluene-d8	100	80-120	08/08/14	Acceptable
4-Bromofluorobenzene	86	68-120	08/08/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408129
Project:	516.01	**Date Collected:**	
Sample Matrix:	Water	**Date Received:**	08/05/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP037	**Units:**	ug/L
Lab Code:	K1408129-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	08/07/14	08/07/14	KWG1411288	
Chloromethane	**0.060**	J	0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
Vinyl Chloride	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Bromomethane	ND	U	0.50	0.072	1	08/07/14	08/07/14	KWG1411288	
Chloroethane	ND	U	0.50	0.14	1	08/07/14	08/07/14	KWG1411288	
Trichlorofluoromethane	ND	U	0.50	0.080	1	08/07/14	08/07/14	KWG1411288	
Acrolein†	ND	U	50	3.7	1	08/07/14	08/07/14	KWG1411288	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethene	ND	U	0.50	0.039	1	08/07/14	08/07/14	KWG1411288	
Acetone	ND	U	20	3.1	1	08/07/14	08/07/14	KWG1411288	
Carbon Disulfide	**0.080**	J	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
Methylene Chloride	**0.17**	J	2.0	0.14	1	08/07/14	08/07/14	KWG1411288	
Acrylonitrile†	ND	U	10	0.14	1	08/07/14	08/07/14	KWG1411288	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethane	ND	U	0.50	0.025	1	08/07/14	08/07/14	KWG1411288	
Vinyl Acetate	ND	U	10	0.33	1	08/07/14	08/07/14	KWG1411288	
cis-1,2-Dichloroethene	ND	U	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
2-Butanone (MEK)	ND	U	20	3.0	1	08/07/14	08/07/14	KWG1411288	
Chloroform	ND	U	0.50	0.062	1	08/07/14	08/07/14	KWG1411288	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	08/07/14	08/07/14	KWG1411288	
Carbon Tetrachloride	ND	U	0.50	0.12	1	08/07/14	08/07/14	KWG1411288	
Benzene	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
Trichloroethene (TCE)	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloropropane	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
Bromodichloromethane	ND	U	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	08/07/14	08/07/14	KWG1411288	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	08/07/14	08/07/14	KWG1411288	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	08/07/14	08/07/14	KWG1411288	
Toluene	**0.15**	J	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
Tetrachloroethene (PCE)	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408129
Project:	516.01	**Date Collected:**	
Sample Matrix:	Water	**Date Received:**	08/05/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP037	**Units:**	ug/L
Lab Code:	K1408129-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	08/07/14	08/07/14	KWG1411288	
Dibromochloromethane	ND	U	0.50	0.081	1	08/07/14	08/07/14	KWG1411288	
Chlorobenzene	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Ethylbenzene	ND	U	0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
m,p-Xylenes	ND	U	1.0	0.14	1	08/07/14	08/07/14	KWG1411288	
o-Xylene	ND	U	0.50	0.024	1	08/07/14	08/07/14	KWG1411288	
Styrene	ND	U	0.50	0.023	1	08/07/14	08/07/14	KWG1411288	
Bromoform	ND	U	0.50	0.17	1	08/07/14	08/07/14	KWG1411288	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	08/07/14	08/07/14	KWG1411288	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	08/07/14	08/07/14	KWG1411288	
1,4-Dichlorobenzene	ND	U	0.50	0.073	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	119	76-132	08/07/14	Acceptable
Toluene-d8	98	80-120	08/07/14	Acceptable
4-Bromofluorobenzene	88	68-120	08/07/14	Acceptable

† **Analyte Comments**

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408129
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411288-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.077	1	08/07/14	08/07/14	KWG1411288	
Chloromethane	ND	U	0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
Vinyl Chloride	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Bromomethane	ND	U	0.50	0.072	1	08/07/14	08/07/14	KWG1411288	
Chloroethane	ND	U	0.50	0.14	1	08/07/14	08/07/14	KWG1411288	
Trichlorofluoromethane	ND	U	0.50	0.080	1	08/07/14	08/07/14	KWG1411288	
Acrolein†	ND	U	50	3.7	1	08/07/14	08/07/14	KWG1411288	
Trichlorotrifluoroethane	ND	U	5.0	0.074	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethene	ND	U	0.50	0.039	1	08/07/14	08/07/14	KWG1411288	
Acetone	**3.9**	J	20	3.1	1	08/07/14	08/07/14	KWG1411288	
Carbon Disulfide	**0.10**	J	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
Methylene Chloride	**0.26**	J	2.0	0.14	1	08/07/14	08/07/14	KWG1411288	
Acrylonitrile†	ND	U	10	0.14	1	08/07/14	08/07/14	KWG1411288	
trans-1,2-Dichloroethene	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
1,1-Dichloroethane	ND	U	0.50	0.025	1	08/07/14	08/07/14	KWG1411288	
Vinyl Acetate	ND	U	10	0.33	1	08/07/14	08/07/14	KWG1411288	
cis-1,2-Dichloroethene	ND	U	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
2-Butanone (MEK)	ND	U	20	3.0	1	08/07/14	08/07/14	KWG1411288	
Chloroform	ND	U	0.50	0.062	1	08/07/14	08/07/14	KWG1411288	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.057	1	08/07/14	08/07/14	KWG1411288	
Carbon Tetrachloride	ND	U	0.50	0.12	1	08/07/14	08/07/14	KWG1411288	
Benzene	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.036	1	08/07/14	08/07/14	KWG1411288	
Trichloroethene (TCE)	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichloropropane	ND	U	0.50	0.044	1	08/07/14	08/07/14	KWG1411288	
Bromodichloromethane	ND	U	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	
2-Chloroethyl Vinyl Ether	ND	U	10	0.12	1	08/07/14	08/07/14	KWG1411288	
cis-1,3-Dichloropropene	ND	U	0.50	0.035	1	08/07/14	08/07/14	KWG1411288	
4-Methyl-2-pentanone (MIBK)	ND	U	20	2.7	1	08/07/14	08/07/14	KWG1411288	
Toluene	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	
trans-1,3-Dichloropropene	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
1,1,2-Trichloroethane	ND	U	0.50	0.045	1	08/07/14	08/07/14	KWG1411288	
Tetrachloroethene (PCE)	ND	U	0.50	0.032	1	08/07/14	08/07/14	KWG1411288	

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408129
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411288-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	2.5	1	08/07/14	08/07/14	KWG1411288	
Dibromochloromethane	ND	U	0.50	0.081	1	08/07/14	08/07/14	KWG1411288	
Chlorobenzene	ND	U	0.50	0.031	1	08/07/14	08/07/14	KWG1411288	
Ethylbenzene	ND	U	0.50	0.030	1	08/07/14	08/07/14	KWG1411288	
m,p-Xylenes	ND	U	1.0	0.14	1	08/07/14	08/07/14	KWG1411288	
o-Xylene	ND	U	0.50	0.024	1	08/07/14	08/07/14	KWG1411288	
Styrene	ND	U	0.50	0.023	1	08/07/14	08/07/14	KWG1411288	
Bromoform	ND	U	0.50	0.17	1	08/07/14	08/07/14	KWG1411288	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.092	1	08/07/14	08/07/14	KWG1411288	
1,3-Dichlorobenzene	ND	U	0.50	0.071	1	08/07/14	08/07/14	KWG1411288	
1,4-Dichlorobenzene	ND	U	0.50	0.073	1	08/07/14	08/07/14	KWG1411288	
1,2-Dichlorobenzene	ND	U	0.50	0.086	1	08/07/14	08/07/14	KWG1411288	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	115	76-132	08/07/14	Acceptable
Toluene-d8	99	80-120	08/07/14	Acceptable
4-Bromofluorobenzene	90	68-120	08/07/14	Acceptable

† Analyte Comments

Acrolein	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.
Acrylonitrile	This compound is unstable under normal conditions. As per EPA Method 624 guidelines, the reported value was an estimate.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408129
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: METHOD **Units:** Percent
Analysis Method: 624 **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MOA14VOP036	K1408129-001	118	100	86
MOA14VOP037	K1408129-002	119	98	88
Batch QC	K1408252-003	119	100	90
Method Blank	KWG1411288-4	115	99	90
Batch QCMS	KWG1411288-1	110	106	98
Batch QCDMS	KWG1411288-2	109	107	99
Lab Control Sample	KWG1411288-3	112	109	99

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	76-132
Sur2	=	Toluene-d8	80-120
Sur3	=	4-Bromofluorobenzene	68-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408129
Project:	516.01	**Date Extracted:**	08/07/2014
Sample Matrix:	Water	**Date Analyzed:**	08/07/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1408252-003	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624	**Extraction Lot:**	KWG1411288

		Batch QCMS KWG1411288-1 Matrix Spike			Batch QCDMS KWG1411288-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
1,1-Dichloroethene	ND	11.0	10.0	110	10.5	10.0	105	10-234	5	30
Benzene	0.20	9.39	10.0	92	9.34	10.0	91	37-151	1	30
Trichloroethene (TCE)	ND	9.34	10.0	93	9.05	10.0	91	71-157	3	30
Toluene	0.83	9.69	10.0	89	9.61	10.0	88	47-150	1	30
Chlorobenzene	0.050	8.25	10.0	82	8.23	10.0	82	37-160	0	30
1,2-Dichlorobenzene	ND	8.18	10.0	82	8.37	10.0	84	18-190	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408129
Project:	516.01	**Date Extracted:**	08/07/2014
Sample Matrix:	Water	**Date Analyzed:**	08/07/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411288

	Lab Control Sample KWG1411288-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Dichlorodifluoromethane	8.11	10.0	81	32-158
Chloromethane	8.69	10.0	87	10-273
Vinyl Chloride	9.64	10.0	96	10-251
Bromomethane	7.22	10.0	72	10-242
Chloroethane	11.5	10.0	115	14-230
Trichlorofluoromethane	8.48	10.0	85	17-181
Acrolein	90.4	100	90	27-200
Trichlorotrifluoroethane	8.29	10.0	83	65-153
1,1-Dichloroethene	10.8	10.0	108	10-234
Acetone	67.1	50.0	134	46-162
Carbon Disulfide	18.5	20.0	92	66-138
Methylene Chloride	10.3	10.0	103	10-221
Acrylonitrile	10.2	10.0	102	61-141
trans-1,2-Dichloroethene	10.1	10.0	101	54-156
1,1-Dichloroethane	10.4	10.0	104	59-155
Vinyl Acetate	19.6	20.0	98	62-141
cis-1,2-Dichloroethene	9.29	10.0	93	80-124
2-Butanone (MEK)	47.3	50.0	95	53-148
Chloroform	10.4	10.0	104	51-138
1,1,1-Trichloroethane (TCA)	9.26	10.0	93	52-162
Carbon Tetrachloride	9.34	10.0	93	70-140
Benzene	9.63	10.0	96	37-151
1,2-Dichloroethane (EDC)	11.7	10.0	117	49-155
Trichloroethene (TCE)	9.58	10.0	96	71-157
1,2-Dichloropropane	9.46	10.0	95	10-210
Bromodichloromethane	10.9	10.0	109	35-155
2-Chloroethyl Vinyl Ether	6.83	10.0	68	10-305
cis-1,3-Dichloropropene	8.28	10.0	83	10-227
4-Methyl-2-pentanone (MIBK)	48.4	50.0	97	46-129
Toluene	9.47	10.0	95	47-150
trans-1,3-Dichloropropene	7.11	10.0	71	17-183
1,1,2-Trichloroethane	9.06	10.0	91	52-150
Tetrachloroethene (PCE)	7.54	10.0	75	64-148
2-Hexanone	48.6	50.0	97	37-136
Dibromochloromethane	9.14	10.0	91	53-149

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408129
Project:	516.01	**Date Extracted:**	08/07/2014
Sample Matrix:	Water	**Date Analyzed:**	08/07/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411288

	Lab Control Sample KWG1411288-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Chlorobenzene	8.74	10.0	87	37-160
Ethylbenzene	8.63	10.0	86	37-162
m,p-Xylenes	17.8	20.0	89	80-126
o-Xylene	8.04	10.0	80	78-120
Styrene	9.08	10.0	91	80-120
Bromoform	10.7	10.0	107	45-169
1,1,2,2-Tetrachloroethane	9.61	10.0	96	46-157
1,3-Dichlorobenzene	8.33	10.0	83	59-156
1,4-Dichlorobenzene	8.28	10.0	83	18-190
1,2-Dichlorobenzene	8.45	10.0	85	18-190

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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September 2, 2014 Analytical Report for Service Request No: K1408130

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.01

Dear Gary:

Enclosed are the results of the samples submitted to our laboratory on August 05, 2014. For your reference, these analyses have been assigned our service request number K1408130.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard B. Holmes

Howard Holmes
Project Manager

HH/kd

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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/envserv/	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
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories	**Service Request No.:**	K1408130
Project:	516.01	**Date Received:**	8/5/14
Sample Matrix:	Water/sludge		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Laboratory Control Sample (LCS).

Sample Receipt

Sixteen water & four sludge samples were received for analysis at ALS Environmental on 8/5/14. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with this analysis were observed.

Total Metals – Sludge

Matrix Spike Recovery Exceptions:
Antimony recoveries are generally low for soil and sediment samples when digested using EPA Method 3050B. Despite anticipated low recoveries, the method is still generally prescribed because of its versatility for general metals analysis. Antimony results (in conjunction with the matrix spike recovery) from this procedure should only be used as indicators to estimate concentrations. The matrix spike recovery of Antimony for the Batch QC sample was below the ALS control criterion. Since low recoveries resulted from a method defect and were possibly magnified by certain matrix components, no corrective action was appropriate. Alternative procedures that specifically target Antimony are available but were not specified for this project. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicated the analysis was in control.

No other anomalies associated with this analysis were observed.

Total and Dissolved Metals – Water

No anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 625

Lab Control Sample Exceptions:
The advisory criterion was exceeded for 4-Bromophenyl Phenyl Ether and Hexachlorobenzene in Laboratory Control Sample/Duplicate Laboratory Sample (LCS/DLCS) KWG1411366-1 and KWG1411366-2. As per the CAS/Kelso Standard Operating Procedure (SOP) for this method, these compounds are not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

No other anomalies associated with this analysis were observed.

Approved by_____

Organochlorine Pesticides by EPA Method 8081

Matrix Spike Recovery Exceptions:
Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

Elevated Detection Limits:
The detection limit was elevated for several analytes in all field samples. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compounds at the normal limit. The results were flagged to indicate the matrix interference.

Second Source Exceptions:
The analysis of Chlorinated Pesticides by EPA 8081 requires the use of dual column confirmation. When the Initial Calibration Verification (ICV) criteria are met for both columns, the lower of the two sample results is generally reported. The criteria were not met for Endrin Aldehyde in CAL 13214. The data quality was not affected. No further corrective action was necessary.

Calibration Verification Exceptions:
The upper control criterion was exceeded for Endrin Aldehyde in an associated Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analyte in question above the reporting limit. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

No other anomalies associated with this analysis were observed.

PCB Aroclors by EPA Method 8082

Elevated Detection Limits:
The detection limit was elevated for several Aroclors in all field samples. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compounds at the normal limit. The results were flagged to indicate the matrix interference.

Sample Notes and Discussion:
Insufficient sample mass/volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

No other anomalies associated with this analysis were observed.

Organophosphorus Pesticides by EPA Method 8141

Calibration Verification Exceptions:
The upper control criterion was exceeded for a couple analytes in some associated Continuing Calibration Verification (CCV). The field samples analyzed in this sequence did not contain the analytes in question above the reporting limit. Since the apparent problem indicated a potential high bias, the data quality was not affected. No further corrective action was required.

Approved by_____

Surrogate Exceptions:
The control criteria were exceeded for Tributyl and Triphenyl Phosphate in sample both field samples due to matrix interference. Due the presence of suspended sediment in the sample, the extraction disks had to be punctured in order for the entire sample to pass through. This has historically led to lower than nominal analyte recoveries. (See note on benchsheet) No further corrective action was possible. Note that all surrogate recoveries in the associated Laboratory Control Sample were met control criteria, suggesting that the low recoveries were restricted to the field sample matrix.

The control criteria for Tributyl and Triphenyl Phosphate in sample MOA14SLG002 were not applicable. The analysis of the sample required a dilution, which resulted in a surrogate concentration below the reporting limit. No further corrective action was appropriate.

The recovery of Tributyl and Triphenyl Phosphate in KWG1411551-3MB and KWG1411551-1LCS/2DLCS was outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

Matrix Spike Recovery Exceptions:
Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for sample MOA14SLG002.

The control criteria were exceeded for all spiked compounds in sample Batch QC due to matrix interference. Due the presence of suspended sediment in the sample, the extraction disks had to be punctured in order for the entire sample to pass through. This has historically led to lower than nominal analyte recoveries. (See note on benchsheet) No further corrective action was possible. Note that all recoveries in the associated Laboratory Control Sample were met control criteria suggesting that the low recoveries were restricted to the field sample matrix.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) criterion for the replicate analysis of all analytes in sample Batch QC was not applicable because the analyte concentration was not significantly greater than the Method Reporting Limit (MRL). Analytical values derived from measurements close to the detection limit are not subject to the same accuracy and precision criteria as results derived from measurements higher on the calibration range for the method.

Lab Control Sample Exceptions:
The recovery of all analytes in KWG1411551-1LCS/2DLCS was outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

Elevated Detection Limits:
The detection limit was elevated for all analytes in sample MOA14SLG002. The sample extract was diluted prior to instrumental analysis due to relatively high levels of non-target background components. The extract was highly colored and contained visible particulate, which indicated the need to perform a dilution prior to injection into the instrument. The result was flagged to indicate the matrix interference.

The detection limit was elevated for Methyl Parathion in sample MOA14ORG003. The chromatogram indicated the presence of non-target background components. The matrix interference prevented adequate resolution of the target compound at the normal limit. The result was flagged to indicate the matrix interference.

No other anomalies associated with this analysis were observed.

Approved by_____

Volatile Organic Compounds by EPA Method 8260

Internal Standard Exceptions:
The internal standard recovery of 1,4-Dichlorobenzene-d4 in sample MOA14VOP038 was outside control criteria because of suspected matrix interference. A re-analysis was performed and produced similar results. The results of the original analysis were reported. The results quantified using this internal standard were flagged to indicate the problem.

Surrogate Exceptions:
The control criteria were exceeded for Toluene-d8 in sample MOA14VOP038, MOA14VOP038MS and MOA14VOP038DMS due to matrix interference. A re-analysis was performed, but produced similar results. The results of the original analysis were reported. No further corrective action was required.

The control criteria were exceeded for 4-Bromofluorobenzene in sample MOA14VOP038MS due to matrix interference. A re-analysis was performed, but produced similar results. The results of the original analysis were reported. No further corrective action was required.

Matrix Spike Recovery Exceptions:
The matrix spike recovery of Chloroform, 1,1,2-Trichloroethane, Chlorobenzene, Ethylbenzene and 1,2-Dichlorobenzene for sample MOA14VOP038 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential low bias in this matrix. No further corrective action was appropriate.

The control criteria for matrix spike recovery of Toluene for sample MOA14VOP038 were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

The upper control criterion was exceeded by 5-10% for Acetone for sample Batch QC. The matrix spike outlier suggested a potential high bias in this matrix. No further corrective action was taken.

Lab Control Sample Exceptions:
The advisory criterion was exceeded for Acetone in Laboratory Control Sample (LCS) KWG1411378-3. As per the CAS/Kelso Standard Operating Procedure (SOP) for this method, these compounds are not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

No other anomalies associated with this analysis were observed.

Semivolatile Organic Compounds by EPA Method 8270

Calibration Verification Exceptions:
The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS07\0820F009.D: Hexachlorocyclopentadiene. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Lab Control Sample Exceptions:
The advisory criterion was exceeded for Benzidine in Laboratory Control Sample/Duplicate Laboratory Sample (LCS/DLCS) KWG1411467-1 and KWG1411467-2. As per the CAS/Kelso Standard Operating Procedure (SOP) for this method, these compounds are not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

No other anomalies associated with this analysis were observed.

Approved by__ Howard B. Holman _____

Dioxins and Furans by EPA Method 8290

This analysis was performed by ALS-Houston. Their report and case narrative are included in the appropriate section of this report.

Asbestos

This analysis was performed by ALS-Cincinnati. Their report and case narrative are included in the appropriate section of this report.

Approved by_____

K1408130

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	FROM:
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion date: 30 Days	MATRIX: Water (Inf & Eff), Solids (Sludge)	P.O. #: AK14-1007	KLI Project Number: 516.01

	Sample ID	Sample Location	Sample date & time	No. of contain	Container type	Preservative	EPA 625/8270	8081 A/B Pest OC	8141 A/B PEST_OP	PCBs - 8082	8290/2,3,7,8- TCDD	EPA 1664 Oil & Gr.	Metals	Mercury (1631E)	EPA 8260	Asbestos PLM	Asbestos TEM	Total Cyanide	Condition upon receipt	Comments
1 ✓	MOA14ORG003	Influent	8/4/14 0902	6	1-L amber glass	None	X	X	X	X	X									
2 ✓	MOA14ORG004	Effluent	0900	8	1-L amber glass	6°C Effluent samples contain L-Ascorbic Acid	X	X	X	X	X									Run MS/SD on EPA 625
3 ✓	MOA14O&G003	Influent	0902	1	1-L amber glass	HCl 6°C						X								
4 ✓	MOA14O&G004	Effluent	0900	1	1-L amber glass	HCl 6°C						X								
5 ✓	MOA14MET013	Influent	0902	1	500ml HDPE	6°C, HNO3							X							Total metals
6 ✓	MOA14MET014	Influent	0902	1	500ml HDPE	6°C, HNO3							X							Prefiltered for dissolved metals
7 ✓	MOA14MET015	Effluent	0900	1	500ml HDPE	6°C, HNO3							X							Total metals
8 ✓	MOA14MET016	Effluent	0900	1	500ml HDPE	6°C, HNO3							X							Prefiltered for dissolved metals
9 ✓	MOA14TCN015	Influent	0902	1	500ml HDPE	NaOH, 6°C											X			SM 4500-CN-E low level
10 ✓	MOA14TCN016	Effluent	0900	1	500ml HDPE	NaOH, 6°C											X			SM 4500-CN-E low level
11 ✓	MOA14DXN002	Sludge	8/3/14 2400	1	125ml glass	None, 6°C					X									Detection limits as per method. Please report in dry weight.
12 ✓	MOA14SLG002	Sludge	8/3/14 2400	2	500ml glass	None, 6°C	X	X	X	X			X				X			
13 ✓	MOA14ASB004	Influent	8/4/14 0902	1	1-L HDPE	None, 6°C										X				
14 ✓	MOA14ASB005	Effluent	0900	1	1-L HDPE	None, 6°C										X				
15 ✓	MOA14ASB006	Sludge	8/3/14 2400		125ml glass	None, 6°C									X					
16 ✓	MOA14VOP038	Sludge	2400		125ml glass	None, 6°C								X						Detection limits as per method. Please report in dry weight.
17 ✓	MOA14MRC013	Influent	8/4/14 0902	1	500ml HDPE	HCl 6°C							X							Total metals
18 ✓	MOA14MRC014	Influent	0902	1	500ml HDPE	HCl 6°C							X							Prefiltered for dissolved metals
19 ✓	MOA14MRC015	Effluent	0900	1	500ml HDPE	HCl 6°C							X							Total metals
20 ✓	MOA14MRC016	Effluent	0900	1	500ml HDPE	HCl 6°C							X							Prefiltered for dissolved metals

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID, ANALYTICAL METHOD, MDL, DATE OF EXTRACTION & ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

Comments: Metals to include Ag, As, Be, Cd, Cr, Cu, Mo, Ni, Pb, Sb, Se, Tl, Zn, Hg.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	8/4/14; 1223	hand	[signature]	8/4/14 1225
[signature]	8/4/14 1330	Fed X	[signature]	8/5/14 0930

SAMPLED BY (NAME/SIGNATURE): _____

PC 42

Cooler Receipt and Preservation Form

Client / Project: Kinnetic Service Request *K14* 08130

Received: 8/6/14 Opened: 8/6/14 By: [illegible] Unloaded: 8/6/14 By: [illegible]

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
1.9	1.9	5.8	5.8	0	351		7707 5804 5040	

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
MOA14VOP030	3 VOA		X							

SHORT HOLD TIME

Notes, Discrepancies, & Resolutions:

Rec'd missing cooler

Page ____ *of* ____

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/4/14
Sample Matrix:	Water	**Date Received:**	08/5/14
Analysis Method:	1664A	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Oil and Grease, Total (HEM)

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
MOA14O&G003	K1408130-003	**20.4**	4.9	0.8	1	08/13/14 15:40	8/13/14	
MOA14O&G004	K1408130-004	**13.9**	4.9	0.8	1	08/13/14 15:40	8/13/14	
Method Blank	K1408130-MB1	ND U	5.0	0.8	1	08/13/14 15:40	8/13/14	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	08/13/14
		Date Extracted:	08/13/14

Matrix Spike Summary
Oil and Grease, Total (HEM)

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	K1408270-001	**Basis:**	NA
Analysis Method:	1664A		
Prep Method:	Method		

Matrix Spike
K1408270-001MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Oil and Grease, Total (HEM)	ND U	55.1	57.7	96	78-114

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Analyzed:**	08/13/14
Sample Matrix:	Water	**Date Extracted:**	08/13/14

Duplicate Lab Control Sample Summary
General Chemistry Parameters

Analysis Method:	1664A	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	406441

	Lab Control Sample K1408130-LCS3			Duplicate Lab Control Sample K1408130-DLCS3					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Oil and Grease, Total (HEM)	55.7	60.0	93	54.2	60.0	90	78-114	3	20

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/3/14
Sample Matrix:	Sludge, Solid	**Date Received:**	08/5/14
Analysis Method:	9012B	**Units:**	mg/Kg
Prep Method:	Method	**Basis:**	Dry

Cyanide, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
MOA14SLG002	K1408130-012	**0.35**	0.60	0.18	1	08/12/14 13:46	8/12/14	**J**
Method Blank	K1408130-MB2	ND	0.20	0.06	1	08/12/14 13:46	8/12/14	U

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, Solid	**Date Received:**	NA
		Date Analyzed:	08/12/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/Kg
Lab Code:	KQ1409508-03	**Basis:**	Dry

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1409508-03DUP Result	Average	RPD	RPD Limit
Cyanide, Total	9012B	0.22	0.07	ND	ND	NC	NC	20

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	N/A
Sample Matrix:	Sludge, Solid	**Date Received:**	N/A
		Date Analyzed:	08/12/14
		Date Extracted:	08/12/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	Batch QC	**Units:**	mg/Kg
Lab Code:	KQ1409508-03	**Basis:**	Dry
Analysis Method:	9012B		
Prep Method:	Method		

		Matrix Spike KQ1409508-03MS			Duplicate Matrix Spike KQ1409508-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	2.29	2.24	102	2.29	2.20	104	10-171	2	20

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Analyzed:**	08/12/14
Sample Matrix:	Sludge, Solid	**Date Extracted:**	08/12/14

Lab Control Sample Summary
Cyanide, Total

Analysis Method:	9012B	**Units:**	mg/Kg
Prep Method:	Method	**Basis:**	Dry
		Analysis Lot:	406217

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1408130-LCS1	99.2	109	91	62-128

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/4/14
Sample Matrix:	Water	**Date Received:**	08/5/14
Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA

Cyanide, Total

Sample Name	Lab Code	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
MOA14TCN015	K1408130-009	ND	U	0.0047	0.0009	1	08/13/14 13:38	8/13/14	
MOA14TCN016	K1408130-010	ND	U	0.0047	0.0009	1	08/13/14 13:38	8/13/14	
Method Blank	K1408130-MB1	ND	U	0.0047	0.0009	1	08/13/14 13:38	8/13/14	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	08/13/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1409581-03	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1409581-03DUP Result	Average	RPD	RPD Limit
Cyanide, Total	SM 4500-CN- E	0.0047	0.0009	ND	ND	NC	NC	20

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	08/13/14
		Date Extracted:	08/13/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1409581-03	**Basis:**	NA
Analysis Method:	SM 4500-CN- E		
Prep Method:	SM 4500-CN-C		

		Matrix Spike KQ1409581-03MS			Duplicate Matrix Spike KQ1409581-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	0.102	0.100	102	0.102	0.100	102	23-148	<1	20

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Results flagged with a pound (#) indicate the control criteria is not applicable.

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Analyzed:**	08/13/14
Sample Matrix:	Water	**Date Extracted:**	08/13/14

Lab Control Sample Summary
Cyanide, Total

Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA
		Analysis Lot:	406457

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1408130-LCS2	0.146	0.150	97	84-115

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/3/14
Sample Matrix:	Sludge, Solid	**Date Received:**	08/5/14
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
MOA14SLG002	K1408130-012	**31.8**	-	-	1	08/07/14 10:43	
MOA14VOP038	K1408130-016	**31.7**	-	-	1	08/07/14 10:43	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, Solid	**Date Received:**	NA
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Replicate Sample Summary
Total Solids

Sample Name:	Lab Code:	MRL	MDL	Sample Result	Duplicate Result	Average	RPD	RPD Limit	Date Analyzed
Batch QC	KQ1409234-01	-	-	58.0	58.2	58.1	<1	10	08/07/14
Batch QC	KQ1409234-02	-	-	90.8	90.3	90.6	<1	10	08/07/14

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Superset Reference:14-0000298558 rev 00

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/14
Sample Matrix:	Water	**Date Received:**	08/05/14

Mercury, Total

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631E	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MOA14MRC013	K1408130-017	2.5	0.3	5	08/09/14	08/10/14	49.6	
MOA14MRC015	K1408130-019	2.5	0.3	5	08/09/14	08/10/14	32.8	
Method Blank 1	K1408130-MB1	0.5	0.06	1	08/09/14	08/10/14	ND	
Method Blank 2	K1408130-MB2	0.5	0.06	1	08/09/14	08/10/14	ND	
Method Blank 3	K1408130-MB3	0.5	0.06	1	08/09/14	08/10/14	ND	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/14
Sample Matrix:	Water	**Date Received:**	08/05/14

Mercury, Dissolved

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631E	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MOA14MRC014	K1408130-018	0.5	0.06	1	08/09/14	08/10/14	11.2	
MOA14MRC016	K1408130-020	0.5	0.06	1	08/09/14	08/10/14	6.61	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	08/09/14
		Date Analyzed:	08/10/14

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	Batch QC	Units:	ng/L
Lab Code:	K1408427-002MS, K1408427-002MSD	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	ALS Acceptance Limits	Relative Percent Difference	Result Notes
Mercury	METHOD	1631E	0.5	50	50	34.2	79.4	77.5	90	87	71-125	2	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/10/14

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.11	102	77-123	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/10/14

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.10	102	77-123	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/10/14

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.22	104	77-123	

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Kinnetic Laboratories, Incorpora
Service Request: K1408130
Project No.: NA
Date Collected: 08/03/14
Project Name: 516.01
Date Received: 08/05/14
Matrix: SLUDGE
Units: mg/Kg
Basis: DRY

Sample Name: MOA14SLG002
Lab Code: K1408130-012

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020A	0.052	0.010	5.0	08/18/14	08/19/14	1.44		N
Arsenic	6020A	0.52	0.04	5.0	08/18/14	08/19/14	5.39		
Beryllium	6020A	0.021	0.005	5.0	08/18/14	08/19/14	0.080		
Cadmium	6020A	0.021	0.007	5.0	08/18/14	08/19/14	1.44		
Chromium	6020A	0.21	0.06	5.0	08/18/14	08/19/14	16.6		
Copper	6020A	0.11	0.04	5.0	08/18/14	08/19/14	230		
Lead	6020A	0.11	0.02	5.0	08/18/14	08/19/14	20.3		
Mercury	7471B	0.041	0.004	1.0	08/08/14	08/11/14	0.560		
Molybdenum	6020A	0.05	0.02	5.0	08/18/14	08/19/14	5.00		
Nickel	6020A	0.21	0.03	5.0	08/18/14	08/19/14	14.1		
Selenium	6020A	1.05	0.07	5.0	08/18/14	08/19/14	2.05		
Silver	6020A	0.021	0.004	5.0	08/18/14	08/19/14	2.97		
Thallium	6020A	0.021	0.002	5.0	08/18/14	08/19/14	0.032		
Zinc	6020A	0.5	0.2	5.0	08/18/14	08/19/14	751		

% Solids: 31.8

Comments:

Metals
- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: Kinnetic Laboratories, Incorpora
Service Request: K1408130
Project No.: NA
Date Collected:
Project Name: 516.01
Date Received:
Matrix: SOIL
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank
Lab Code: K1408130-MB

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	6020A	0.050	0.010	5.0	08/18/14	08/19/14	0.010	U	N
Arsenic	6020A	0.50	0.04	5.0	08/18/14	08/19/14	0.04	U	
Beryllium	6020A	0.020	0.005	5.0	08/18/14	08/19/14	0.005	U	
Cadmium	6020A	0.020	0.007	5.0	08/18/14	08/19/14	0.007	U	
Chromium	6020A	0.20	0.06	5.0	08/18/14	08/19/14	0.06	U	
Copper	6020A	0.10	0.04	5.0	08/18/14	08/19/14	0.04	U	
Lead	6020A	0.10	0.02	5.0	08/18/14	08/19/14	0.03	J	
Mercury	7471B	0.020	0.002	1.0	08/08/14	08/11/14	0.002	U	
Molybdenum	6020A	0.05	0.02	5.0	08/18/14	08/19/14	0.02	U	
Nickel	6020A	0.20	0.03	5.0	08/18/14	08/19/14	0.03	U	
Selenium	6020A	1.00	0.07	5.0	08/18/14	08/19/14	0.07	U	
Silver	6020A	0.020	0.004	5.0	08/18/14	08/19/14	0.004	U	
Thallium	6020A	0.020	0.002	5.0	08/18/14	08/19/14	0.002	U	
Zinc	6020A	0.5	0.2	5.0	08/18/14	08/19/14	0.3	J	

% Solids: 100.0

Comments:

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408130

Project No.: NA **Units:** MG/KG

Project Name: 516.01 **Basis:** DRY

Matrix: SOIL **% Solids:** 93.0

Sample Name: **Batch QC2S** **Lab Code:** **K1408108-001S**

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	80 - 120	0.595		0.053		0.51	106.3		7471B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408130

Project No.: NA **Units:** MG/KG

Project Name: 516.01 **Basis:** DRY

Matrix: SOIL **% Solids:** 93.0

Sample Name: **Batch QC2SD** **Lab Code:** **K1408108-001SD**

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	80 - 120	0.559		0.053		0.51	99.2		7471B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408130

Project No.: NA **Units:** MG/KG

Project Name: 516.01 **Basis:** DRY

Matrix: SEDIMENT **% Solids:** 48.9

Sample Name: Batch QC1S **Lab Code:** K1408521-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	75 - 125	19.311		0.084		67.7	28.4	N	6020A
Arsenic	75 - 125	67.40		4.22		67.7	93.3		6020A
Beryllium	70 - 130	7.369		0.545		6.8	100.4		6020A
Cadmium	75 - 125	6.976		0.173		6.8	100.0		6020A
Chromium	75 - 125	51.98		26.71		27.1	93.2		6020A
Copper	75 - 125	61.95		32.56		33.9	86.7		6020A
Lead	75 - 125	75.58		9.76		67.7	97.2		6020A
Molybdenum	75 - 125	64.16		0.32		67.7	94.3		6020A
Nickel	75 - 125	86.43		22.03		67.7	95.1		6020A
Selenium	75 - 125	64.87		0.21	J	67.7	95.5		6020A
Silver	75 - 125	6.868		0.080		6.8	99.8		6020A
Thallium	75 - 125	66.901		0.087		67.7	98.7		6020A
Zinc	75 - 125	146.3		88.6		67.7	85.2		6020A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

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DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408130

Project No.: NA **Units:** MG/KG

Project Name: 516.01 **Basis:** DRY

Matrix: SOIL **% Solids:** 93.0

Sample Name: **Batch QC2SD** **Lab Code:** **K1408108-001SD**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	20	0.595		0.559		6.2		7471B

An empty field in the Control Limit column indicates the control limit is not applicable.

Form VI - IN

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Metals

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DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408130

Project No.: NA **Units:** MG/KG

Project Name: 516.01 **Basis:** DRY

Matrix: SEDIMENT **% Solids:** 48.9

Sample Name: **Batch QC1D** **Lab Code:** **K1408521-001D**

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony		0.084		0.088		4.7		6020A
Arsenic	20	4.22		4.15		1.7		6020A
Beryllium		0.545		0.555		1.8		6020A
Cadmium	20	0.173		0.175		1.1		6020A
Chromium	20	26.71		26.43		1.1		6020A
Copper	20	32.56		32.21		1.1		6020A
Lead	20	9.76		9.75		0.1		6020A
Molybdenum	20	0.32		0.30		6.5		6020A
Nickel	20	22.03		21.77		1.2		6020A
Selenium		0.21	J	0.21	J	0.0		6020A
Silver	20	0.080		0.075		6.5		6020A
Thallium	20	0.087		0.088		1.1		6020A
Zinc	20	88.6		88.9		0.3		6020A

An empty field in the Control Limit column indicates the control limit is not applicable.

Form VI - IN

Metals

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LABORATORY CONTROL SAMPLE

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408130

Project No.: NA

Project Name: 516.01

Aqueous LCS Source: ALS MIXED **Solid LCS Source:** ERA D080-540

Analyte	Aqueous (ug/L) True	Aqueous (ug/L) Found	Aqueous (ug/L) %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) Limits C	Solid (mg/kg) Limits	Solid (mg/kg) %R
Antimony				88.2	70.8	26	289	80.3
Arsenic				99.6	110.0	69	131	110.4
Beryllium				72.30	73.4	74	126	101.5
Cadmium				182.0	204.0	74	126	112.1
Chromium				136.0	154.0	70	130	113.2
Copper				102.0	111.0	74	126	108.8
Lead				115.0	129.0	72	129	112.2
Mercury				19.9	17.2	51	148	86.4
Molybdenum				133.0	159.0	71	137	119.5
Nickel				153.0	170.0	73	126	111.1
Selenium				150.0	173.0	67	133	115.3
Silver				40.4	47.0	66	134	116.3
Thallium				174.0	209.0	69	132	120.1
Zinc				161.0	172.0	81	119	106.8

Metals

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LABORATORY CONTROL SAMPLE

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408130

Project No.: NA

Project Name: 516.01

Aqueous LCS Source: ALS MIXED **Solid LCS Source:** ERA D080-540

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits	%R
Mercury	5	5.04	100.8					

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408130
Project No.:	NA	**Date Collected:**	08/04/14
Project Name:	516.01	**Date Received:**	08/05/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET013** **Lab Code:** **K1408130-005**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/08/14	08/19/14	0.429		
Arsenic	200.8	0.5	0.1	1.0	08/08/14	08/19/14	2.2		
Beryllium	200.8	0.020	0.006	1.0	08/08/14	08/19/14	0.007	J	
Cadmium	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.197		
Chromium	200.8	0.20	0.02	1.0	08/08/14	08/19/14	1.93		
Copper	200.8	0.10	0.02	1.0	08/08/14	08/19/14	46.0		
Lead	200.8	0.020	0.005	1.0	08/08/14	08/19/14	1.94		
Molybdenum	200.8	0.050	0.007	1.0	08/08/14	08/19/14	1.68		
Nickel	200.8	0.20	0.02	1.0	08/08/14	08/19/14	3.74		
Selenium	200.8	1.0	0.3	1.0	08/08/14	08/19/14	0.8	J	
Silver	200.8	0.020	0.004	1.0	08/08/14	08/19/14	0.189		
Thallium	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.008	J	
Zinc	200.8	0.5	0.2	1.0	08/08/14	08/19/14	122		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408130
Project No.:	NA	**Date Collected:**	08/04/14
Project Name:	516.01	**Date Received:**	08/05/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET014** **Lab Code:** **K1408130-006DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/08/14	08/19/14	0.322		
Arsenic	200.8	0.5	0.1	1.0	08/08/14	08/19/14	1.5		
Beryllium	200.8	0.020	0.006	1.0	08/08/14	08/19/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.051		
Chromium	200.8	0.20	0.02	1.0	08/08/14	08/19/14	0.70		
Copper	200.8	0.10	0.02	1.0	08/08/14	08/19/14	14.8		
Lead	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.376		
Molybdenum	200.8	0.050	0.007	1.0	08/08/14	08/19/14	1.25		
Nickel	200.8	0.20	0.02	1.0	08/08/14	08/19/14	2.40		
Selenium	200.8	1.0	0.3	1.0	08/08/14	08/19/14	0.7	J	
Silver	200.8	0.020	0.004	1.0	08/08/14	08/19/14	0.046		
Thallium	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	08/08/14	08/19/14	23.7		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408130
Project No.:	NA	**Date Collected:**	08/04/14
Project Name:	516.01	**Date Received:**	08/05/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET015** **Lab Code:** **K1408130-007**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/08/14	08/19/14	0.447		
Arsenic	200.8	0.5	0.1	1.0	08/08/14	08/19/14	2.3		
Beryllium	200.8	0.020	0.006	1.0	08/08/14	08/19/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.167		
Chromium	200.8	0.20	0.02	1.0	08/08/14	08/19/14	1.09		
Copper	200.8	0.10	0.02	1.0	08/08/14	08/19/14	31.6		
Lead	200.8	0.020	0.005	1.0	08/08/14	08/19/14	1.53		
Molybdenum	200.8	0.050	0.007	1.0	08/08/14	08/19/14	1.74		
Nickel	200.8	0.20	0.02	1.0	08/08/14	08/19/14	3.04		
Selenium	200.8	1.0	0.3	1.0	08/08/14	08/19/14	0.8	J	
Silver	200.8	0.020	0.004	1.0	08/08/14	08/19/14	0.128		
Thallium	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.005	J	
Zinc	200.8	0.5	0.2	1.0	08/08/14	08/19/14	61.1		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408130
Project No.:	NA	**Date Collected:**	08/04/14
Project Name:	516.01	**Date Received:**	08/05/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET016** **Lab Code:** **K1408130-008DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/08/14	08/19/14	0.374		
Arsenic	200.8	0.5	0.1	1.0	08/08/14	08/19/14	2.2		
Beryllium	200.8	0.020	0.006	1.0	08/08/14	08/19/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.085		
Chromium	200.8	0.20	0.02	1.0	08/08/14	08/19/14	0.76		
Copper	200.8	0.10	0.02	1.0	08/08/14	08/19/14	19.3		
Lead	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.496		
Molybdenum	200.8	0.050	0.007	1.0	08/08/14	08/19/14	1.68		
Nickel	200.8	0.20	0.02	1.0	08/08/14	08/19/14	2.68		
Selenium	200.8	1.0	0.3	1.0	08/08/14	08/19/14	1.0	J	
Silver	200.8	0.020	0.004	1.0	08/08/14	08/19/14	0.041		
Thallium	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	08/08/14	08/19/14	34.8		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408130
Project No.:	NA	**Date Collected:**	
Project Name:	516.01	**Date Received:**	
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **Method Blank** **Lab Code:** **K1408130-MB**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/08/14	08/19/14	0.005	U	
Arsenic	200.8	0.5	0.1	1.0	08/08/14	08/19/14	0.1	U	
Beryllium	200.8	0.020	0.006	1.0	08/08/14	08/19/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.005	U	
Chromium	200.8	0.20	0.02	1.0	08/08/14	08/19/14	0.02	U	
Copper	200.8	0.10	0.02	1.0	08/08/14	08/19/14	0.02	U	
Lead	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.005	U	
Molybdenum	200.8	0.050	0.007	1.0	08/08/14	08/19/14	0.007	U	
Nickel	200.8	0.20	0.02	1.0	08/08/14	08/19/14	0.02	U	
Selenium	200.8	1.0	0.3	1.0	08/08/14	08/19/14	0.3	U	
Silver	200.8	0.020	0.004	1.0	08/08/14	08/19/14	0.004	U	
Thallium	200.8	0.020	0.005	1.0	08/08/14	08/19/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	08/08/14	08/19/14	0.2	U	

Comments:

Metals
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SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408130

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC1S **Lab Code:** K1408227-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	51.2		0.506		50.00	101.4		200.8
Arsenic	70 - 130	65.5		14.7		50.00	101.6		200.8
Beryllium	70 - 130	2.34		0.006	U	2.50	93.6		200.8
Cadmium	70 - 130	24.9		0.016	J	25.00	99.5		200.8
Chromium	70 - 130	13.9		3.68		10.00	102.2		200.8
Copper	70 - 130	14.6		3.33		12.50	90.2		200.8
Lead	70 - 130	48.3		0.029		50.00	96.5		200.8
Molybdenum	70 - 130	22.8		2.85		20.00	99.8		200.8
Nickel	70 - 130	24.7		1.67		25.00	92.1		200.8
Selenium	70 - 130	54.8		3.3		50.00	103.0		200.8
Silver	70 - 130	11.5		0.004	U	12.50	92.0		200.8
Thallium	70 - 130	49.8		0.005	J	50.00	99.6		200.8
Zinc	70 - 130	36.4		11.9		25.00	98.0		200.8

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

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DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408130

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC1D **Lab Code:** K1408227-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	0.506		0.491		3.0		200.8
Arsenic	20	14.7		14.7		0.0		200.8
Beryllium		0.006	U	0.006	U			200.8
Cadmium		0.016	J	0.015	J	6.5		200.8
Chromium	20	3.68		3.82		3.7		200.8
Copper	20	3.33		3.28		1.5		200.8
Lead		0.029		0.031		6.7		200.8
Molybdenum	20	2.85		2.87		0.7		200.8
Nickel	20	1.67		1.65		1.2		200.8
Selenium		3.3		3.5		5.9		200.8
Silver		0.004	U	0.004	U			200.8
Thallium		0.005	J	0.005	U	200.0		200.8
Zinc	20	11.9		12.1		1.7		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

Form VI - IN

Metals

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LABORATORY CONTROL SAMPLE

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408130

Project No.: NA

Project Name: 516.01

Aqueous LCS Source: ALS MIXED **Solid LCS Source:**

Analyte	Aqueous (ug/L) True	Aqueous (ug/L) Found	Aqueous (ug/L) %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) C	Solid (mg/kg) Limits	Solid (mg/kg) %R
Antimony	50	49.7	99.4					
Arsenic	50	48.7	97.4					
Beryllium	2.5	2.32	92.8					
Cadmium	25	25.0	100.0					
Chromium	10	9.64	96.4					
Copper	12.5	11.7	93.6					
Lead	50	49.9	99.8					
Molybdenum	20	18.8	94.0					
Nickel	25	23.5	94.0					
Selenium	50	50.8	101.6					
Silver	12.5	12.3	98.4					
Thallium	50	51.0	102.0					
Zinc	25	24.8	99.2					

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Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Organophosphorus Pesticides

Sample Name:	MOA14ORG003	**Units:**	ug/L
Lab Code:	K1408130-001	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8141B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	2.0	0.038	1	08/11/14	08/15/14	KWG1411542	
Methyl Parathion	ND	Ui	0.50	0.040	1	08/11/14	08/15/14	KWG1411542	
Malathion	ND	U	0.20	0.015	1	08/11/14	08/15/14	KWG1411542	
Ethyl Parathion	ND	U	0.50	0.010	1	08/11/14	08/15/14	KWG1411542	
Azinphos-methyl (Guthion)	ND	U	0.99	0.023	1	08/11/14	08/15/14	KWG1411542	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tributyl Phosphate	24	54-115	08/15/14	Outside Control Limits
Triphenyl Phosphate	32	57-112	08/15/14	Outside Control Limits

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Organophosphorus Pesticides

Sample Name:	MOA14ORG004	**Units:**	ug/L
Lab Code:	K1408130-002	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8141B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	2.1	0.040	1	08/11/14	08/15/14	KWG1411542	
Methyl Parathion	ND	U	0.52	0.011	1	08/11/14	08/15/14	KWG1411542	
Malathion	ND	U	0.21	0.016	1	08/11/14	08/15/14	KWG1411542	
Ethyl Parathion	ND	U	0.52	0.011	1	08/11/14	08/15/14	KWG1411542	
Azinphos-methyl (Guthion)	ND	U	1.1	0.024	1	08/11/14	08/15/14	KWG1411542	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tributyl Phosphate	3	54-115	08/15/14	Outside Control Limits
Triphenyl Phosphate	7	57-112	08/15/14	Outside Control Limits

Comments:

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Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Organophosphorus Pesticides

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411542-7	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8141B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	2.0	0.038	1	08/11/14	08/15/14	KWG1411542	
Methyl Parathion	ND	U	0.50	0.010	1	08/11/14	08/15/14	KWG1411542	
Malathion	ND	U	0.20	0.015	1	08/11/14	08/15/14	KWG1411542	
Ethyl Parathion	ND	U	0.50	0.010	1	08/11/14	08/15/14	KWG1411542	
Azinphos-methyl (Guthion)	ND	U	0.99	0.023	1	08/11/14	08/15/14	KWG1411542	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tributyl Phosphate	86	54-115	08/15/14	Acceptable
Triphenyl Phosphate	83	57-112	08/15/14	Acceptable

Comments:

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Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Sludge, solid	**Date Received:**	08/05/2014

Organophosphorus Pesticides

Sample Name:	MOA14SLG002	**Units:**	mg/Kg
Lab Code:	K1408130-012	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8141B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	2.6	0.15	10	08/13/14	08/15/14	KWG1411551	*
Methyl Parathion	ND	U	2.6	0.12	10	08/13/14	08/15/14	KWG1411551	*
Malathion	ND	U	2.6	0.17	10	08/13/14	08/15/14	KWG1411551	*
Ethyl Parathion	ND	U	2.6	0.20	10	08/13/14	08/15/14	KWG1411551	*
Azinphos-methyl (Guthion)	ND	U	2.6	2.6	10	08/13/14	08/15/14	KWG1411551	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tributyl Phosphate	82	70-130	08/15/14	Acceptable
Triphenyl Phosphate	118	70-130	08/15/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Organophosphorus Pesticides

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1411551-3	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8141B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Demeton-O,S	ND	U	0.017	0.0028	1	08/13/14	08/16/14	KWG1411551	*
Methyl Parathion	ND	U	0.050	0.0022	1	08/13/14	08/16/14	KWG1411551	*
Malathion	ND	U	0.050	0.0032	1	08/13/14	08/16/14	KWG1411551	*
Ethyl Parathion	ND	U	0.050	0.0038	1	08/13/14	08/16/14	KWG1411551	*
Azinphos-methyl (Guthion)	ND	U	0.017	0.017	1	08/13/14	08/16/14	KWG1411551	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tributyl Phosphate	42	70-130	08/16/14	Outside Control Limits
Triphenyl Phosphate	41	70-130	08/16/14	Outside Control Limits

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408130
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Organophosphorus Pesticides

Extraction Method: EPA 3535A **Units:** Percent
Analysis Method: 8141B **Level:** Low

Sample Name	Lab Code	Sur1		Sur2	
MOA14ORG003	K1408130-001	24	*	32	*
MOA14ORG004	K1408130-002	3	*	7	*
Batch QC	K1408253-002	45	*	40	*
Method Blank	KWG1411542-7	86		83	
Batch QCMS	KWG1411542-1	2	*	5	*
Batch QCDMS	KWG1411542-2	5	*	8	*
Lab Control Sample	KWG1411542-3	85		94	

Surrogate Recovery Control Limits (%)

Sur1	=	Tributyl Phosphate	54-115
Sur2	=	Triphenyl Phosphate	57-112

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408130
Project: 516.01
Sample Matrix: Sludge, solid

Surrogate Recovery Summary
Organophosphorus Pesticides

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8141B **Level:** Low

Sample Name	Lab Code	Sur1		Sur2	
MOA14SLG002	K1408130-012	82 D	#	118 D	#
Method Blank	KWG1411551-3	42	*	41	*
Lab Control Sample	KWG1411551-1	46	*	46	*
Duplicate Lab Control Sample	KWG1411551-2	42	*	44	*

Surrogate Recovery Control Limits (%)

Sur1	=	Tributyl Phosphate	70-130
Sur2	=	Triphenyl Phosphate	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/11/2014
Sample Matrix:	Water	**Date Analyzed:**	08/15/2014

Matrix Spike/Duplicate Matrix Spike Summary
Organophosphorus Pesticides

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1408253-002	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8141B	**Extraction Lot:**	KWG1411542

		Batch QCMS KWG1411542-1 Matrix Spike				Batch QCDMS KWG1411542-2 Duplicate Matrix Spike						
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**		**%Rec Limits**	**RPD**		**RPD Limit**
Demeton-O,S	ND	ND	2.04	0	*	0.0541	2.04	3	*	16-100	NC		30
Methyl Parathion	ND	0.0459	2.04	2	*	0.0918	2.04	5	*	44-127	67	*	30
Malathion	0.13	0.0367	2.04	-5	*	0.0929	2.04	-2	*	43-116	87	*	30
Ethyl Parathion	ND	0.0541	2.04	3	*	0.0949	2.04	5	*	46-127	55	*	30
Azinphos-methyl (Guthion)	ND	0.193	2.04	9	*	0.273	2.04	13	*	30-151	35	*	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/11/2014
Sample Matrix:	Water	**Date Analyzed:**	08/15/2014

Lab Control Spike Summary
Organophosphorus Pesticides

Extraction Method:	EPA 3535A	**Units:**	ug/L
Analysis Method:	8141B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411542

	Lab Control Sample KWG1411542-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Demeton-O,S	0.784	2.00	39	16-100
Methyl Parathion	1.83	2.00	92	44-127
Malathion	1.64	2.00	82	43-116
Ethyl Parathion	1.61	2.00	80	46-127
Azinphos-methyl (Guthion)	2.51	2.00	125	30-151

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/13/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	08/15/2014 - 08/16/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Organophosphorus Pesticides

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8141B	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1411551

	Lab Control Sample KWG1411551-1 Lab Control Spike				Duplicate Lab Control Sample KWG1411551-2 Duplicate Lab Control Spike						
Analyte Name	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**		**%Rec Limits**	**RPD**	**RPD Limit**
Demeton-O,S	0.106	0.267	40	*	0.107	0.267	40	*	70-130	2	40
Methyl Parathion	0.109	0.267	41	*	0.105	0.267	40	*	70-130	3	40
Malathion	0.107	0.267	40	*	0.104	0.267	39	*	70-130	4	40
Ethyl Parathion	0.104	0.267	39	*	0.0991	0.267	37	*	70-130	5	40
Azinphos-methyl (Guthion)	0.176	0.267	66	*	0.161	0.267	60	*	70-130	9	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG003	**Units:**	ug/L
Lab Code:	K1408130-001	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	25	1.7	1	08/11/14	08/14/14	KWG1411366	
Bis(2-chloroethyl) Ether	ND	U	9.9	0.37	1	08/11/14	08/14/14	KWG1411366	
Phenol	**120**		9.9	0.45	1	08/11/14	08/14/14	KWG1411366	
2-Chlorophenol	ND	U	9.9	0.42	1	08/11/14	08/14/14	KWG1411366	
Bis(2-chloroisopropyl) Ether	ND	U	9.9	0.36	1	08/11/14	08/14/14	KWG1411366	
Hexachloroethane	ND	U	9.9	0.26	1	08/11/14	08/14/14	KWG1411366	
N-Nitrosodi-n-propylamine	ND	U	9.9	0.51	1	08/11/14	08/14/14	KWG1411366	
Nitrobenzene	ND	U	9.9	0.36	1	08/11/14	08/14/14	KWG1411366	
Isophorone	ND	U	9.9	0.35	1	08/11/14	08/14/14	KWG1411366	
2-Nitrophenol	ND	U	9.9	0.35	1	08/11/14	08/14/14	KWG1411366	
2,4-Dimethylphenol	ND	U	9.9	1.1	1	08/11/14	08/14/14	KWG1411366	
Bis(2-chloroethoxy)methane	ND	U	9.9	0.31	1	08/11/14	08/14/14	KWG1411366	
2,4-Dichlorophenol	ND	U	9.9	0.29	1	08/11/14	08/14/14	KWG1411366	
1,2,4-Trichlorobenzene	ND	U	9.9	0.32	1	08/11/14	08/14/14	KWG1411366	
Naphthalene	ND	U	9.9	0.31	1	08/11/14	08/14/14	KWG1411366	
Hexachlorobutadiene	ND	U	9.9	0.22	1	08/11/14	08/14/14	KWG1411366	
4-Chloro-3-methylphenol	ND	U	9.9	0.48	1	08/11/14	08/14/14	KWG1411366	
Hexachlorocyclopentadiene	ND	U	9.9	0.58	1	08/11/14	08/14/14	KWG1411366	
2,4,6-Trichlorophenol	ND	U	9.9	0.19	1	08/11/14	08/14/14	KWG1411366	
2-Chloronaphthalene	ND	U	9.9	0.43	1	08/11/14	08/14/14	KWG1411366	
Acenaphthylene	ND	U	9.9	0.29	1	08/11/14	08/14/14	KWG1411366	
Dimethyl Phthalate	ND	U	9.9	0.71	1	08/11/14	08/14/14	KWG1411366	
2,6-Dinitrotoluene	ND	U	9.9	0.27	1	08/11/14	08/14/14	KWG1411366	
Acenaphthene	ND	U	9.9	0.27	1	08/11/14	08/14/14	KWG1411366	
2,4-Dinitrophenol	ND	U	25	1.0	1	08/11/14	08/14/14	KWG1411366	
4-Nitrophenol	ND	U	25	2.3	1	08/11/14	08/14/14	KWG1411366	
2,4-Dinitrotoluene	ND	U	9.9	0.26	1	08/11/14	08/14/14	KWG1411366	
Fluorene	ND	U	9.9	0.23	1	08/11/14	08/14/14	KWG1411366	
4-Chlorophenyl Phenyl Ether	ND	U	9.9	0.26	1	08/11/14	08/14/14	KWG1411366	
Diethyl Phthalate	**4.0**	J	9.9	0.33	1	08/11/14	08/14/14	KWG1411366	
2-Methyl-4,6-dinitrophenol	ND	U	25	2.3	1	08/11/14	08/14/14	KWG1411366	
N-Nitrosodiphenylamine	ND	U	9.9	0.34	1	08/11/14	08/14/14	KWG1411366	
1,2-Diphenylhydrazine†	ND	U	9.9	0.23	1	08/11/14	08/14/14	KWG1411366	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG003	**Units:**	ug/L
Lab Code:	K1408130-001	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Bromophenyl Phenyl Ether	ND	U	9.9	0.35	1	08/11/14	08/14/14	KWG1411366	*
Hexachlorobenzene	ND	U	9.9	0.27	1	08/11/14	08/14/14	KWG1411366	*
Pentachlorophenol	ND	U	25	0.38	1	08/11/14	08/14/14	KWG1411366	
Phenanthrene	**0.38**	J	9.9	0.24	1	08/11/14	08/14/14	KWG1411366	
Anthracene	ND	U	9.9	0.33	1	08/11/14	08/14/14	KWG1411366	
Di-n-butyl Phthalate	**0.73**	J	9.9	0.46	1	08/11/14	08/14/14	KWG1411366	
Fluoranthene	ND	U	9.9	0.45	1	08/11/14	08/14/14	KWG1411366	
Benzidine	ND	U	50	29	1	08/11/14	08/14/14	KWG1411366	
Pyrene	ND	U	9.9	0.47	1	08/11/14	08/14/14	KWG1411366	
Butyl Benzyl Phthalate	**3.0**	J	9.9	0.55	1	08/11/14	08/14/14	KWG1411366	
3,3'-Dichlorobenzidine	ND	U	25	0.48	1	08/11/14	08/14/14	KWG1411366	
Benz(a)anthracene	ND	U	9.9	0.25	1	08/11/14	08/14/14	KWG1411366	
Chrysene	ND	U	9.9	0.40	1	08/11/14	08/14/14	KWG1411366	
Bis(2-ethylhexyl) Phthalate	**16**		9.9	0.34	1	08/11/14	08/14/14	KWG1411366	
Di-n-octyl Phthalate	**7.6**	J	9.9	0.38	1	08/11/14	08/14/14	KWG1411366	
Benzo(b)fluoranthene	ND	U	9.9	0.27	1	08/11/14	08/14/14	KWG1411366	
Benzo(k)fluoranthene	ND	U	9.9	0.32	1	08/11/14	08/14/14	KWG1411366	
Benzo(a)pyrene	ND	U	9.9	0.37	1	08/11/14	08/14/14	KWG1411366	
Indeno(1,2,3-cd)pyrene	ND	U	9.9	0.45	1	08/11/14	08/14/14	KWG1411366	
Dibenz(a,h)anthracene	ND	U	9.9	0.41	1	08/11/14	08/14/14	KWG1411366	
Benzo(g,h,i)perylene	ND	U	9.9	0.41	1	08/11/14	08/14/14	KWG1411366	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	82	34-112	08/14/14	Acceptable
Phenol-d6	88	34-116	08/14/14	Acceptable
Nitrobenzene-d5	88	43-120	08/14/14	Acceptable
2-Fluorobiphenyl	95	45-115	08/14/14	Acceptable
2,4,6-Tribromophenol	88	47-128	08/14/14	Acceptable
Terphenyl-d14	96	28-147	08/14/14	Acceptable

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG003	**Units:**	ug/L
Lab Code:	K1408130-001	**Basis:**	NA

† **Analyte Comments**

1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG004	**Units:**	ug/L
Lab Code:	K1408130-002	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	25	1.7	1	08/11/14	08/14/14	KWG1411366	
Bis(2-chloroethyl) Ether	ND	U	10	0.37	1	08/11/14	08/14/14	KWG1411366	
Phenol	**19**		10	0.45	1	08/11/14	08/14/14	KWG1411366	
2-Chlorophenol	**0.66**	J	10	0.42	1	08/11/14	08/14/14	KWG1411366	
Bis(2-chloroisopropyl) Ether	ND	U	10	0.36	1	08/11/14	08/14/14	KWG1411366	
Hexachloroethane	ND	U	10	0.26	1	08/11/14	08/14/14	KWG1411366	
N-Nitrosodi-n-propylamine	ND	U	10	0.51	1	08/11/14	08/14/14	KWG1411366	
Nitrobenzene	ND	U	10	0.36	1	08/11/14	08/14/14	KWG1411366	
Isophorone	ND	U	10	0.35	1	08/11/14	08/14/14	KWG1411366	
2-Nitrophenol	ND	U	10	0.35	1	08/11/14	08/14/14	KWG1411366	
2,4-Dimethylphenol	ND	U	10	1.1	1	08/11/14	08/14/14	KWG1411366	
Bis(2-chloroethoxy)methane	ND	U	10	0.31	1	08/11/14	08/14/14	KWG1411366	
2,4-Dichlorophenol	ND	U	10	0.29	1	08/11/14	08/14/14	KWG1411366	
1,2,4-Trichlorobenzene	ND	U	10	0.32	1	08/11/14	08/14/14	KWG1411366	
Naphthalene	ND	U	10	0.31	1	08/11/14	08/14/14	KWG1411366	
Hexachlorobutadiene	ND	U	10	0.22	1	08/11/14	08/14/14	KWG1411366	
4-Chloro-3-methylphenol	ND	U	10	0.48	1	08/11/14	08/14/14	KWG1411366	
Hexachlorocyclopentadiene	ND	U	10	0.58	1	08/11/14	08/14/14	KWG1411366	
2,4,6-Trichlorophenol	**0.74**	J	10	0.19	1	08/11/14	08/14/14	KWG1411366	
2-Chloronaphthalene	ND	U	10	0.43	1	08/11/14	08/14/14	KWG1411366	
Acenaphthylene	ND	U	10	0.29	1	08/11/14	08/14/14	KWG1411366	
Dimethyl Phthalate	ND	U	10	0.71	1	08/11/14	08/14/14	KWG1411366	
2,6-Dinitrotoluene	ND	U	10	0.27	1	08/11/14	08/14/14	KWG1411366	
Acenaphthene	ND	U	10	0.27	1	08/11/14	08/14/14	KWG1411366	
2,4-Dinitrophenol	ND	U	25	1.0	1	08/11/14	08/14/14	KWG1411366	
4-Nitrophenol	ND	U	25	2.3	1	08/11/14	08/14/14	KWG1411366	
2,4-Dinitrotoluene	ND	U	10	0.26	1	08/11/14	08/14/14	KWG1411366	
Fluorene	ND	U	10	0.23	1	08/11/14	08/14/14	KWG1411366	
4-Chlorophenyl Phenyl Ether	ND	U	10	0.26	1	08/11/14	08/14/14	KWG1411366	
Diethyl Phthalate	**4.3**	J	10	0.33	1	08/11/14	08/14/14	KWG1411366	
2-Methyl-4,6-dinitrophenol	ND	U	25	2.3	1	08/11/14	08/14/14	KWG1411366	
N-Nitrosodiphenylamine	ND	U	10	0.34	1	08/11/14	08/14/14	KWG1411366	
1,2-Diphenylhydrazine†	ND	U	10	0.23	1	08/11/14	08/14/14	KWG1411366	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG004	**Units:**	ug/L
Lab Code:	K1408130-002	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Bromophenyl Phenyl Ether	ND	U	10	0.35	1	08/11/14	08/14/14	KWG1411366	*
Hexachlorobenzene	ND	U	10	0.27	1	08/11/14	08/14/14	KWG1411366	*
Pentachlorophenol	**8.0**	J	25	0.38	1	08/11/14	08/14/14	KWG1411366	
Phenanthrene	ND	U	10	0.24	1	08/11/14	08/14/14	KWG1411366	
Anthracene	ND	U	10	0.33	1	08/11/14	08/14/14	KWG1411366	
Di-n-butyl Phthalate	**0.76**	J	10	0.46	1	08/11/14	08/14/14	KWG1411366	
Fluoranthene	ND	U	10	0.45	1	08/11/14	08/14/14	KWG1411366	
Benzidine	ND	U	50	29	1	08/11/14	08/14/14	KWG1411366	
Pyrene	ND	U	10	0.47	1	08/11/14	08/14/14	KWG1411366	
Butyl Benzyl Phthalate	**1.4**	J	10	0.55	1	08/11/14	08/14/14	KWG1411366	
3,3'-Dichlorobenzidine	ND	U	25	0.48	1	08/11/14	08/14/14	KWG1411366	
Benz(a)anthracene	ND	U	10	0.25	1	08/11/14	08/14/14	KWG1411366	
Chrysene	ND	U	10	0.40	1	08/11/14	08/14/14	KWG1411366	
Bis(2-ethylhexyl) Phthalate	**12**		10	0.34	1	08/11/14	08/14/14	KWG1411366	
Di-n-octyl Phthalate	**7.6**	J	10	0.38	1	08/11/14	08/14/14	KWG1411366	
Benzo(b)fluoranthene	ND	U	10	0.27	1	08/11/14	08/14/14	KWG1411366	
Benzo(k)fluoranthene	ND	U	10	0.32	1	08/11/14	08/14/14	KWG1411366	
Benzo(a)pyrene	ND	U	10	0.37	1	08/11/14	08/14/14	KWG1411366	
Indeno(1,2,3-cd)pyrene	ND	U	10	0.45	1	08/11/14	08/14/14	KWG1411366	
Dibenz(a,h)anthracene	ND	U	10	0.41	1	08/11/14	08/14/14	KWG1411366	
Benzo(g,h,i)perylene	ND	U	10	0.41	1	08/11/14	08/14/14	KWG1411366	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	84	34-112	08/14/14	Acceptable
Phenol-d6	89	34-116	08/14/14	Acceptable
Nitrobenzene-d5	86	43-120	08/14/14	Acceptable
2-Fluorobiphenyl	87	45-115	08/14/14	Acceptable
2,4,6-Tribromophenol	83	47-128	08/14/14	Acceptable
Terphenyl-d14	79	28-147	08/14/14	Acceptable

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG004	**Units:**	ug/L
Lab Code:	K1408130-002	**Basis:**	NA

† **Analyte Comments**

1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411366-5	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	24	1.7	1	08/11/14	08/13/14	KWG1411366	
Bis(2-chloroethyl) Ether	ND	U	9.5	0.37	1	08/11/14	08/13/14	KWG1411366	
Phenol	ND	U	9.5	0.45	1	08/11/14	08/13/14	KWG1411366	
2-Chlorophenol	ND	U	9.5	0.42	1	08/11/14	08/13/14	KWG1411366	
Bis(2-chloroisopropyl) Ether	ND	U	9.5	0.36	1	08/11/14	08/13/14	KWG1411366	
Hexachloroethane	ND	U	9.5	0.26	1	08/11/14	08/13/14	KWG1411366	
N-Nitrosodi-n-propylamine	ND	U	9.5	0.51	1	08/11/14	08/13/14	KWG1411366	
Nitrobenzene	ND	U	9.5	0.36	1	08/11/14	08/13/14	KWG1411366	
Isophorone	ND	U	9.5	0.35	1	08/11/14	08/13/14	KWG1411366	
2-Nitrophenol	ND	U	9.5	0.35	1	08/11/14	08/13/14	KWG1411366	
2,4-Dimethylphenol	ND	U	9.5	1.1	1	08/11/14	08/13/14	KWG1411366	
Bis(2-chloroethoxy)methane	ND	U	9.5	0.31	1	08/11/14	08/13/14	KWG1411366	
2,4-Dichlorophenol	ND	U	9.5	0.29	1	08/11/14	08/13/14	KWG1411366	
1,2,4-Trichlorobenzene	ND	U	9.5	0.32	1	08/11/14	08/13/14	KWG1411366	
Naphthalene	ND	U	9.5	0.31	1	08/11/14	08/13/14	KWG1411366	
Hexachlorobutadiene	ND	U	9.5	0.22	1	08/11/14	08/13/14	KWG1411366	
4-Chloro-3-methylphenol	ND	U	9.5	0.48	1	08/11/14	08/13/14	KWG1411366	
Hexachlorocyclopentadiene	ND	U	9.5	0.58	1	08/11/14	08/13/14	KWG1411366	
2,4,6-Trichlorophenol	ND	U	9.5	0.19	1	08/11/14	08/13/14	KWG1411366	
2-Chloronaphthalene	ND	U	9.5	0.43	1	08/11/14	08/13/14	KWG1411366	
Acenaphthylene	ND	U	9.5	0.29	1	08/11/14	08/13/14	KWG1411366	
Dimethyl Phthalate	ND	U	9.5	0.71	1	08/11/14	08/13/14	KWG1411366	
2,6-Dinitrotoluene	ND	U	9.5	0.27	1	08/11/14	08/13/14	KWG1411366	
Acenaphthene	ND	U	9.5	0.27	1	08/11/14	08/13/14	KWG1411366	
2,4-Dinitrophenol	ND	U	24	1.0	1	08/11/14	08/13/14	KWG1411366	
4-Nitrophenol	ND	U	24	2.3	1	08/11/14	08/13/14	KWG1411366	
2,4-Dinitrotoluene	ND	U	9.5	0.26	1	08/11/14	08/13/14	KWG1411366	
Fluorene	ND	U	9.5	0.23	1	08/11/14	08/13/14	KWG1411366	
4-Chlorophenyl Phenyl Ether	ND	U	9.5	0.26	1	08/11/14	08/13/14	KWG1411366	
Diethyl Phthalate	ND	U	9.5	0.33	1	08/11/14	08/13/14	KWG1411366	
2-Methyl-4,6-dinitrophenol	ND	U	24	2.3	1	08/11/14	08/13/14	KWG1411366	
N-Nitrosodiphenylamine	ND	U	9.5	0.34	1	08/11/14	08/13/14	KWG1411366	
1,2-Diphenylhydrazine†	ND	U	9.5	0.23	1	08/11/14	08/13/14	KWG1411366	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411366-5	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Bromophenyl Phenyl Ether	ND	U	9.5	0.35	1	08/11/14	08/13/14	KWG1411366	*
Hexachlorobenzene	ND	U	9.5	0.27	1	08/11/14	08/13/14	KWG1411366	*
Pentachlorophenol	ND	U	24	0.38	1	08/11/14	08/13/14	KWG1411366	
Phenanthrene	ND	U	9.5	0.24	1	08/11/14	08/13/14	KWG1411366	
Anthracene	ND	U	9.5	0.33	1	08/11/14	08/13/14	KWG1411366	
Di-n-butyl Phthalate	ND	U	9.5	0.46	1	08/11/14	08/13/14	KWG1411366	
Fluoranthene	ND	U	9.5	0.45	1	08/11/14	08/13/14	KWG1411366	
Benzidine	ND	U	48	29	1	08/11/14	08/13/14	KWG1411366	
Pyrene	ND	U	9.5	0.47	1	08/11/14	08/13/14	KWG1411366	
Butyl Benzyl Phthalate	ND	U	9.5	0.55	1	08/11/14	08/13/14	KWG1411366	
3,3'-Dichlorobenzidine	ND	U	24	0.48	1	08/11/14	08/13/14	KWG1411366	
Benz(a)anthracene	ND	U	9.5	0.25	1	08/11/14	08/13/14	KWG1411366	
Chrysene	ND	U	9.5	0.40	1	08/11/14	08/13/14	KWG1411366	
Bis(2-ethylhexyl) Phthalate	ND	U	9.5	0.34	1	08/11/14	08/13/14	KWG1411366	
Di-n-octyl Phthalate	ND	U	9.5	0.38	1	08/11/14	08/13/14	KWG1411366	
Benzo(b)fluoranthene	ND	U	9.5	0.27	1	08/11/14	08/13/14	KWG1411366	
Benzo(k)fluoranthene	ND	U	9.5	0.32	1	08/11/14	08/13/14	KWG1411366	
Benzo(a)pyrene	ND	U	9.5	0.37	1	08/11/14	08/13/14	KWG1411366	
Indeno(1,2,3-cd)pyrene	ND	U	9.5	0.45	1	08/11/14	08/13/14	KWG1411366	
Dibenz(a,h)anthracene	ND	U	9.5	0.41	1	08/11/14	08/13/14	KWG1411366	
Benzo(g,h,i)perylene	ND	U	9.5	0.41	1	08/11/14	08/13/14	KWG1411366	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	74	34-112	08/13/14	Acceptable
Phenol-d6	74	34-116	08/13/14	Acceptable
Nitrobenzene-d5	76	43-120	08/13/14	Acceptable
2-Fluorobiphenyl	77	45-115	08/13/14	Acceptable
2,4,6-Tribromophenol	67	47-128	08/13/14	Acceptable
Terphenyl-d14	111	28-147	08/13/14	Acceptable

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411366-5	**Basis:**	NA

† **Analyte Comments**

1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408130
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C **Units:** Percent
Analysis Method: 625 **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4	Sur5	Sur6
MOA14ORG003	K1408130-001	82	88	88	95	88	96
MOA14ORG004	K1408130-002	84	89	86	87	83	79
Method Blank	KWG1411366-5	74	74	76	77	67	111
MOA14ORG004MS	KWG1411366-1	76	82	86	96	86	74
MOA14ORG004DMS	KWG1411366-2	81	83	81	93	84	80
Lab Control Sample	KWG1411366-3	78	81	85	86	92	89
Duplicate Lab Control Sample	KWG1411366-4	85	82	89	96	101	92

Surrogate Recovery Control Limits (%)

Sur1 =	2-Fluorophenol	34-112	Sur5 =	2,4,6-Tribromophenol	47-128
Sur2 =	Phenol-d6	34-116	Sur6 =	Terphenyl-d14	28-147
Sur3 =	Nitrobenzene-d5	43-120			
Sur4 =	2-Fluorobiphenyl	45-115			

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/11/2014
Sample Matrix:	Water	**Date Analyzed:**	08/14/2014

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14ORG004	**Units:**	ug/L
Lab Code:	K1408130-002	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	625	**Extraction Lot:**	KWG1411366

		MOA14ORG004MS KWG1411366-1 Matrix Spike			MOA14ORG004DMS KWG1411366-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	19	98.0	98.0	80	88.8	98.0	71	53-101	10	30
2-Chlorophenol	0.66	85.7	98.0	87	79.2	98.0	80	59-101	8	30
N-Nitrosodi-n-propylamine	ND	86.8	98.0	89	86.9	98.0	89	59-105	0	30
1,2,4-Trichlorobenzene	ND	93.6	98.0	95	90.0	98.0	92	53-101	4	30
4-Chloro-3-methylphenol	ND	77.0	98.0	79	79.6	98.0	81	60-112	3	30
Acenaphthene	ND	87.7	98.0	89	83.6	98.0	85	60-109	5	30
4-Nitrophenol	ND	115	98.0	117	98.5	98.0	100	51-125	15	30
2,4-Dinitrotoluene	ND	99.7	98.0	102	97.9	98.0	100	56-127	2	30
Pentachlorophenol	8.0	110	98.0	104	101	98.0	95	52-117	9	30
Pyrene	ND	73.2	98.0	75	73.3	98.0	75	57-115	0	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/11/2014
Sample Matrix:	Water	**Date Analyzed:**	08/13/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3520C	**Units:**	ug/L
Analysis Method:	625	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411366

	Lab Control Sample KWG1411366-3 Lab Control Spike			Duplicate Lab Control Sample KWG1411366-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
N-Nitrosodimethylamine	90.4	100	90	90.5	100	90	47-110	0	30
Bis(2-chloroethyl) Ether	89.4	100	89	87.8	100	88	55-102	2	30
Phenol	79.4	100	79	75.3	100	75	53-101	5	30
2-Chlorophenol	88.6	100	89	91.4	100	91	59-101	3	30
Bis(2-chloroisopropyl) Ether	77.5	100	78	76.2	100	76	51-105	2	30
Hexachloroethane	81.7	100	82	83.7	100	84	50-98	2	30
N-Nitrosodi-n-propylamine	95.4	100	95	90.7	100	91	59-105	5	30
Nitrobenzene	94.7	100	95	87.9	100	88	58-105	7	30
Isophorone	95.7	100	96	95.5	100	96	57-108	0	30
2-Nitrophenol	97.5	100	97	101	100	101	61-105	4	30
2,4-Dimethylphenol	79.2	100	79	76.9	100	77	29-105	3	30
Bis(2-chloroethoxy)methane	92.9	100	93	92.8	100	93	56-106	0	30
2,4-Dichlorophenol	100	100	100	98.7	100	99	59-106	2	30
1,2,4-Trichlorobenzene	93.6	100	94	96.0	100	96	53-101	3	30
Naphthalene	90.8	100	91	86.6	100	87	55-102	5	30
Hexachlorobutadiene	96.7	100	97	96.3	100	96	52-101	0	30
4-Chloro-3-methylphenol	98.7	100	99	93.1	100	93	60-112	6	30
Hexachlorocyclopentadiene	33.7	100	34	42.2	100	42	10-63	22	30
2,4,6-Trichlorophenol	102	100	102	106	100	106	65-112	4	30
2-Chloronaphthalene	93.6	100	94	95.5	100	96	57-106	2	30
Acenaphthylene	93.8	100	94	95.7	100	96	57-112	2	30
Dimethyl Phthalate	101	100	101	103	100	103	62-122	2	30
2,6-Dinitrotoluene	103	100	103	104	100	104	63-122	1	30
Acenaphthene	92.8	100	93	94.1	100	94	60-109	1	30
2,4-Dinitrophenol	101	100	101	100	100	100	32-123	1	30
4-Nitrophenol	90.4	100	90	83.3	100	83	51-125	8	30
2,4-Dinitrotoluene	97.7	100	98	87.9	100	88	56-127	11	30
Fluorene	98.4	100	98	92.9	100	93	56-115	6	30
4-Chlorophenyl Phenyl Ether	101	100	101	103	100	103	57-116	2	30
Diethyl Phthalate	96.0	100	96	95.8	100	96	54-135	0	30
2-Methyl-4,6-dinitrophenol	107	100	107	97.1	100	97	49-128	9	30
N-Nitrosodiphenylamine	86.8	100	87	85.9	100	86	48-122	1	30
1,2-Diphenylhydrazine	84.4	100	84	86.4	100	86	54-117	2	30
4-Bromophenyl Phenyl Ether	119	100	119 *	126	100	126 *	64-116	6	30
Hexachlorobenzene	117	100	117 *	121	100	121 *	61-116	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/11/2014
Sample Matrix:	Water	**Date Analyzed:**	08/13/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3520C	**Units:**	ug/L
Analysis Method:	625	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411366

	Lab Control Sample KWG1411366-3 Lab Control Spike			Duplicate Lab Control Sample KWG1411366-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Pentachlorophenol	99.2	100	99	96.3	100	96	52-117	3	30
Phenanthrene	99.3	100	99	99.9	100	100	64-113	1	30
Anthracene	102	100	102	99.5	100	100	62-114	2	30
Di-n-butyl Phthalate	110	100	110	102	100	102	63-125	8	30
Fluoranthene	118	100	118	114	100	114	60-120	4	30
Benzidine	112	150	75	121	150	80	6-160	7	30
Pyrene	97.9	100	98	93.0	100	93	57-115	5	30
Butyl Benzyl Phthalate	106	100	106	102	100	102	65-115	4	30
3,3'-Dichlorobenzidine	88.4	100	88	85.2	100	85	42-120	4	30
Benz(a)anthracene	103	100	103	98.0	100	98	66-113	5	30
Chrysene	103	100	103	99.7	100	100	64-113	3	30
Bis(2-ethylhexyl) Phthalate	102	100	102	98.8	100	99	61-120	3	30
Di-n-octyl Phthalate	105	100	105	103	100	103	64-128	1	30
Benzo(b)fluoranthene	101	100	101	95.0	100	95	64-115	6	30
Benzo(k)fluoranthene	101	100	101	97.2	100	97	62-119	4	30
Benzo(a)pyrene	100	100	100	98.5	100	98	57-119	2	30
Indeno(1,2,3-cd)pyrene	98.6	100	99	97.1	100	97	65-116	2	30
Dibenz(a,h)anthracene	96.4	100	96	95.1	100	95	64-119	1	30
Benzo(g,h,i)perylene	109	100	109	106	100	106	65-115	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Organochlorine Pesticides

Sample Name:	MOA14ORG003	**Units:**	ug/L
Lab Code:	K1408130-001	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.010	0.00044	1	08/11/14	08/20/14	KWG1411616	
Heptachlor	ND	Ui	0.027	0.027	1	08/11/14	08/20/14	KWG1411616	
Aldrin	ND	U	0.010	0.00040	1	08/11/14	08/20/14	KWG1411616	
Heptachlor Epoxide	ND	U	0.010	0.00032	1	08/11/14	08/20/14	KWG1411616	
gamma-Chlordane†	ND	U	0.010	0.00032	1	08/11/14	08/20/14	KWG1411616	
Endosulfan I	ND	Ui	0.010	0.0050	1	08/11/14	08/20/14	KWG1411616	
alpha-Chlordane	ND	Ui	0.010	0.0073	1	08/11/14	08/20/14	KWG1411616	
Dieldrin	ND	U	0.010	0.00035	1	08/11/14	08/20/14	KWG1411616	
4,4'-DDE	ND	Ui	0.010	0.00092	1	08/11/14	08/20/14	KWG1411616	
Endrin	ND	U	0.010	0.00068	1	08/11/14	08/20/14	KWG1411616	
Endosulfan II	ND	Ui	0.010	0.0092	1	08/11/14	08/20/14	KWG1411616	
4,4'-DDD	ND	Ui	0.010	0.0098	1	08/11/14	08/20/14	KWG1411616	
Endrin Aldehyde	ND	U	0.010	0.00046	1	08/11/14	08/20/14	KWG1411616	
Endosulfan Sulfate	ND	Ui	0.010	0.0029	1	08/11/14	08/20/14	KWG1411616	
4,4'-DDT	ND	Ui	0.010	0.0029	1	08/11/14	08/20/14	KWG1411616	
Endrin Ketone	ND	U	0.010	0.00066	1	08/11/14	08/20/14	KWG1411616	
Methoxychlor	ND	Ui	0.010	0.0034	1	08/11/14	08/20/14	KWG1411616	
Toxaphene	ND	Ui	0.50	0.46	1	08/11/14	08/20/14	KWG1411616	
Chlordane	ND	Ui	0.20	0.14	1	08/11/14	08/20/14	KWG1411616	
Mirex	ND	Ui	0.010	0.0021	1	08/11/14	08/20/14	KWG1411616	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	59	20-106	08/20/14	Acceptable
Decachlorobiphenyl	51	19-127	08/20/14	Acceptable

† Analyte Comments

gamma-Chlordane	For this analyte (CAS Registry No. 5103-74-2), USEPA has corrected the name to be beta-Chlordane, also known as trans-Chlordane.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Organochlorine Pesticides

Sample Name:	MOA14ORG004	**Units:**	ug/L
Lab Code:	K1408130-002	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.011	0.00045	1	08/11/14	08/20/14	KWG1411616	
Heptachlor	ND	Ui	0.015	0.015	1	08/11/14	08/20/14	KWG1411616	
Aldrin	ND	U	0.011	0.00041	1	08/11/14	08/20/14	KWG1411616	
Heptachlor Epoxide	ND	U	0.011	0.00033	1	08/11/14	08/20/14	KWG1411616	
gamma-Chlordane†	ND	U	0.011	0.00033	1	08/11/14	08/20/14	KWG1411616	
Endosulfan I	ND	Ui	0.011	0.0074	1	08/11/14	08/20/14	KWG1411616	
alpha-Chlordane	ND	Ui	0.018	0.018	1	08/11/14	08/20/14	KWG1411616	
Dieldrin	ND	Ui	0.011	0.0056	1	08/11/14	08/20/14	KWG1411616	
4,4'-DDE	ND	U	0.011	0.00037	1	08/11/14	08/20/14	KWG1411616	
Endrin	ND	Ui	0.011	0.0081	1	08/11/14	08/20/14	KWG1411616	
Endosulfan II	ND	Ui	0.026	0.026	1	08/11/14	08/20/14	KWG1411616	
4,4'-DDD	ND	Ui	0.019	0.019	1	08/11/14	08/20/14	KWG1411616	
Endrin Aldehyde	ND	Ui	0.021	0.021	1	08/11/14	08/20/14	KWG1411616	
Endosulfan Sulfate	ND	U	0.011	0.00048	1	08/11/14	08/20/14	KWG1411616	
4,4'-DDT	ND	Ui	0.011	0.0063	1	08/11/14	08/20/14	KWG1411616	
Endrin Ketone	ND	Ui	0.011	0.0032	1	08/11/14	08/20/14	KWG1411616	
Methoxychlor	ND	Ui	0.011	0.0059	1	08/11/14	08/20/14	KWG1411616	
Toxaphene	ND	Ui	0.51	0.47	1	08/11/14	08/20/14	KWG1411616	
Chlordane	ND	Ui	0.32	0.32	1	08/11/14	08/20/14	KWG1411616	
Mirex	ND	Ui	0.011	0.0013	1	08/11/14	08/20/14	KWG1411616	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	69	20-106	08/20/14	Acceptable
Decachlorobiphenyl	64	19-127	08/20/14	Acceptable

† Analyte Comments

gamma-Chlordane	For this analyte (CAS Registry No. 5103-74-2), USEPA has corrected the name to be beta-Chlordane, also known as trans-Chlordane.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411616-7	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	0.010	0.00044	1	08/11/14	08/17/14	KWG1411616	
Heptachlor	ND	U	0.010	0.00036	1	08/11/14	08/17/14	KWG1411616	
Aldrin	ND	U	0.010	0.00040	1	08/11/14	08/17/14	KWG1411616	
Heptachlor Epoxide	ND	U	0.010	0.00032	1	08/11/14	08/17/14	KWG1411616	
gamma-Chlordane†	ND	U	0.010	0.00032	1	08/11/14	08/17/14	KWG1411616	
Endosulfan I	ND	U	0.010	0.00044	1	08/11/14	08/17/14	KWG1411616	
alpha-Chlordane	ND	U	0.010	0.0040	1	08/11/14	08/17/14	KWG1411616	
Dieldrin	ND	U	0.010	0.00035	1	08/11/14	08/17/14	KWG1411616	
4,4'-DDE	ND	U	0.010	0.00036	1	08/11/14	08/17/14	KWG1411616	
Endrin	ND	U	0.010	0.00068	1	08/11/14	08/17/14	KWG1411616	
Endosulfan II	ND	U	0.010	0.00040	1	08/11/14	08/17/14	KWG1411616	
4,4'-DDD	ND	U	0.010	0.0015	1	08/11/14	08/17/14	KWG1411616	
Endrin Aldehyde	ND	U	0.010	0.00046	1	08/11/14	08/17/14	KWG1411616	
Endosulfan Sulfate	ND	U	0.010	0.00047	1	08/11/14	08/17/14	KWG1411616	
4,4'-DDT	ND	U	0.010	0.00058	1	08/11/14	08/17/14	KWG1411616	
Endrin Ketone	ND	U	0.010	0.00066	1	08/11/14	08/17/14	KWG1411616	
Methoxychlor	ND	U	0.010	0.00093	1	08/11/14	08/17/14	KWG1411616	
Toxaphene	ND	U	0.50	0.051	1	08/11/14	08/17/14	KWG1411616	
Chlordane	ND	U	0.20	0.022	1	08/11/14	08/17/14	KWG1411616	
Mirex	ND	U	0.010	0.00081	1	08/11/14	08/17/14	KWG1411616	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	53	20-106	08/17/14	Acceptable
Decachlorobiphenyl	67	19-127	08/17/14	Acceptable

† Analyte Comments

gamma-Chlordane	For this analyte (CAS Registry No. 5103-74-2), USEPA has corrected the name to be beta-Chlordane, also known as trans-Chlordane.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Sludge, solid	**Date Received:**	08/05/2014

Organochlorine Pesticides

Sample Name:	MOA14SLG002	**Units:**	ug/Kg
Lab Code:	K1408130-012	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	Ui	7.8	2.2	1	08/14/14	08/21/14	KWG1411787	
Heptachlor	ND	U	7.8	1.3	1	08/14/14	08/21/14	KWG1411787	
Aldrin	ND	U	7.8	0.53	1	08/14/14	08/21/14	KWG1411787	
Heptachlor Epoxide	ND	U	7.8	0.61	1	08/14/14	08/21/14	KWG1411787	
gamma-Chlordane†	ND	Ui	7.8	4.5	1	08/14/14	08/21/14	KWG1411787	
Endosulfan I	ND	Ui	7.8	3.9	1	08/14/14	08/21/14	KWG1411787	
alpha-Chlordane	ND	U	7.8	1.9	1	08/14/14	08/21/14	KWG1411787	
Dieldrin	ND	Ui	7.8	2.7	1	08/14/14	08/21/14	KWG1411787	
4,4'-DDE	ND	U	7.8	2.5	1	08/14/14	08/21/14	KWG1411787	
Endrin	ND	Ui	7.8	5.2	1	08/14/14	08/21/14	KWG1411787	
Endosulfan II	ND	Ui	15	15	1	08/14/14	08/21/14	KWG1411787	
4,4'-DDD	ND	U	7.8	1.6	1	08/14/14	08/21/14	KWG1411787	
Endrin Aldehyde	ND	U	7.8	2.2	1	08/14/14	08/21/14	KWG1411787	
Endosulfan Sulfate	ND	Ui	7.8	4.7	1	08/14/14	08/21/14	KWG1411787	
4,4'-DDT	ND	Ui	7.8	3.2	1	08/14/14	08/21/14	KWG1411787	
Endrin Ketone	ND	U	7.8	0.85	1	08/14/14	08/21/14	KWG1411787	
Methoxychlor	ND	Ui	7.8	5.3	1	08/14/14	08/21/14	KWG1411787	
Toxaphene	ND	Ui	1100	1100	1	08/14/14	08/21/14	KWG1411787	
Chlordane	ND	U	160	34	1	08/14/14	08/21/14	KWG1411787	
Mirex	ND	Ui	7.8	4.3	1	08/14/14	08/21/14	KWG1411787	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	55	21-112	08/21/14	Acceptable
Decachlorobiphenyl	56	15-130	08/21/14	Acceptable

† Analyte Comments

gamma-Chlordane	For this analyte (CAS Registry No. 5103-74-2), USEPA has corrected the name to be beta-Chlordane, also known as trans-Chlordane.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge	**Date Received:**	NA

Organochlorine Pesticides

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1411787-5	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8081B		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
gamma-BHC (Lindane)	ND	U	2.5	0.45	1	08/14/14	08/21/14	KWG1411787	
Heptachlor	ND	U	2.5	0.83	1	08/14/14	08/21/14	KWG1411787	
Aldrin	ND	U	2.5	0.34	1	08/14/14	08/21/14	KWG1411787	
Heptachlor Epoxide	ND	U	2.5	0.39	1	08/14/14	08/21/14	KWG1411787	
gamma-Chlordane†	ND	U	2.5	0.60	1	08/14/14	08/21/14	KWG1411787	
Endosulfan I	ND	U	2.5	1.7	1	08/14/14	08/21/14	KWG1411787	
alpha-Chlordane	ND	U	2.5	1.2	1	08/14/14	08/21/14	KWG1411787	
Dieldrin	ND	U	2.5	0.48	1	08/14/14	08/21/14	KWG1411787	
4,4'-DDE	ND	U	2.5	1.6	1	08/14/14	08/21/14	KWG1411787	
Endrin	ND	U	2.5	0.45	1	08/14/14	08/21/14	KWG1411787	
Endosulfan II	ND	U	2.5	0.86	1	08/14/14	08/21/14	KWG1411787	
4,4'-DDD	ND	U	2.5	1.0	1	08/14/14	08/21/14	KWG1411787	
Endrin Aldehyde	ND	U	2.5	1.4	1	08/14/14	08/21/14	KWG1411787	
Endosulfan Sulfate	ND	U	2.5	0.57	1	08/14/14	08/21/14	KWG1411787	
4,4'-DDT	ND	U	2.5	0.85	1	08/14/14	08/21/14	KWG1411787	
Endrin Ketone	ND	U	2.5	0.55	1	08/14/14	08/21/14	KWG1411787	
Methoxychlor	ND	U	2.5	0.61	1	08/14/14	08/21/14	KWG1411787	
Toxaphene	ND	U	130	37	1	08/14/14	08/21/14	KWG1411787	
Chlordane	ND	U	50	22	1	08/14/14	08/21/14	KWG1411787	
Mirex	ND	U	2.5	0.68	1	08/14/14	08/21/14	KWG1411787	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Tetrachloro-m-xylene	53	21-112	08/21/14	Acceptable
Decachlorobiphenyl	72	15-130	08/21/14	Acceptable

† Analyte Comments

gamma-Chlordane	For this analyte (CAS Registry No. 5103-74-2), USEPA has corrected the name to be beta-Chlordane, also known as trans-Chlordane.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408130
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Organochlorine Pesticides

Extraction Method: EPA 3535A **Units:** Percent
Analysis Method: 8081B **Level:** Low

Sample Name	Lab Code	Sur1	Sur2
MOA14ORG003	K1408130-001	59	51
MOA14ORG004	K1408130-002	69	64
Method Blank	KWG1411616-7	53	67
Lab Control Sample	KWG1411616-1	47	75
Duplicate Lab Control Sample	KWG1411616-2	49	80

Surrogate Recovery Control Limits (%)

Sur1	=	Tetrachloro-m-xylene	20-106
Sur2	=	Decachlorobiphenyl	19-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408130
Project: 516.01
Sample Matrix: Sludge, solid

Surrogate Recovery Summary
Organochlorine Pesticides

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8081B **Level:** Low

Sample Name	Lab Code	Sur1	Sur2
MOA14SLG002	K1408130-012	55	56
Method Blank	KWG1411787-5	53	72
Lab Control Sample	KWG1411787-1	58	69
Duplicate Lab Control Sample	KWG1411787-2	59	73

Surrogate Recovery Control Limits (%)

Sur1	=	Tetrachloro-m-xylene	21-112
Sur2	=	Decachlorobiphenyl	15-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/11/2014
Sample Matrix:	Water	**Date Analyzed:**	08/16/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Organochlorine Pesticides

Extraction Method:	EPA 3535A	**Units:**	ug/L
Analysis Method:	8081B	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411616

	Lab Control Sample KWG1411616-1 Lab Control Spike			Duplicate Lab Control Sample KWG1411616-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
gamma-BHC (Lindane)	0.124	0.200	62	0.127	0.200	63	44-117	3	30
Heptachlor	0.117	0.200	59	0.122	0.200	61	40-115	5	30
Aldrin	0.111	0.200	56	0.117	0.200	59	10-102	5	30
Heptachlor Epoxide	0.131	0.200	66	0.129	0.200	65	49-109	2	30
gamma-Chlordane	0.134	0.200	67	0.137	0.200	69	47-113	2	30
Endosulfan I	0.108	0.200	54	0.103	0.200	52	35-115	4	30
alpha-Chlordane	0.132	0.200	66	0.134	0.200	67	45-115	2	30
Dieldrin	0.143	0.200	72	0.143	0.200	72	50-115	0	30
4,4'-DDE	0.140	0.200	70	0.140	0.200	70	41-116	0	30
Endrin	0.151	0.200	76	0.152	0.200	76	48-126	0	30
Endosulfan II	0.132	0.200	66	0.131	0.200	66	28-128	0	30
4,4'-DDD	0.160	0.200	80	0.158	0.200	79	33-132	1	30
Endrin Aldehyde	0.144	0.200	72	0.133	0.200	67	27-104	8	30
Endosulfan Sulfate	0.163	0.200	81	0.162	0.200	81	38-118	1	30
4,4'-DDT	0.167	0.200	83	0.166	0.200	83	42-143	0	30
Endrin Ketone	0.154	0.200	77	0.153	0.200	76	30-124	1	30
Methoxychlor	0.179	0.200	89	0.178	0.200	89	43-143	0	30
Toxaphene	0.950	1.00	95	0.876	1.00	88	36-137	8	30
Chlordane	0.859	1.00	86	0.798	1.00	80	45-148	7	30
Mirex	0.127	0.200	63	0.133	0.200	67	43-126	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/14/2014
Sample Matrix:	Sludge	**Date Analyzed:**	08/21/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Organochlorine Pesticides

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8081B	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1411787

	Lab Control Sample KWG1411787-1 Lab Control Spike			Duplicate Lab Control Sample KWG1411787-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
gamma-BHC (Lindane)	69.7	100	70	69.8	100	70	40-142	0	40
Heptachlor	65.4	100	65	65.5	100	65	39-135	0	40
Aldrin	58.7	100	59	61.4	100	61	37-134	4	40
Heptachlor Epoxide	66.8	100	67	65.2	100	65	45-118	2	40
gamma-Chlordane	67.6	100	68	69.2	100	69	41-135	2	40
Endosulfan I	48.8	100	49	50.7	100	51	35-121	4	40
alpha-Chlordane	66.7	100	67	67.2	100	67	41-134	1	40
Dieldrin	71.0	100	71	72.1	100	72	46-136	1	40
4,4'-DDE	65.5	100	65	71.3	100	71	46-141	8	40
Endrin	68.9	100	69	74.7	100	75	40-152	8	40
Endosulfan II	60.6	100	61	61.6	100	62	39-128	2	40
4,4'-DDD	78.8	100	79	78.9	100	79	46-146	0	40
Endrin Aldehyde	81.2	100	81	80.3	100	80	32-132	1	40
Endosulfan Sulfate	82.5	100	82	82.3	100	82	43-138	0	40
4,4'-DDT	80.7	100	81	80.8	100	81	46-151	0	40
Endrin Ketone	81.0	100	81	80.6	100	81	47-135	0	40
Methoxychlor	85.4	100	85	88.5	100	89	42-147	4	40
Toxaphene	418	500	84	407	500	81	53-133	3	40
Chlordane	366	500	73	352	500	70	52-140	4	40
Mirex	65.9	100	66	66.5	100	66	38-123	1	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	MOA14ORG003	**Units:**	ug/L
Lab Code:	K1408130-001	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	0.20	0.037	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1221	ND	Ui	0.40	0.16	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1232	ND	Ui	0.20	0.13	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1242	ND	Ui	0.20	0.054	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1248	ND	Ui	0.20	0.034	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1254	ND	U	0.20	0.0094	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1260	ND	U	0.20	0.0094	1	08/11/14	08/26/14	KWG1411615	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	98	36-113	08/26/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/2014
Sample Matrix:	Water	**Date Received:**	08/05/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	MOA14ORG004	**Units:**	ug/L
Lab Code:	K1408130-002	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	0.21	0.068	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1221	ND	Ui	0.97	0.97	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1232	ND	Ui	0.23	0.23	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1242	ND	Ui	0.21	0.076	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1248	ND	Ui	0.21	0.020	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1254	ND	U	0.21	0.0095	1	08/11/14	08/26/14	KWG1411615	
Aroclor 1260	ND	U	0.21	0.0095	1	08/11/14	08/26/14	KWG1411615	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	104	36-113	08/26/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1411615-3	**Basis:**	NA
Extraction Method:	EPA 3535A	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.20	0.0094	1	08/11/14	08/25/14	KWG1411615	
Aroclor 1221	ND	U	0.40	0.0094	1	08/11/14	08/25/14	KWG1411615	
Aroclor 1232	ND	U	0.20	0.0094	1	08/11/14	08/25/14	KWG1411615	
Aroclor 1242	ND	U	0.20	0.0094	1	08/11/14	08/25/14	KWG1411615	
Aroclor 1248	ND	U	0.20	0.0094	1	08/11/14	08/25/14	KWG1411615	
Aroclor 1254	ND	U	0.20	0.0094	1	08/11/14	08/25/14	KWG1411615	
Aroclor 1260	ND	U	0.20	0.0094	1	08/11/14	08/25/14	KWG1411615	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	74	36-113	08/25/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Sludge, solid	**Date Received:**	08/05/2014

Polychlorinated Biphenyls (PCBs)

Sample Name:	MOA14SLG002	**Units:**	mg/Kg
Lab Code:	K1408130-012	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	0.16	0.046	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1221	ND	Ui	0.31	0.17	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1232	ND	Ui	0.16	0.15	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1242	ND	Ui	0.16	0.057	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1248	ND	Ui	0.16	0.040	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1254	ND	Ui	0.16	0.032	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1260	ND	Ui	0.16	0.024	1	08/14/14	08/25/14	KWG1411788	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	85	43-148	08/25/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1411788-3	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8082A		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	0.050	0.0085	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1221	ND	U	0.099	0.0085	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1232	ND	U	0.050	0.0085	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1242	ND	U	0.050	0.0085	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1248	ND	U	0.050	0.0085	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1254	ND	U	0.050	0.0085	1	08/14/14	08/25/14	KWG1411788	
Aroclor 1260	ND	U	0.050	0.0085	1	08/14/14	08/25/14	KWG1411788	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	83	43-148	08/25/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408130
Project: 516.01
Sample Matrix: Water

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3535A **Units:** Percent
Analysis Method: 8082A **Level:** Low

Sample Name	Lab Code	Sur1
MOA14ORG003	K1408130-001	98
MOA14ORG004	K1408130-002	104
Method Blank	KWG1411615-3	74
Lab Control Sample	KWG1411615-1	80
Duplicate Lab Control Sample	KWG1411615-2	67

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 36-113

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408130
Project: 516.01
Sample Matrix: Sludge, solid

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8082A **Level:** Low

Sample Name	Lab Code	Sur1
MOA14SLG002	K1408130-012	85
Method Blank	KWG1411788-3	83
Lab Control Sample	KWG1411788-1	83
Duplicate Lab Control Sample	KWG1411788-2	79

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl 43-148

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/11/2014
Sample Matrix:	Water	**Date Analyzed:**	08/25/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3535A	**Units:**	ug/L
Analysis Method:	8082A	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1411615

	Lab Control Sample KWG1411615-1 Lab Control Spike			Duplicate Lab Control Sample KWG1411615-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	1.36	2.00	68	1.16	2.00	58	41-113	16	30
Aroclor 1260	1.45	2.00	73	1.32	2.00	66	47-117	9	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/14/2014
Sample Matrix:	Sludge	**Date Analyzed:**	08/25/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8082A	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1411788

	Lab Control Sample KWG1411788-1 Lab Control Spike			Duplicate Lab Control Sample KWG1411788-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	0.730	1.00	73	0.697	1.00	70	42-122	5	40
Aroclor 1260	0.808	1.00	81	0.791	1.00	79	50-124	2	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Sludge, solid	**Date Received:**	08/05/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP038	**Units:**	ug/Kg
Lab Code:	K1408130-016	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	16	0.37	1	08/06/14	08/06/14	KWG1411202	
Chloromethane	ND	U	16	0.55	1	08/06/14	08/06/14	KWG1411202	
Vinyl Chloride	ND	U	16	0.55	1	08/06/14	08/06/14	KWG1411202	
Bromomethane	ND	U	16	0.62	1	08/06/14	08/06/14	KWG1411202	
Chloroethane	ND	U	16	2.3	1	08/06/14	08/06/14	KWG1411202	
Trichlorofluoromethane	ND	U	16	0.26	1	08/06/14	08/06/14	KWG1411202	
Acrolein	ND	U	310	5.2	1	08/06/14	08/06/14	KWG1411202	
Trichlorotrifluoroethane	ND	U	16	0.74	1	08/06/14	08/06/14	KWG1411202	
1,1-Dichloroethene	ND	U	16	0.77	1	08/06/14	08/06/14	KWG1411202	
Carbon Disulfide	**72**		16	0.29	1	08/06/14	08/06/14	KWG1411202	
Methylene Chloride	**11**	J	31	0.49	1	08/06/14	08/06/14	KWG1411202	
Acrylonitrile	ND	U	62	1.4	1	08/06/14	08/06/14	KWG1411202	
trans-1,2-Dichloroethene	ND	U	16	0.37	1	08/06/14	08/06/14	KWG1411202	
1,1-Dichloroethane	ND	U	16	0.37	1	08/06/14	08/06/14	KWG1411202	
Vinyl Acetate	ND	U	62	0.95	1	08/06/14	08/06/14	KWG1411202	
cis-1,2-Dichloroethene	ND	U	16	0.37	1	08/06/14	08/06/14	KWG1411202	
Chloroform	**2.5**	J	16	0.34	1	08/06/14	08/06/14	KWG1411202	
1,1,1-Trichloroethane (TCA)	ND	U	16	0.34	1	08/06/14	08/06/14	KWG1411202	
Carbon Tetrachloride	ND	U	16	0.29	1	08/06/14	08/06/14	KWG1411202	
Benzene	**4.1**	J	16	0.17	1	08/06/14	08/06/14	KWG1411202	
1,2-Dichloroethane (EDC)	ND	U	16	0.22	1	08/06/14	08/06/14	KWG1411202	
Trichloroethene (TCE)	ND	U	16	0.46	1	08/06/14	08/06/14	KWG1411202	
1,2-Dichloropropane	ND	U	16	0.40	1	08/06/14	08/06/14	KWG1411202	
Bromodichloromethane	ND	U	16	0.49	1	08/06/14	08/06/14	KWG1411202	
2-Chloroethyl Vinyl Ether	ND	U	31	1.4	1	08/06/14	08/06/14	KWG1411202	
cis-1,3-Dichloropropene	ND	U	16	0.40	1	08/06/14	08/06/14	KWG1411202	
4-Methyl-2-pentanone (MIBK)	**6.9**	J	62	5.5	1	08/06/14	08/06/14	KWG1411202	
Toluene	**790**		16	0.46	1	08/06/14	08/06/14	KWG1411202	
trans-1,3-Dichloropropene	ND	U	16	0.34	1	08/06/14	08/06/14	KWG1411202	
1,1,2-Trichloroethane	ND	U	16	0.46	1	08/06/14	08/06/14	KWG1411202	
Tetrachloroethene (PCE)	**25**		16	0.49	1	08/06/14	08/06/14	KWG1411202	
2-Hexanone	ND	U	62	2.9	1	08/06/14	08/06/14	KWG1411202	
Dibromochloromethane	ND	U	16	0.55	1	08/06/14	08/06/14	KWG1411202	
Chlorobenzene	**0.95**	J	16	0.20	1	08/06/14	08/06/14	KWG1411202	
Ethylbenzene	**11**	J	16	0.29	1	08/06/14	08/06/14	KWG1411202	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Sludge, solid	**Date Received:**	08/05/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP038	**Units:**	ug/Kg
Lab Code:	K1408130-016	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
m,p-Xylenes	**40**		16	0.31	1	08/06/14	08/06/14	KWG1411202	
o-Xylene	**20**		16	0.25	1	08/06/14	08/06/14	KWG1411202	
Styrene	**3.8**	J	16	0.43	1	08/06/14	08/06/14	KWG1411202	
Bromoform	ND	U	16	0.43	1	08/06/14	08/06/14	KWG1411202	
1,1,2,2-Tetrachloroethane	ND	U	16	0.40	1	08/06/14	08/06/14	KWG1411202	*
1,3-Dichlorobenzene	ND	U	16	0.29	1	08/06/14	08/06/14	KWG1411202	*
1,4-Dichlorobenzene	**24**		16	0.27	1	08/06/14	08/06/14	KWG1411202	*
1,2-Dichlorobenzene	ND	U	16	0.24	1	08/06/14	08/06/14	KWG1411202	*

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	82-146	08/06/14	Acceptable
Toluene-d8	85	90-142	08/06/14	Outside Control Limits
4-Bromofluorobenzene	92	88-127	08/06/14	Acceptable

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Sludge, solid	**Date Received:**	08/05/2014

Volatile Organic Compounds

Sample Name:	MOA14VOP038	**Units:**	mg/Kg
Lab Code:	K1408130-016	**Basis:**	Dry
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Acetone	**71**		17	2.8	1	08/06/14	08/11/14	KWG1411378	*
2-Butanone (MEK)	**12**	J	17	1.6	1	08/06/14	08/11/14	KWG1411378	

* See Case Narrative

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1411202-3	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	5.0	0.12	1	08/06/14	08/06/14	KWG1411202	
Chloromethane	ND	U	5.0	0.18	1	08/06/14	08/06/14	KWG1411202	
Vinyl Chloride	ND	U	5.0	0.18	1	08/06/14	08/06/14	KWG1411202	
Bromomethane	ND	U	5.0	0.20	1	08/06/14	08/06/14	KWG1411202	
Chloroethane	ND	U	5.0	0.74	1	08/06/14	08/06/14	KWG1411202	
Trichlorofluoromethane	ND	U	5.0	0.085	1	08/06/14	08/06/14	KWG1411202	
Acrolein	ND	U	100	1.7	1	08/06/14	08/06/14	KWG1411202	
Trichlorotrifluoroethane	ND	U	5.0	0.24	1	08/06/14	08/06/14	KWG1411202	
1,1-Dichloroethene	ND	U	5.0	0.25	1	08/06/14	08/06/14	KWG1411202	
Acetone	**8.8**	J	20	2.9	1	08/06/14	08/06/14	KWG1411202	
Carbon Disulfide	ND	U	5.0	0.092	1	08/06/14	08/06/14	KWG1411202	
Methylene Chloride	**3.7**	J	10	0.16	1	08/06/14	08/06/14	KWG1411202	
Acrylonitrile	ND	U	20	0.43	1	08/06/14	08/06/14	KWG1411202	
trans-1,2-Dichloroethene	ND	U	5.0	0.12	1	08/06/14	08/06/14	KWG1411202	
1,1-Dichloroethane	ND	U	5.0	0.12	1	08/06/14	08/06/14	KWG1411202	
Vinyl Acetate	ND	U	20	0.31	1	08/06/14	08/06/14	KWG1411202	
cis-1,2-Dichloroethene	ND	U	5.0	0.12	1	08/06/14	08/06/14	KWG1411202	
2-Butanone (MEK)	ND	U	20	0.90	1	08/06/14	08/06/14	KWG1411202	
Chloroform	ND	U	5.0	0.11	1	08/06/14	08/06/14	KWG1411202	
1,1,1-Trichloroethane (TCA)	ND	U	5.0	0.11	1	08/06/14	08/06/14	KWG1411202	
Carbon Tetrachloride	ND	U	5.0	0.094	1	08/06/14	08/06/14	KWG1411202	
Benzene	ND	U	5.0	0.054	1	08/06/14	08/06/14	KWG1411202	
1,2-Dichloroethane (EDC)	ND	U	5.0	0.070	1	08/06/14	08/06/14	KWG1411202	
Trichloroethene (TCE)	ND	U	5.0	0.15	1	08/06/14	08/06/14	KWG1411202	
1,2-Dichloropropane	ND	U	5.0	0.13	1	08/06/14	08/06/14	KWG1411202	
Bromodichloromethane	ND	U	5.0	0.16	1	08/06/14	08/06/14	KWG1411202	
2-Chloroethyl Vinyl Ether	ND	U	10	0.43	1	08/06/14	08/06/14	KWG1411202	
cis-1,3-Dichloropropene	ND	U	5.0	0.13	1	08/06/14	08/06/14	KWG1411202	
4-Methyl-2-pentanone (MIBK)	ND	U	20	1.8	1	08/06/14	08/06/14	KWG1411202	
Toluene	ND	U	5.0	0.15	1	08/06/14	08/06/14	KWG1411202	
trans-1,3-Dichloropropene	ND	U	5.0	0.11	1	08/06/14	08/06/14	KWG1411202	
1,1,2-Trichloroethane	ND	U	5.0	0.15	1	08/06/14	08/06/14	KWG1411202	
Tetrachloroethene (PCE)	ND	U	5.0	0.16	1	08/06/14	08/06/14	KWG1411202	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1411202-3	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	0.93	1	08/06/14	08/06/14	KWG1411202	
Dibromochloromethane	ND	U	5.0	0.18	1	08/06/14	08/06/14	KWG1411202	
Chlorobenzene	ND	U	5.0	0.065	1	08/06/14	08/06/14	KWG1411202	
Ethylbenzene	ND	U	5.0	0.094	1	08/06/14	08/06/14	KWG1411202	
m,p-Xylenes	ND	U	5.0	0.10	1	08/06/14	08/06/14	KWG1411202	
o-Xylene	ND	U	5.0	0.081	1	08/06/14	08/06/14	KWG1411202	
Styrene	ND	U	5.0	0.14	1	08/06/14	08/06/14	KWG1411202	
Bromoform	ND	U	5.0	0.14	1	08/06/14	08/06/14	KWG1411202	
1,1,2,2-Tetrachloroethane	ND	U	5.0	0.13	1	08/06/14	08/06/14	KWG1411202	
1,3-Dichlorobenzene	ND	U	5.0	0.094	1	08/06/14	08/06/14	KWG1411202	
1,4-Dichlorobenzene	**0.13**	J	5.0	0.086	1	08/06/14	08/06/14	KWG1411202	
1,2-Dichlorobenzene	ND	U	5.0	0.077	1	08/06/14	08/06/14	KWG1411202	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	82-146	08/06/14	Acceptable
Toluene-d8	95	90-142	08/06/14	Acceptable
4-Bromofluorobenzene	93	88-127	08/06/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1411378-4	**Basis:**	Dry
Extraction Method:	EPA 5030A/5030B	**Level:**	Med
Analysis Method:	8260C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Acetone	**0.86**	J	2.0	0.33	1	08/06/14	08/11/14	KWG1411378	*
2-Butanone (MEK)	ND	U	2.0	0.19	1	08/06/14	08/11/14	KWG1411378	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	117	55-132	08/11/14	Acceptable
Toluene-d8	97	81-124	08/11/14	Acceptable
4-Bromofluorobenzene	104	64-132	08/11/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408130
Project: 516.01
Sample Matrix: Sludge, solid

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030A **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2		Sur3	
MOA14VOP038	K1408130-016	111	85	*	92	
Method Blank	KWG1411202-3	99	95		93	
MOA14VOP038MS	KWG1411202-4	110	88	*	87	*
MOA14VOP038DMS	KWG1411202-5	111	86	*	91	
Lab Control Sample	KWG1411202-1	102	97		95	
Duplicate Lab Control Sample	KWG1411202-2	98	94		96	

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	82-146
Sur2	=	Toluene-d8	90-142
Sur3	=	4-Bromofluorobenzene	88-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408130
Project: 516.01
Sample Matrix: Soil

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5035A/5030B **Units:** Percent
Analysis Method: 8260C **Level:** Med

Sample Name	Lab Code	Sur1	Sur2	Sur3
Batch QC	K1408261-007	102	103	92
Method Blank	KWG1411378-4	117	97	104
Batch QCMS	KWG1411378-1	102	105	97
Batch QCDMS	KWG1411378-2	102	103	97
Lab Control Sample	KWG1411378-3	109	109	96

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	55-132
Sur2	=	Toluene-d8	81-124
Sur3	=	4-Bromofluorobenzene	64-132

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/06/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	08/06/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	MOA14VOP038	**Units:**	ug/Kg
Lab Code:	K1408130-016	**Basis:**	Dry
Extraction Method:	EPA 5030A	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1411202

		MOA14VOP038MS KWG1411202-4 Matrix Spike			MOA14VOP038DMS KWG1411202-5 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Vinyl Chloride	ND	103	155	67	111	157	71	31-140	7	40
1,1-Dichloroethene	ND	73.1	155	47	89.8	157	57	31-153	20	40
Chloroform	2.5	59.4	155	37 *	64.4	157	39 *	43-133	8	40
Carbon Tetrachloride	ND	34.7	155	22	43.7	157	28	10-144	23	40
Benzene	4.1	50.4	155	30	60.3	157	36	30-137	18	40
Trichloroethene (TCE)	ND	33.6	155	22	37.0	157	24	18-145	10	40
Bromodichloromethane	ND	41.7	155	27	44.2	157	28	14-146	6	40
Toluene	790	747	155	-30 #	903	157	71 #	24-142	19	40
1,1,2-Trichloroethane	ND	53.3	155	34 *	55.4	157	35	35-130	4	40
2-Hexanone	ND	427	775	55	433	785	55	15-162	1	40
Chlorobenzene	0.95	22.0	155	14 *	24.5	157	15	15-124	11	40
Ethylbenzene	11	27.5	155	10 *	33.0	157	14	13-128	18	40
1,2-Dichlorobenzene	ND	11.5	155	7 *	13.7	157	9 *	10-124	17	40

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/06/2014
Sample Matrix:	Soil	**Date Analyzed:**	08/11/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	mg/Kg
Lab Code:	K1408261-007	**Basis:**	Dry
Extraction Method:	EPA 5035A/5030B	**Level:**	Med
Analysis Method:	8260C	**Extraction Lot:**	KWG1411378

		Batch QCMS KWG1411378-1 Matrix Spike			Batch QCDMS KWG1411378-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Acetone	0.61	5.85	3.61	145 *	5.68	3.61	140 *	70-135	3	40
2-Butanone (MEK)	ND	4.10	3.61	114	4.20	3.61	117	77-140	2	40

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/06/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	08/06/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030A	**Units:**	ug/Kg
Analysis Method:	8260C	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1411202

	Lab Control Sample KWG1411202-1 Lab Control Spike			Duplicate Lab Control Sample KWG1411202-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Dichlorodifluoromethane	42.6	50.0	85	38.0	50.0	76	38-160	11	40
Chloromethane	44.9	50.0	90	40.3	50.0	81	37-146	11	40
Vinyl Chloride	48.3	50.0	97	44.1	50.0	88	54-127	9	40
Bromomethane	41.6	50.0	83	37.6	50.0	75	22-180	10	40
Chloroethane	54.9	50.0	110	48.7	50.0	97	51-122	12	40
Trichlorofluoromethane	43.8	50.0	88	39.9	50.0	80	51-140	9	40
Acrolein	92.9	100	93	88.9	100	89	10-218	4	40
Trichlorotrifluoroethane	43.6	50.0	87	40.0	50.0	80	53-135	9	40
1,1-Dichloroethene	56.3	50.0	113	51.1	50.0	102	64-152	10	40
Acetone	198	250	79	215	250	86	32-135	8	40
Carbon Disulfide	115	100	115	105	100	105	55-141	9	40
Methylene Chloride	49.2	50.0	98	46.7	50.0	93	65-122	5	40
Acrylonitrile	123	100	123	126	100	126	18-179	2	40
trans-1,2-Dichloroethene	51.2	50.0	102	47.3	50.0	95	63-127	8	40
1,1-Dichloroethane	48.8	50.0	98	45.7	50.0	91	59-137	7	40
Vinyl Acetate	148	180	82	130	180	72	45-158	13	40
cis-1,2-Dichloroethene	48.7	50.0	97	45.2	50.0	90	62-138	8	40
2-Butanone (MEK)	215	250	86	229	250	92	54-116	6	40
Chloroform	47.4	50.0	95	44.0	50.0	88	61-137	7	40
1,1,1-Trichloroethane (TCA)	48.7	50.0	97	43.9	50.0	88	59-146	10	40
Carbon Tetrachloride	51.0	50.0	102	47.0	50.0	94	51-135	8	40
Benzene	47.6	50.0	95	45.8	50.0	92	68-122	4	40
1,2-Dichloroethane (EDC)	47.0	50.0	94	45.7	50.0	91	65-121	3	40
Trichloroethene (TCE)	47.6	50.0	95	42.8	50.0	86	67-126	11	40
1,2-Dichloropropane	48.9	50.0	98	43.6	50.0	87	71-121	12	40
Bromodichloromethane	56.2	50.0	112	49.9	50.0	100	61-143	12	40
2-Chloroethyl Vinyl Ether	51.2	50.0	102	46.1	50.0	92	63-130	11	40
cis-1,3-Dichloropropene	46.3	50.0	93	41.4	50.0	83	58-138	11	40
4-Methyl-2-pentanone (MIBK)	250	250	100	237	250	95	69-126	6	40
Toluene	44.8	50.0	90	41.0	50.0	82	75-117	9	40
trans-1,3-Dichloropropene	50.2	50.0	100	46.3	50.0	93	63-121	8	40
1,1,2-Trichloroethane	50.2	50.0	100	48.9	50.0	98	72-118	3	40
Tetrachloroethene (PCE)	46.6	50.0	93	44.4	50.0	89	66-126	5	40
2-Hexanone	239	250	96	233	250	93	67-121	3	40
Dibromochloromethane	57.3	50.0	115	54.7	50.0	109	69-120	5	40

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/06/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	08/06/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030A	**Units:**	ug/Kg
Analysis Method:	8260C	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1411202

	Lab Control Sample KWG1411202-1 Lab Control Spike			Duplicate Lab Control Sample KWG1411202-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Chlorobenzene	46.4	50.0	93	45.0	50.0	90	70-116	3	40
Ethylbenzene	46.5	50.0	93	44.9	50.0	90	70-118	3	40
m,p-Xylenes	91.7	100	92	89.0	100	89	69-127	3	40
o-Xylene	43.6	50.0	87	42.4	50.0	85	69-124	3	40
Styrene	48.6	50.0	97	46.2	50.0	92	62-135	5	40
Bromoform	59.6	50.0	119	58.1	50.0	116	62-134	3	40
1,1,2,2-Tetrachloroethane	50.5	50.0	101	49.6	50.0	99	60-128	2	40
1,3-Dichlorobenzene	48.3	50.0	97	46.4	50.0	93	69-128	4	40
1,4-Dichlorobenzene	48.6	50.0	97	45.7	50.0	91	69-125	6	40
1,2-Dichlorobenzene	47.7	50.0	95	44.8	50.0	90	67-124	6	40

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/06/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	08/11/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030A/5030B	**Units:**	mg/Kg
Analysis Method:	8260C	**Basis:**	Dry
		Level:	Med
		Extraction Lot:	KWG1411378

	Lab Control Sample KWG1411378-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Acetone	7.76	5.00	155 *	47-142
2-Butanone (MEK)	5.76	5.00	115	65-139

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Sludge, solid	**Date Received:**	08/05/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14SLG002	**Units:**	mg/Kg
Lab Code:	K1408130-012	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	36	0.45	1	08/13/14	08/21/14	KWG1411467	
Bis(2-chloroethyl) Ether	ND	U	6.0	0.22	1	08/13/14	08/21/14	KWG1411467	
Phenol	**1.1**	J	6.0	0.35	1	08/13/14	08/21/14	KWG1411467	
2-Chlorophenol	ND	U	6.0	0.18	1	08/13/14	08/21/14	KWG1411467	
Bis(2-chloroisopropyl) Ether	ND	U	6.0	0.26	1	08/13/14	08/21/14	KWG1411467	
Hexachloroethane	ND	U	6.0	0.40	1	08/13/14	08/21/14	KWG1411467	
N-Nitrosodi-n-propylamine	ND	U	6.0	0.35	1	08/13/14	08/21/14	KWG1411467	
Nitrobenzene	ND	U	6.0	0.47	1	08/13/14	08/21/14	KWG1411467	
Isophorone	ND	U	6.0	0.26	1	08/13/14	08/21/14	KWG1411467	
2-Nitrophenol	ND	U	6.0	0.26	1	08/13/14	08/21/14	KWG1411467	
2,4-Dimethylphenol	ND	U	6.0	0.27	1	08/13/14	08/21/14	KWG1411467	
Bis(2-chloroethoxy)methane	ND	U	6.0	0.20	1	08/13/14	08/21/14	KWG1411467	
2,4-Dichlorophenol	ND	U	6.0	0.29	1	08/13/14	08/21/14	KWG1411467	
1,2,4-Trichlorobenzene	ND	U	6.0	0.20	1	08/13/14	08/21/14	KWG1411467	
Naphthalene	ND	U	6.0	0.26	1	08/13/14	08/21/14	KWG1411467	
Hexachlorobutadiene	ND	U	6.0	0.26	1	08/13/14	08/21/14	KWG1411467	
4-Chloro-3-methylphenol	ND	U	6.0	0.31	1	08/13/14	08/21/14	KWG1411467	
Hexachlorocyclopentadiene	ND	U	6.0	0.22	1	08/13/14	08/21/14	KWG1411467	*
2,4,6-Trichlorophenol	ND	U	6.0	0.26	1	08/13/14	08/21/14	KWG1411467	
2-Chloronaphthalene	ND	U	6.0	0.18	1	08/13/14	08/21/14	KWG1411467	
Acenaphthylene	ND	U	6.0	0.29	1	08/13/14	08/21/14	KWG1411467	
Dimethyl Phthalate	ND	U	6.0	0.29	1	08/13/14	08/21/14	KWG1411467	
2,6-Dinitrotoluene	ND	U	6.0	0.29	1	08/13/14	08/21/14	KWG1411467	
Acenaphthene	ND	U	6.0	0.24	1	08/13/14	08/21/14	KWG1411467	
2,4-Dinitrophenol	ND	U	36	2.0	1	08/13/14	08/21/14	KWG1411467	
4-Nitrophenol	ND	U	36	2.7	1	08/13/14	08/21/14	KWG1411467	
2,4-Dinitrotoluene	ND	U	6.0	0.27	1	08/13/14	08/21/14	KWG1411467	
Fluorene	ND	U	6.0	0.24	1	08/13/14	08/21/14	KWG1411467	
4-Chlorophenyl Phenyl Ether	ND	U	6.0	0.29	1	08/13/14	08/21/14	KWG1411467	
Diethyl Phthalate	ND	U	6.0	0.26	1	08/13/14	08/21/14	KWG1411467	
2-Methyl-4,6-dinitrophenol	ND	U	36	2.6	1	08/13/14	08/21/14	KWG1411467	
N-Nitrosodiphenylamine	ND	U	6.0	0.33	1	08/13/14	08/21/14	KWG1411467	
1,2-Diphenylhydrazine†	ND	U	6.0	0.26	1	08/13/14	08/21/14	KWG1411467	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Sludge, solid	**Date Received:**	08/05/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14SLG002	**Units:**	mg/Kg
Lab Code:	K1408130-012	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Bromophenyl Phenyl Ether	ND	U	6.0	0.22	1	08/13/14	08/21/14	KWG1411467	
Hexachlorobenzene	ND	U	6.0	0.27	1	08/13/14	08/21/14	KWG1411467	
Pentachlorophenol	ND	U	36	2.4	1	08/13/14	08/21/14	KWG1411467	
Phenanthrene	**1.4**	J	6.0	0.18	1	08/13/14	08/21/14	KWG1411467	
Anthracene	ND	U	6.0	0.26	1	08/13/14	08/21/14	KWG1411467	
Di-n-butyl Phthalate	**0.79**	J	6.0	0.22	1	08/13/14	08/21/14	KWG1411467	
Fluoranthene	**1.3**	J	6.0	0.20	1	08/13/14	08/21/14	KWG1411467	
Benzidine	ND	U	36	7.6	1	08/13/14	08/21/14	KWG1411467	*
Pyrene	ND	U	6.0	0.26	1	08/13/14	08/21/14	KWG1411467	
Butyl Benzyl Phthalate	ND	U	6.0	0.29	1	08/13/14	08/21/14	KWG1411467	
3,3'-Dichlorobenzidine	ND	U	6.0	0.49	1	08/13/14	08/21/14	KWG1411467	
Benz(a)anthracene	ND	U	6.0	0.22	1	08/13/14	08/21/14	KWG1411467	
Chrysene	**0.60**	J	6.0	0.22	1	08/13/14	08/21/14	KWG1411467	
Bis(2-ethylhexyl) Phthalate	**14**		6.0	0.35	1	08/13/14	08/21/14	KWG1411467	
Di-n-octyl Phthalate	ND	U	6.0	0.44	1	08/13/14	08/21/14	KWG1411467	
Benzo(b)fluoranthene	ND	U	6.0	0.31	1	08/13/14	08/21/14	KWG1411467	
Benzo(k)fluoranthene	ND	U	6.0	0.35	1	08/13/14	08/21/14	KWG1411467	
Benzo(a)pyrene	ND	U	6.0	0.36	1	08/13/14	08/21/14	KWG1411467	
Indeno(1,2,3-cd)pyrene	ND	U	6.0	0.71	1	08/13/14	08/21/14	KWG1411467	
Dibenz(a,h)anthracene	ND	U	6.0	0.49	1	08/13/14	08/21/14	KWG1411467	
Benzo(g,h,i)perylene	ND	U	6.0	0.36	1	08/13/14	08/21/14	KWG1411467	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	51	20-83	08/21/14	Acceptable
Phenol-d6	60	26-106	08/21/14	Acceptable
Nitrobenzene-d5	65	29-116	08/21/14	Acceptable
2-Fluorobiphenyl	67	32-104	08/21/14	Acceptable
2,4,6-Tribromophenol	53	20-123	08/21/14	Acceptable
Terphenyl-d14	42	37-133	08/21/14	Acceptable

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/2014
Sample Matrix:	Sludge, solid	**Date Received:**	08/05/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	MOA14SLG002	**Units:**	mg/Kg
Lab Code:	K1408130-012	**Basis:**	Dry

† **Analyte Comments**

1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1411467-3	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	2.0	0.025	1	08/13/14	08/21/14	KWG1411467	
Bis(2-chloroethyl) Ether	ND	U	0.33	0.012	1	08/13/14	08/21/14	KWG1411467	
Phenol	ND	U	0.33	0.019	1	08/13/14	08/21/14	KWG1411467	
2-Chlorophenol	ND	U	0.33	0.0099	1	08/13/14	08/21/14	KWG1411467	
Bis(2-chloroisopropyl) Ether	ND	U	0.33	0.014	1	08/13/14	08/21/14	KWG1411467	
Hexachloroethane	ND	U	0.33	0.022	1	08/13/14	08/21/14	KWG1411467	
N-Nitrosodi-n-propylamine	ND	U	0.33	0.019	1	08/13/14	08/21/14	KWG1411467	
Nitrobenzene	ND	U	0.33	0.026	1	08/13/14	08/21/14	KWG1411467	
Isophorone	ND	U	0.33	0.014	1	08/13/14	08/21/14	KWG1411467	
2-Nitrophenol	ND	U	0.33	0.014	1	08/13/14	08/21/14	KWG1411467	
2,4-Dimethylphenol	ND	U	0.33	0.015	1	08/13/14	08/21/14	KWG1411467	
Bis(2-chloroethoxy)methane	ND	U	0.33	0.011	1	08/13/14	08/21/14	KWG1411467	
2,4-Dichlorophenol	ND	U	0.33	0.016	1	08/13/14	08/21/14	KWG1411467	
1,2,4-Trichlorobenzene	ND	U	0.33	0.011	1	08/13/14	08/21/14	KWG1411467	
Naphthalene	ND	U	0.33	0.014	1	08/13/14	08/21/14	KWG1411467	
Hexachlorobutadiene	ND	U	0.33	0.014	1	08/13/14	08/21/14	KWG1411467	
4-Chloro-3-methylphenol	ND	U	0.33	0.017	1	08/13/14	08/21/14	KWG1411467	
Hexachlorocyclopentadiene	ND	U	0.33	0.012	1	08/13/14	08/21/14	KWG1411467	*
2,4,6-Trichlorophenol	ND	U	0.33	0.014	1	08/13/14	08/21/14	KWG1411467	
2-Chloronaphthalene	ND	U	0.33	0.010	1	08/13/14	08/21/14	KWG1411467	
Acenaphthylene	ND	U	0.33	0.016	1	08/13/14	08/21/14	KWG1411467	
Dimethyl Phthalate	ND	U	0.33	0.016	1	08/13/14	08/21/14	KWG1411467	
2,6-Dinitrotoluene	ND	U	0.33	0.016	1	08/13/14	08/21/14	KWG1411467	
Acenaphthene	ND	U	0.33	0.013	1	08/13/14	08/21/14	KWG1411467	
2,4-Dinitrophenol	ND	U	2.0	0.11	1	08/13/14	08/21/14	KWG1411467	
4-Nitrophenol	ND	U	2.0	0.15	1	08/13/14	08/21/14	KWG1411467	
2,4-Dinitrotoluene	ND	U	0.33	0.015	1	08/13/14	08/21/14	KWG1411467	
Fluorene	ND	U	0.33	0.013	1	08/13/14	08/21/14	KWG1411467	
4-Chlorophenyl Phenyl Ether	ND	U	0.33	0.016	1	08/13/14	08/21/14	KWG1411467	
Diethyl Phthalate	ND	U	0.33	0.014	1	08/13/14	08/21/14	KWG1411467	
2-Methyl-4,6-dinitrophenol	ND	U	2.0	0.14	1	08/13/14	08/21/14	KWG1411467	
N-Nitrosodiphenylamine	ND	U	0.33	0.018	1	08/13/14	08/21/14	KWG1411467	
1,2-Diphenylhydrazine†	ND	U	0.33	0.014	1	08/13/14	08/21/14	KWG1411467	

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1411467-3	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
4-Bromophenyl Phenyl Ether	ND	U	0.33	0.012	1	08/13/14	08/21/14	KWG1411467	
Hexachlorobenzene	ND	U	0.33	0.015	1	08/13/14	08/21/14	KWG1411467	
Pentachlorophenol	ND	U	2.0	0.13	1	08/13/14	08/21/14	KWG1411467	
Phenanthrene	ND	U	0.33	0.010	1	08/13/14	08/21/14	KWG1411467	
Anthracene	ND	U	0.33	0.014	1	08/13/14	08/21/14	KWG1411467	
Di-n-butyl Phthalate	ND	U	0.33	0.012	1	08/13/14	08/21/14	KWG1411467	
Fluoranthene	ND	U	0.33	0.011	1	08/13/14	08/21/14	KWG1411467	
Benzidine	ND	U	2.0	0.42	1	08/13/14	08/21/14	KWG1411467	*
Pyrene	ND	U	0.33	0.014	1	08/13/14	08/21/14	KWG1411467	
Butyl Benzyl Phthalate	ND	U	0.33	0.016	1	08/13/14	08/21/14	KWG1411467	
3,3'-Dichlorobenzidine	ND	U	0.33	0.027	1	08/13/14	08/21/14	KWG1411467	
Benz(a)anthracene	ND	U	0.33	0.012	1	08/13/14	08/21/14	KWG1411467	
Chrysene	ND	U	0.33	0.012	1	08/13/14	08/21/14	KWG1411467	
Bis(2-ethylhexyl) Phthalate	ND	U	0.33	0.019	1	08/13/14	08/21/14	KWG1411467	
Di-n-octyl Phthalate	ND	U	0.33	0.024	1	08/13/14	08/21/14	KWG1411467	
Benzo(b)fluoranthene	ND	U	0.33	0.017	1	08/13/14	08/21/14	KWG1411467	
Benzo(k)fluoranthene	ND	U	0.33	0.019	1	08/13/14	08/21/14	KWG1411467	
Benzo(a)pyrene	ND	U	0.33	0.020	1	08/13/14	08/21/14	KWG1411467	
Indeno(1,2,3-cd)pyrene	ND	U	0.33	0.039	1	08/13/14	08/21/14	KWG1411467	
Dibenz(a,h)anthracene	ND	U	0.33	0.027	1	08/13/14	08/21/14	KWG1411467	
Benzo(g,h,i)perylene	ND	U	0.33	0.020	1	08/13/14	08/21/14	KWG1411467	

* See Case Narrative

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	46	20-83	08/21/14	Acceptable
Phenol-d6	52	26-106	08/21/14	Acceptable
Nitrobenzene-d5	53	29-116	08/21/14	Acceptable
2-Fluorobiphenyl	57	32-104	08/21/14	Acceptable
2,4,6-Tribromophenol	55	20-123	08/21/14	Acceptable
Terphenyl-d14	94	37-133	08/21/14	Acceptable

Comments:

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, solid	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	mg/Kg
Lab Code:	KWG1411467-3	**Basis:**	Dry

† **Analyte Comments**

1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1408130
Project: 516.01
Sample Matrix: Sludge, solid

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8270D **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4	Sur5	Sur6
MOA14SLG002	K1408130-012	51	60	65	67	53	42
Method Blank	KWG1411467-3	46	52	53	57	55	94
Lab Control Sample	KWG1411467-1	65	70	75	77	79	90
Duplicate Lab Control Sample	KWG1411467-2	57	63	70	71	68	69

Surrogate Recovery Control Limits (%)

Sur1 =	2-Fluorophenol	20-83	Sur5 =	2,4,6-Tribromophenol	20-123
Sur2 =	Phenol-d6	26-106	Sur6 =	Terphenyl-d14	37-133
Sur3 =	Nitrobenzene-d5	29-116			
Sur4 =	2-Fluorobiphenyl	32-104			

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/13/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	08/21/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8270D	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1411467

	Lab Control Sample KWG1411467-1 Lab Control Spike			Duplicate Lab Control Sample KWG1411467-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
N-Nitrosodimethylamine	2.42	3.33	73	2.29	3.33	69	35-105	6	40
Bis(2-chloroethyl) Ether	2.56	3.33	77	2.40	3.33	72	42-97	6	40
Phenol	2.49	3.33	75	2.29	3.33	69	40-87	8	40
2-Chlorophenol	2.56	3.33	77	2.28	3.33	68	43-93	12	40
Bis(2-chloroisopropyl) Ether	2.70	3.33	81	2.46	3.33	74	39-94	9	40
Hexachloroethane	2.46	3.33	74	2.27	3.33	68	40-96	8	40
N-Nitrosodi-n-propylamine	2.79	3.33	84	2.51	3.33	75	46-103	11	40
Nitrobenzene	2.67	3.33	80	2.44	3.33	73	46-99	9	40
Isophorone	2.66	3.33	80	2.60	3.33	78	42-93	2	40
2-Nitrophenol	2.68	3.33	81	2.57	3.33	77	44-95	4	40
2,4-Dimethylphenol	2.41	3.33	72	2.33	3.33	70	29-93	3	40
Bis(2-chloroethoxy)methane	2.71	3.33	81	2.55	3.33	76	45-93	6	40
2,4-Dichlorophenol	2.48	3.33	74	2.45	3.33	73	43-94	1	40
1,2,4-Trichlorobenzene	2.49	3.33	75	2.48	3.33	74	42-91	0	40
Naphthalene	2.49	3.33	75	2.47	3.33	74	44-92	1	40
Hexachlorobutadiene	2.49	3.33	75	2.46	3.33	74	42-99	1	40
4-Chloro-3-methylphenol	2.84	3.33	85	2.49	3.33	75	44-101	13	40
Hexachlorocyclopentadiene	1.73	3.33	52	1.62	3.33	49	10-68	7	40
2,4,6-Trichlorophenol	2.97	3.33	89	2.56	3.33	77	46-101	15	40
2-Chloronaphthalene	2.77	3.33	83	2.36	3.33	71	44-95	16	40
Acenaphthylene	2.81	3.33	84	2.56	3.33	77	48-105	9	40
Dimethyl Phthalate	3.04	3.33	91	2.56	3.33	77	48-113	17	40
2,6-Dinitrotoluene	3.02	3.33	91	2.75	3.33	82	49-114	10	40
Acenaphthene	2.81	3.33	84	2.57	3.33	77	49-97	9	40
2,4-Dinitrophenol	2.50	3.33	75	1.90	3.33	57	28-116	27	40
4-Nitrophenol	2.93	3.33	88	2.18	3.33	65	41-121	29	40
2,4-Dinitrotoluene	3.04	3.33	91	2.42	3.33	73	48-119	23	40
Fluorene	2.99	3.33	90	2.53	3.33	76	46-103	16	40
4-Chlorophenyl Phenyl Ether	3.02	3.33	91	2.66	3.33	80	46-105	13	40
Diethyl Phthalate	2.97	3.33	89	2.46	3.33	74	45-121	19	40
2-Methyl-4,6-dinitrophenol	2.93	3.33	88	2.36	3.33	71	41-119	22	40
N-Nitrosodiphenylamine	3.00	3.33	90	2.49	3.33	75	44-113	19	40
1,2-Diphenylhydrazine	2.99	3.33	90	2.63	3.33	79	45-111	13	40
4-Bromophenyl Phenyl Ether	3.24	3.33	97	2.72	3.33	82	49-110	17	40
Hexachlorobenzene	3.13	3.33	94	2.69	3.33	81	50-109	15	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Extracted:**	08/13/2014
Sample Matrix:	Sludge, solid	**Date Analyzed:**	08/21/2014

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method:	EPA 3541	**Units:**	mg/Kg
Analysis Method:	8270D	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1411467

	Lab Control Sample KWG1411467-1 Lab Control Spike				Duplicate Lab Control Sample KWG1411467-2 Duplicate Lab Control Spike						
Analyte Name	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**		**%Rec Limits**	**RPD**	**RPD Limit**
Pentachlorophenol	2.84	3.33	85		2.34	3.33	70		44-109	19	40
Phenanthrene	3.01	3.33	90		2.55	3.33	77		52-108	17	40
Anthracene	3.06	3.33	92		2.65	3.33	80		53-106	14	40
Di-n-butyl Phthalate	3.25	3.33	98		2.50	3.33	75		52-117	26	40
Fluoranthene	3.34	3.33	100		2.74	3.33	82		47-117	20	40
Benzidine	2.01	5.00	40	*	1.94	5.00	39	*	70-130	4	40
Pyrene	3.15	3.33	95		2.56	3.33	77		53-124	21	40
Butyl Benzyl Phthalate	3.32	3.33	100		2.88	3.33	86		53-114	14	40
3,3'-Dichlorobenzidine	3.12	3.33	94		2.66	3.33	80		50-112	16	40
Benz(a)anthracene	3.20	3.33	96		2.69	3.33	81		54-109	17	40
Chrysene	3.13	3.33	94		2.68	3.33	80		53-109	15	40
Bis(2-ethylhexyl) Phthalate	3.41	3.33	102		2.87	3.33	86		51-115	17	40
Di-n-octyl Phthalate	3.29	3.33	99		2.96	3.33	89		51-121	11	40
Benzo(b)fluoranthene	3.24	3.33	97		2.81	3.33	84		53-110	14	40
Benzo(k)fluoranthene	3.26	3.33	98		2.86	3.33	86		52-112	13	40
Benzo(a)pyrene	3.32	3.33	100		2.87	3.33	86		51-114	14	40
Indeno(1,2,3-cd)pyrene	3.23	3.33	97		2.73	3.33	82		53-112	17	40
Dibenz(a,h)anthracene	3.16	3.33	95		2.75	3.33	83		53-114	14	40
Benzo(g,h,i)perylene	3.25	3.33	98		2.78	3.33	83		50-110	16	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

10450 Stancliff Rd., Suite 210
Houston, TX 77099
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August 29, 2014 Service Request No: K1408130

Howard Holmes.

ALS Environmental
1317 South 13th Avenue
Kelso, WA 98626

Laboratory Result for: Kinnetic Laboratories, Incorporated.

Dear Howard:

Enclosed are the results of the sample(s) submitted to our laboratory on August 08, 2014. For Your reference, these analyses have been assigned our service request number: **K1408130**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current TNI standards, where applicable, and considered in their entirety, and ALS Environmental is not responsible for use of less than the final complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the TNI 2009 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My direct line is 281-575-2279. You may also contact me via email at Arthi.Kodur@alsglobal.com

Respectfully submitted,

ALS Group USA Corp., dba ALS Environmental

Arthi Kodur
Project Manager

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For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com.

Certificate of Analysis

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories, Incorporated	**Service Request No.:**	K1408130
Project:	516.01	**Date Received:**	8/8/14
Sample Matrix:	Water and Sludge		

ALS ENVIRONMENTAL NARRATIVE

All analyses were performed in adherence to the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Two water samples and one sludge sample were received for analysis at ALS Environmental on 8/8/14.

Please note the reporting forms are currently referencing the date ALS Environmental-Kelso received the samples (8/5/14) and not the date ALS Environmental-Houston received the samples (8/8/14).

The samples were received at 3°C in good condition and are consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Data Validation Notes and Discussion

MS/MSD

EQ1400465: Laboratory Control Spike/Duplicate Laboratory Control Spike (LCS/DLCS) samples were analyzed and reported in lieu of an MS/MSD for this extraction batch. The batch quality control criteria were met.

EQ1400479: Laboratory Control Spike (LCS) sample was analyzed and reported in addition to an MS/MSD for this extraction batch. The batch quality control criteria were met. The batch precision (MS/DMS) measurements were determined on another order in the extraction batch. The MS/DMS results are not included in this report.

2378-TCDF

Samples analyzed on the DB-5MSUI column were analyzed under conditions were sufficient separation between 2,3,7,8-TCDF and its closest eluter was achieved. Confirmation of this result was not required.

Y flags – Labeled Standards

Quantification of the native 2,3,7,8-substituted analytes is based on isotopic dilution, which automatically corrects for variation in extraction efficiency and provides accurate values even with poor recovery. Samples that had recoveries of labeled standards outside the acceptance limits are qualified with ‘Y’ flags on the Labeled Compound summary pages. In all cases, the signal-to-noise ratios are greater than 10:1 and detection limit were below the Method Reporting Limit.

Detection Limits

Detection limits are calculated for each analyte in each sample by measuring the height of the noise level for each quantitation ion for the associated labeled standard. The concentration equivalent to 2.5 times the height of the noise is then calculated using the appropriate response factor and the weight of the sample. The calculated concentration equals the detection limit.

Where the EDL exceeds the MRL, the MRL is raised to equal the EDL.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS group USA Corp dba ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.

Client: Kinnetic Laboratories, Incorporated **Service Request:**K1408130
Project: 516.01

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
K1408130-001	MOA14ORG003	8/4/2014	0902
K1408130-002	MOA14ORG004	8/4/2014	0900
K1408130-003	MOA14O&G003	8/4/2014	0902
K1408130-004	MOA14O&G004	8/4/2014	0900
K1408130-005	MOA14MET013	8/4/2014	0902
K1408130-006	MOA14MET014	8/4/2014	0902
K1408130-007	MOA14MET015	8/4/2014	0900
K1408130-008	MOA14MET016	8/4/2014	0900
K1408130-009	MOA14TCN015	8/4/2014	0902
K1408130-010	MOA14TCN016	8/4/2014	0900
K1408130-011	MOA14DXN002	8/3/2014	0000
K1408130-012	MOA14SLG002	8/3/2014	0000
K1408130-013	MOA14ASB004	8/4/2014	0902
K1408130-014	MOA14ASB005	8/4/2014	0900
K1408130-015	MOA14ASB006	8/3/2014	0000
K1408130-016	MOA14VOP038	8/3/2014	0000
K1408130-017	MOA14MRC013	8/4/2014	0902
K1408130-018	MOA14MRC014	8/4/2014	0902
K1408130-019	MOA14MRC015	8/4/2014	0900
K1408130-020	MOA14MRC016	8/4/2014	0900

Service Request Summary

Folder #: **K1408130**
Client Name: Kinnetic Laboratories, Incorporated
Project Name: 516.01
Project Number:

Report To: Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501
USA
Phone Number: 907-276-6178
Cell Number: 907-632-4108
Fax Number:
E-mail: glawley@kinneticlabs.com

Project Chemist: Howard Holmes
Originating Lab: KELSO
Logged By: SWOLF
Date Received: 08/05/14
Internal Due Date: 8/22/2014
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N, Y
Report to MDL?: N, Y
P.O. Number: AK14-1007
EDD: BASIC_WQC

14 1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
4 500 mL-Plastic Bottle NM CLEAR HNO3
4 500 mL-Fluoropoly Blue Label HCL
2 500 ml-Plastic Bottle WM CLEAR NaOH
2 16 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
2 1000 mL-Plastic Bottle NM CLEAR Unpreserved
2 1000 mL-Glass Bottle NM AMBER Teflon Liner HCL
3 4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved

Location: K-Disposed, K-Delilah-47, E-Disposed, SUBBED, K-LL Hg Lab, EHRMS-WIC 9E, K-PETUNIA-03

Pressure Gas:

NPDES

				KELSO			HOUSTON		KELSO		KELSO			KELSO					
Lab Samp No.	**Client Samp No**	**Matrix**	**Collected**	PCB/8082	Pest OC/8081B	PEST_OP/8141A	PCDD PCDF/8290	Total Solids/CAS SOP	SVO/625	SVO/8270D	CN T LL/SM 4500-CN- E	CN Tot/9012B	OG HEM/1664A	Hg LL D/1631E	Hg LL T/1631E	Hg/7471B	Metals D/200.8	Metals T/200.8	Metals T/6020A
K1408130-001	MOA14ORG003	Water	08/04/14 0902	V	V	V	V		V										
K1408130-002	MOA14ORG004	Water	08/04/14 0900	V	V	V	V		V										
K1408130-003	MOA14O&G003	Water	08/04/14 0902										V						
K1408130-004	MOA14O&G004	Water	08/04/14 0900										V						
K1408130-005	MOA14MET013	Water	08/04/14 0902															V	
K1408130-006	MOA14MET014	Water	08/04/14 0902														V		
K1408130-007	MOA14MET015	Water	08/04/14 0900															V	
K1408130-008	MOA14MET016	Water	08/04/14 0900														V		
K1408130-009	MOA14TCN015	Water	08/04/14 0902								V								
K1408130-010	MOA14TCN016	Water	08/04/14 0900								V								
K1408130-011	MOA14DXN002	Sludge, Solid	08/03/14 0000				V	V											
K1408130-012	MOA14SLG002	Sludge, Solid	08/03/14 0000	V	V	V				V		V				V			V
K1408130-013	MOA14ASB004	Water	08/04/14 0902																
K1408130-014	MOA14ASB005	Water	08/04/14 0900																
K1408130-015	MOA14ASB006	Sludge, Solid	08/03/14 0000																
K1408130-016	MOA14VOP038	Sludge, Solid	08/03/14 0000																

KELSO	Cincinnati	KELSO
Total Solids/TS-MET	Misc Out 1/None	VOC FP/8260C
V		
	V	
	V	
	V	
V		V

Service Request Summary

Folder #: **K1408130**
Client Name: Kinnetic Laboratories, Incorporated
Project Name: 516.01
Project Number:

Report To: Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501
USA
Phone Number: 907-276-6178
Cell Number: 907-632-4108
Fax Number:
E-mail: glawley@kinneticlabs.com

Project Chemist: Howard Holmes
Originating Lab: KELSO
Logged By: SWOLF
Date Received: 08/05/14
Internal Due Date: 8/22/2014
QAP: LAB QAP
Qualifier Set: Lab Standard
Formset: Lab Standard
Merged?: N, Y
Report to MDL?: N, Y
P.O. Number: AK14-1007
EDD: BASIC_WQC

14	1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
4	500 mL-Plastic Bottle NM CLEAR HNO3
4	500 mL-Fluoropoly Blue Label HCL
2	500 ml-Plastic Bottle WM CLEAR NaOH
2	16 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
2	1000 mL-Plastic Bottle NM CLEAR Unpreserved
2	1000 mL-Glass Bottle NM AMBER Teflon Liner HCL
3	4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved

Location: K-Disposed, K-Delilah-47, E-Disposed, SUBBED, K-LL Hg Lab, EHRMS-WIC 9E, K-PETUNIA-03

Pressure Gas:

NPDES

				KELSO			HOUSTON		KELSO		KELSO			KELSO					
Lab Samp No.	**Client Samp No**	**Matrix**	**Collected**	PCB/8082	Pest OC/8081B	PEST_OP/8141A	PCDD PCDF/8290	Total Solids/CAS SOP	SVO/625	SVO/8270D	CN T LL/SM 4500-CN- E	CN Tot/9012B	OG HEM/1664A	Hg LL D/1631E	Hg LL T/1631E	Hg/7471B	Metals D/200.8	Metals T/200.8	Metals T/6020A
K1408130-017	MOA14MRC013	Water	08/04/14 0902												V				
K1408130-018	MOA14MRC014	Water	08/04/14 0902											V					
K1408130-019	MOA14MRC015	Water	08/04/14 0900												V				
K1408130-020	MOA14MRC016	Water	08/04/14 0900											V					

Folder Comments:

Tier II
Do not use Sludge sample for QC

KELSO	Cincinnati	KELSO
Total Solids/TS-MET	Misc Out 1/None	VOC FP/8260C

Service Request Summary

Folder #:	**K1408130**
Client Name:	Kinnetic Laboratories, Incorporated
Project Name:	516.01
Project Number:	
Report To:	Gary Lawley Kinnetic Laboratories, Incorporated 704 W. 2nd Ave Anchorage, AK 99501 USA
Phone Number:	907-276-6178
Cell Number:	907-632-4108
Fax Number:	
E-mail:	glawley@kinneticlabs.com

Project Chemist:	Howard Holmes
Originating Lab:	KELSO
Logged By:	SWOLF
Date Received:	08/05/14
Internal Due Date:	8/22/2014
QAP:	LAB QAP
Qualifier Set:	Lab Standard
Formset:	Lab Standard
Merged?:	N, Y
Report to MDL?:	N, Y
P.O. Number:	AK14-1007
EDD:	BASIC_WQC

14	1000 ml-Glass Bottle NM AMBER Teflon Liner Unpreserved
4	500 mL-Plastic Bottle NM CLEAR HNO3
4	500 mL-Fluoropoly Blue Label HCL
2	500 ml-Plastic Bottle WM CLEAR NaOH
2	16 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved
2	1000 mL-Plastic Bottle NM CLEAR Unpreserved
2	1000 mL-Glass Bottle NM AMBER Teflon Liner HCL
3	4 oz-Glass Jar WM CLEAR Teflon Liner Unpreserved

Location: K-Disposed, K-Delilah-47, E-Disposed, SUBBED, K-LL Hg Lab, EHRMS-WIC 9E, K-PETUNIA-03

Pressure Gas:

NPDES

Test Comments:

Group	Test/Method	Samples	Comments
GenChem	CN Tot/9012B	1	Do not use for QC
Metals	Hg/7471B	1	Do not use for QC
Metals	Metals D/200.8	2	Ag,As,Be,Cd,Cr,Cu,Mo,Ni,Pb,Sb, Se,Tl,Zn
Metals	Metals T/200.8	2	Ag,As,Be,Cd,Cr,Cu,Mo,Ni,Pb,Sb,Se,Tl,Zn
Metals	Metals T/6020A	1	Ag,As,Be,Cd,Cr,Cu,Mo,Ni,Pb,Sb,Se,Tl,Zn Do not use for QC
Semivoa GC	PCB/8082	1	Do not use for QC
Semivoa GC	Pest OC/8081B	1	608 list + Mirex, Do not use for QC
Semivoa GC	PCB/8082	2	Co-extract with 8081 Pest
Semivoa GC	PEST_OP/8141A	1	Demeton,Guthion,Malathion & Parathion only, Do not use for QC
Semivoa GC	Pest OC/8081B	4	608 list + Mirex Co-extract with 8082 PCB
Semivoa GC	PEST_OP/8141A	2	Demeton,Guthion,Malathion & Parathion only
Semivoa GCMS	PCDD PCDF/8290	2	2,3,7,8 TCDD
Semivoa GCMS	PCDD PCDF/8290	1	2,3,7,8 TCDD only
Semivoa GCMS	SVO/8270D	1	Report 625 list, Do not use for QC
SubLab	Misc Out 1/None	2	Asbestos by TEM 100.2 to ALS Cincinnati
SubLab	Misc Out 1/None	1	Asbestos by PLM-EPA 600 to ALS Cincinnati
TS	Total Solids/TS-MET	1	Do not use for QC
VOA GCMS	VOC FP/8260C	1	see analyte list

Data Qualifier Flags – Dioxin/Furans

B Indicates the associated analyte is found in the method blank, as well as in the sample

C 2378-TCDF is detected on the DB-5 column above the MRL, confirmation analysis was performed on a second column (DB-225.) The results from both the DB-5 column and the DB-225 column are included in this data package. The results from the DB-225 analyses should be used to evaluate the 2378-TCDF in the samples. The confirmed result are used in determining the TEQ value for TCDF.

E The reported result is above the instrument calibration range and is an estimated value.

J Indicates an estimated value – used when the analyte concentration is below the method reporting limit (MRL) and above the estimated detection limit (EDL)

K Ion abundance ratios between the primary and secondary ions were outside of theoretical acceptance limits. The reported result is an estimated maximum possible concentration (EMPC)

i The associated MRL/MDL has been elevated due to matrix interference.

U Indicates the compound was analyzed for, but not detected (ND)

Y C13-Labeled standard percent recoveries are outside of method acceptance limits

S Peak is saturated; data not reportable

P Indicates chlorodiphenyl ether interference present at the retention time of the target compound.

X See case narrative

Acronyms

Cal	Calibration
Conc	CONCentration
Dioxin(s)	Polychlorinated dibenzo-p-dioxin(s)
EDL	Estimated Detection Limit
EMPC	Estimated Maximum Possible Concentration
Flags	Data qualifiers
Furan(s)	Polychlorinated dibenzofuran(s)
g	Grams
ICAL	Initial CALibration
ID	IDentifier
Ions	Masses monitored for the analyte during data acquisition
L	Liter (s)
LCS	Laboratory Control Sample
DLCS	Duplicate Laboratory Control Sample
MB	Method Blank
MCL	Method Calibration Limit
MDL	Method Detection Limit
mL	Milliliters
MS	Matrix Spiked sample
DMS	Duplicate Matrix Spiked sample
NO	Number of peaks meeting all identification criteria
PCDD(s)	Polychlorinated dibenzo-p-dioxin(s)
PCDF(s)	Polychlorinated dibenzofuran(s)
ppb	Parts per billion
ppm	Parts per million
ppq	Parts per quadrillion
ppt	Parts per trillion
QA	Quality Assurance
QC	Quality Control
Ratio	Ratio of areas from monitored ions for an analyte
% Rec.	Percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RT	Retention Time
SDG	Sample Delivery Group
S/N	Signal-to-noise ratio
TEF	Toxicity Equivalence Factor
TEQ	Toxicity Equivalence Quotient

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
American Association for Laboratory Accreditation	2897.01	11/30/2014
Arizona Department of Health Services	AZ0793	5/27/2015
Arkansas Department of Environmental Quality	14-038-0	6/16/2015
California Department of Health Services	2452	2/28/2015
Florida Department of Health	E87611	6/30/2015
Hawaii Department of Health	TX02694	6/30/2015
Illinois Environmental Protection Agency	200057	10/6/2014
Kansas Department of Health and Environment	E-10406	1/31/2015
Louisiana Department of Environmental Quality	03048	12/31/2014
Louisiana Department of Health and Hospitals	TX2694	6/30/2015
Maryland Department of the Environment	343	6/30/2015
Michigan Depratment of Environmental Quality	9971	6/30/2015
Minnesota Department of Health	TX02694	12/31/2014
Nebraska Department of Health and Human Services	NE-OS-25-13	6/30/2015
Nevada Department of Concervation and Natural Resources	TX014112013-2	7/31/2015
New Jersey Department of Environmental Protection	NLC140001	6/30/2015
New Mexico Environment Department	TX02694	6/30/2015
New York Department of Health	11707	4/1/2015
Oklahoma Department of Environmental Quality	2013-132	8/31/2014
Oregon Environmental Laboratory Accreditation Program	TX200002	3/24/2015
Pennsylvania Department of Environmental Protection	68-03441	6/30/2015
Tennessee Department of Environment and Concervation	04016	6/30/2015
Texas Commision on Environmental Quality	TX104704216-14-5	6/30/2015
United States Department of Agriculture	P330-14-00067	2/21/2017
Utah Department of Health Environmental Laboratory Certification	TX02694	7/31/2015
Washington Department of Health	c819	11/14/2014
West Virginia Department of Environmental Protection	347	6/30/2015

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K1408130 DB-5 DB-5MSUI DB-225 SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
08/28/14	Yc	001,002

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
08/28/14	UM	001,002

ALS ENVIRONMENTAL – Houston
Data Processing/Form Production and Peer Review Signatures

SR# Unique ID K1408130 DB-5 DB-5MSUI DB-225 SPB-Octyl

First Level - Data Processing - to be filled by person generating the forms

Date:	Analyst:	Samples:
08-25-14	[illegible]	-011

Second Level - Data Review – to be filled by person doing peer review

Date:	Analyst:	Samples:
08/27/14	[illegible]	011

PEER REVIEW PAGE.DOC

Chain of Custody

ALS Environmental - Houston HRMS
10450 Stancliff Rd, Suite 210, Houston TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Intra-Network Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Howard Holmes

Project Name:
Project Number: 516.01
Project Manager: Gary Lawley
Company: Kinnetic Laboratories, Incorporated

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Date Received	Send To	PCDD PCDF 8290	Total Solids 8290
K1408130-001	MOA14ORG003	1	Water	8/4/14	0902	8/5/14	HOUSTON	II	
K1408130-002	MOA14ORG004	1	Water	8/4/14	0900	8/5/14	HOUSTON	II	
K1408130-011	MOA14DXN002	1	Sludge, Solid	8/3/14	0000	8/5/14	HOUSTON	II	II

Test Comments

PCDD PCDF - 8290	K1408130-001,2	2,3,7,8 TCDD
PCDD PCDF - 8290	K1408130-011	2,3,7,8 TCDD only

4/4

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.

pH Checked _____

Turnaround Requirements
____ RUSH (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ STANDARD
Requested FAX Date: _____
Requested Report Date: 08/22/14

Report Requirements
____ I. Results Only
X II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD Y

Invoice Information
PO# K1408130
Bill to

Relinquished By: 8/7/14 1200 Received By: 8/8/14 0950 Airbill Number:

Cooler Receipt Form

ALS Environmental

Project Chemist: AK

Client/Project: Kelso

Thermometer ID: SMO

Date/Time Received: 8/8/14 0950 Initials: JM

Date/Time Logged in: ~~8/14~~ AK 8/8/14 Initials: AK

1. Method of delivery: ○ US Mail ✓ Fed Ex ○ UPS ○ DHL ○ Courier ○ Client
2. Samples received in: ✓ Cooler ○ Box ○ Envelope ○ Other
3. Were custody seals on coolers? ✓ Yes ○ No
   Were they intact? ✓ Yes ○ No ○ N/A
   Were they signed and dated? ✓ Yes ○ No ○ N/A

   If yes, how many and where? one front seal
4. Packing Material: ○ Inserts ○ Baggies ○ Bubble Wrap ○ Gel Packs ○ Wet Ice ○ Sleeves ○ Other
5. Foreign or Regulated Soil? ○ Yes ○ No Location of Sampling:

Cooler Tracking Number	COC ID	Date Opened	Time Opened	Opened By	Temp. °C	Temp Blank?
5478 9735 9463 6		8/8/14	1020	JM	3	☑
						☐
						☐
						☐

6. Were custody papers properly filled out (ink, signed, dated, etc)? ✓ Yes ○ No
7. Did all bottles arrive in good condition (not broken, no signs of leakage)? ✓ Yes ○ No
8. Were all sample labels complete (i.e., sample ID, analysis, preservation, etc)? ✓ Yes ○ No
9. Were appropriate bottles/containers and volumes received for the requested tests? ✓ Yes ○ No
10. Did sample labels and tags agree with custody documents? ✓ Yes ○ No

Notes, Discrepancies, & Resolutions:

# of containers on COC:

# of containers received:

Service request Label: K1408130 5

Kinnetic Laboratories, Incorporated
516.01

10450 Stancliff Rd., Suite 210
Houston, TX 77099
T: +1 713 266 1599
F: +1 713 266 1599
www.alsglobal.com

SAMPLE ACCEPTANCE POLICY

This policy outlines the criteria samples must meet to be accepted by ALS Environmental – Houston HRMS.

Cooler Custody Seals (desirable, mandatory if specified in SAP):

- ✓ Intact on outside of cooler, signed and dated

Chain-of-Custody (COC) documentation (mandatory):

The following is required on each COC:

- ✓ Sample ID, the location, date and time of collection, collector's name, preservation type, sample type, and any other special remarks concerning the sampleThe COC must be completed in ink.
- ✓ Signature and date of relinquishing party.

In the absence of a COC at sample receipt, the COC will be requested from the client.

Sample Integrity (mandatory):

Samples are inspected upon arrival to ensure that sample integrity was not compromised during transfer to the laboratory.

- ✓ Sample containers must arrive in good condition (not broken or leaking).
- ✓ Samples must be labeled appropriately, including Sample IDs, and requested test using durable labels and indelible ink.
- ✓ The correct type of sample bottle must be used for the method requested.
- ✓ An appropriate sample volume, or weight, must be received.
- ✓ Sample IDs and number of containers must reconcile with the COC.
- ✓ Samples must be received within the method defined holding time.

Temperature Requirement (varies by sample matrix):

- ✓ Aqueous and Non-aqueous samples must be shipped and stored cold, at 0 to 6ºC.
- ✓ Tissue samples must be shipped and stored frozen, at -20 to -10ºC.
- ✓ Air samples are shipped and stored cold, at 0 to 6ºC
- ✓ The sample temperature must be recorded on the COC

All cooler inspections are documented on the Cooler Receipt Form (CRF). A separate CRF is completed for each service request. Any samples not meeting the above criteria are noted on the CRF and the Project Manager notified. The Project Manager must resolve any sample integrity issues with the client prior to proceeding with the analysis. Such resolutions are documented in writing and filed with the project folder. Data associated with samples received outside of this acceptance policy will be qualified on the case narrative of the final report

Preparation Information Benchsheets

ALS Environmental - Houston HRMS
10450 Stancliff Rd., Suite 210, Houston, TX 77099
Phone (713)266-1599 Fax (713)266-0130
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 215468 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped
Team: Semivoa GCMS/WMCDONOUGH **Prep Method:** Method **Prep Date/Time:** 8/14/14 05:30 AM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Sample Description
1	E1400918-027	BM11LAA01C-SW-25	.01	8290A/PCDD PCDF		Soil	10.294g	Damp, Brown Soil
2	E1400927-001	BM11LAA01C-SW-26	.01	8290A/PCDD PCDF		Soil	10.366g	Brown Soil (w/ rocks)
3	E1400927-002	BM11LAA01C-SW-27	.01	8290A/PCDD PCDF		Soil	10.385g	Brown Soil (w/ rocks)
4	E1400927-003	BM11LAA01C-SW-28	.01	8290A/PCDD PCDF		Soil	10.407g	Brown Soil (w/ rocks)
5	E1400927-004	BM11LAA01C-SW-28-D	.01	8290A/PCDD PCDF		Soil	10.276g	Brown Soil (w/ rocks)
6	E1400927-005	BM11LAA01C-SW-29	.01	8290A/PCDD PCDF		Soil	10.427g	Brown Soil (w/ rocks)
7	E1400946-001	2023102001	.01	8290/PCDD PCDF		Soil	10.444g	Damp, Red/Brown Dirt (w/ rocks)
8	EQ1400465-01	MB		8290A/PCDD PCDF		Solid	10.277g	
9	EQ1400465-02	LCS		8290A/PCDD PCDF		Solid	10.273g	
10	EQ1400465-03	DLCS		8290A/PCDD PCDF		Solid	10.518g	
11	K1408108-001	WAFB-CO-B2B3-SPOILS-02-QA	.03	8290A/PCDD PCDF		Soil	10.245g	Damp, Brown/Orange Soil
12	K1408130-011	MOA14DXN002	.05	8290/PCDD PCDF		Sludge, Solid	10.331g	Soft, Brown Spongy Solid
13	K1408357-001	14RVL-B05-30-S	.01	8290/PCDD PCDF		Soil	10.376g	Damp, Black Dirt (w/ rocks)
14	K1408357-002	14RVL-B05-30-SA	.01	8290/PCDD PCDF		Soil	10.168g	Damp, Black Dirt (w/ rocks)

Spiking Solutions

Name: 8290/1613B Cleanup Working Standard Inventory ID 73407 Logbook Ref: 73407 CID 08/11/2014 Expires On: 02/07/2015

E1400918-027	100.00µL	E1400927-001	100.00µL	E1400927-002	100.00µL	E1400927-003	100.00µL	E1400927-004	100.00µL	E1400927-005	100.00µL
E1400946-001	100.00µL	EQ1400465-01	100.00µL	EQ1400465-01	100.00µL	EQ1400465-02	100.00µL	EQ1400465-02	100.00µL	EQ1400465-03	100.00µL
EQ1400465-03	100.00µL	K1408108-001	100.00µL	K1408130-011	100.00µL	K1408357-001	100.00µL	K1408357-002	100.00µL		

Name: 1613B Labeled Working Standard Inventory ID 73409 Logbook Ref: 2-4 ng/ml 73409 WM 8/11/14 Expires On: 08/11/2015

E1400918-027	1,000.00µL	E1400927-001	1,000.00µL	E1400927-002	1,000.00µL	E1400927-003	1,000.00µL	E1400927-004	1,000.00µL	E1400927-005	1,000.00µL
EQ1400465-01	1,000.00µL	EQ1400465-01	1,000.00µL	EQ1400465-02	1,000.00µL	EQ1400465-02	1,000.00µL	EQ1400465-03	1,000.00µL	EQ1400465-03	1,000.00µL
K1408108-001	1,000.00µL	K1408130-011	1,000.00µL								

Name: 1613B Labeled Working Standard Inventory ID 73410 Logbook Ref: 2-4 ng/ml 73410 WM 8/11/14 Expires On: 08/11/2015

E1400946-001	1,000.00µL	K1408357-001	1,000.00µL	K1408357-002	1,000.00µL

Name: 1613B Matrix Working Standard Inventory ID 73564 Logbook Ref: 2-20ng/mL 73564 TL 8/13 Expires On: 08/13/2015

EQ1400465-02	100.00µL	EQ1400465-02	100.00µL	EQ1400465-03	100.00µL	EQ1400465-03	100.00µL

Preparation Information Benchsheet

Prep Run#: 215468 **Prep WorkFlow:** OrgExtDioxS(30) **Status:** Prepped
Team: Semivoa GCMS/WMCDONOUGH **Prep Method:** Method **Prep Date/Time:** 8/14/14 05:30 AM

Preparation Materials

Carbon, High Purity	TL 7/9/14 (72330)	Ethyl Acetate 99.9% Minimum EtOAc	AL 04/01/14 (71228)	Glass Wool	AL 08/06/14 (73215)
Sulfuric Acid Reagent Grade H2SO4	73285 TL 8/6/14 (73285)	Hexanes 95%	AL 08/06/14 (73213)	Dichloromethane (Methylene Chloride) 99.9% MeCl2	TL 8/12/14 (73534)
Sodium Chloride Reagent Grade NaCl	C2-65-5 (38670)	Sodium Hydroxide Reagent Grade NaOH	C2-73-7 (53023)	Sodium Sulfate Anhydrous Reagent Grade Na2SO4	AL 07/29/14 (72944)
Tridecane (n-Tridecane)	LM 7/9/14 (72332)	Silica Gel Reagent Grade	AL 05/21/14 (70718)	Toluene 99.9% Minimum	AL 08/06/14 (73212)

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	8/14/14 05:30	Started:	8/15/14 09:00	Started:	8/15/14 12:25	Started:	8/15/14 16:15
Finished:	8/15/14 04:20	Finished:	8/15/14 09:25	Finished:	8/15/14 14:00	Finished:	8/15/14 17:15
By:	WMCDONOUGH	By:	CDIAZ	By:	CDIAZ	By:	JPLASSARD
Comments		Comments		Comments		Comments	

Comments: _____

Reviewed By: JWP 081814 Date: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Preparation Information Benchsheet

Prep Run#: 215971 **Prep WorkFlow:** OrgExtDioxAq-30 **Status:** Prepped
Team: Semivoa GCMS/LMCCRINK **Prep Method:** Method Sep Funnel/Jar **Prep Date/Time:** 8/19/14 02:05 PM

#	Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Sample Description
1	EQ1400479-01	MB		8290A/PCDD PCDF	5	Liquid	1000mL	
2	EQ1400479-02	LCS		8290A/PCDD PCDF	5	Liquid	1000mL	
3	EQ1400479-03	TW0505 MS	.02	8290/PCDD PCDF	7	Liquid	1045mL	
4	EQ1400479-04	TW0505 DMS	.07	8290/PCDD PCDF	7	Liquid	1046mL	
5	K1408130-001	MOA14ORG003	.10	8290/PCDD PCDF	7	Water	1042mL	Black liquid
6	K1408130-002	MOA14ORG004	.10	8290/PCDD PCDF	7	Water	1005mL	Light yellow liquid
7	K1408231-002	TW0505	.08	8290/PCDD PCDF	7	Water	1045mL	Clear liquid
8	K1408231-003	TW0507	.01	8290/PCDD PCDF	5	Water	1049mL	Clear liquid
9	K1408231-006	TW0506	.01	8290/PCDD PCDF	7	Water	1049mL	Clear liquid
10	K1408413-001	2090-GW-1078	.01	8290/PCDD PCDF	7	Water	976mL	Clear liquid
11	R1405950-001	1408020905 200-SB-17	.01	8290A/PCDD PCDF	5	Water	1049mL	Clear liquid

Spiking Solutions

Name: 1613B Matrix Working Standard Inventory ID 73564 Logbook Ref: 2-20ng/mL 73564 TL 8/13 Expires On: 08/13/2015

EQ1400479-02	100.00µL	EQ1400479-02	100.00µL	EQ1400479-03	100.00µL	EQ1400479-04	100.00µL

Name: 1613B Labeled Working Standard Inventory ID 73658 Logbook Ref: 2-4 ng/ml 73658 8/18/14 WM Expires On: 08/18/2015

EQ1400479-01	1,000.00µL	EQ1400479-01	1,000.00µL

Name: 1613B Labeled Working Standard Inventory ID 73659 Logbook Ref: 2-4 ng/ml 73659 8/18/14 WM Expires On: 08/18/2015

EQ1400479-02	1,000.00µL	EQ1400479-02	1,000.00µL	EQ1400479-03	1,000.00µL	EQ1400479-04	1,000.00µL	K1408130-001	1,000.00µL	K1408130-002	1,000.00µL
K1408231-002	1,000.00µL	K1408231-003	1,000.00µL	K1408231-006	1,000.00µL	K1408413-001	1,000.00µL	R1405950-001	1,000.00µL		

Name: 8290/1613B Cleanup Working Standard Inventory ID 73662 Logbook Ref: 73662 CID 08/18/2014 Expires On: 02/14/2015

EQ1400479-01	100.00µL	EQ1400479-01	100.00µL	EQ1400479-02	100.00µL	EQ1400479-02	100.00µL	EQ1400479-03	100.00µL	EQ1400479-04	100.00µL
K1408130-001	100.00µL	K1408130-002	100.00µL	K1408231-002	100.00µL	K1408231-003	100.00µL	K1408231-006	100.00µL	K1408413-001	100.00µL
R1405950-001	100.00µL										

Preparation Information Benchsheet

Prep Run#: 215971 **Prep WorkFlow:** OrgExtDioxAq-30 **Status:** Prepped
Team: Semivoa GCMS/LMCCRINK **Prep Method:** Method **Prep Date/Time:** 8/19/14 02:05 PM

Preparation Materials

Sensafe Free Chlorine WTR CHK	AL 06/10/14 (71458)	Carbon, High Purity	AL 08/20/14 (73803)	Ethyl Acetate 99.9% Minimum EtOAc	AL 04/01/14 (71228)
Glass Wool	AL 08/06/14 (73215)	Sulfuric Acid Reagent Grade H2SO4	73285 TL 8/6/14 (73285)	Hexanes 95%	AL 08/13/14 (73545)
Dichloromethane (Methylene Chloride) 99.9% MeCl2	AL 08/18/14 (73648)	Sodium Chloride Reagent Grade NaCl	C2-65-5 (38670)	Sodium Hydroxide Reagent Grade NaOH	C2-73-7 (53023)
Sodium Sulfate Anhydrous Reagent Grade Na2SO4	AL 07/29/14 (72944)	ColorpHast pH-Indicator Strips	7/21/14 TL (72635)	Silica Gel Reagent Grade	AL 08/22/14 (73882)
Toluene 99.9% Minimum	AL 08/06/14 (73212)				

Preparation Steps

Step:	Extraction	Step:	Acid Clean	Step:	Silica Gel Clean	Step:	Final Volume
Started:	8/19/14 14:05	Started:	8/21/14 08:00	Started:	8/22/14 09:00	Started:	8/23/14 09:30
Finished:	8/19/14 17:30	Finished:	8/21/14 08:10	Finished:	8/22/14 12:00	Finished:	8/23/14 10:20
By:	HLEUNG	By:	CDIAZ	By:	CDIAZ	By:	LMCCRINK
Comments		Comments		Comments		Comments	

Comments: _____

Reviewed By: JWP 082514 Date: _____

Chain of Custody

Relinquished By: _____ Date: _____ Extracts Examined

Received By: _____ Date: _____ Yes No

Analytical Results

ALS Environmental - Houston HRMS
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ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/14 09:02
Sample Matrix:	Water	**Date Received:**	08/05/14 09:30
Sample Name:	MOA14ORG003	**Units:**	pg/L
Lab Code:	K1408130-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/27/14 13:25
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	8/19/14
Sample Amount:	1042mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P173132	**Blank File Name:**	P230792
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P173126

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	4.54	4.80			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/14 09:02
Sample Matrix:	Water	**Date Received:**	08/05/14 09:30
Sample Name:	MOA14ORG003	**Units:**	Percent
Lab Code:	K1408130-001	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/27/14 13:25
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	8/19/14
Sample Amount:	1042mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P173132	**Blank File Name:**	P230792
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P173126

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1245.125	62		40-135	0.76	1.022
37Cl-2,3,7,8-TCDD	800	470.302	59		40-135	NA	1.024

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/14 09:00
Sample Matrix:	Water	**Date Received:**	08/05/14 09:30
Sample Name:	MOA14ORG004	**Units:**	pg/L
Lab Code:	K1408130-002	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/27/14 14:13
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	8/19/14
Sample Amount:	1005mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P173133	**Blank File Name:**	P230792
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P173126

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	5.66	5.66			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/04/14 09:00
Sample Matrix:	Water	**Date Received:**	08/05/14 09:30
Sample Name:	MOA14ORG004	**Units:**	Percent
Lab Code:	K1408130-002	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/27/14 14:13
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	8/19/14
Sample Amount:	1005mL	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P173133	**Blank File Name:**	P230792
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P173126

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1256.073	63		40-135	0.78	1.022
37Cl-2,3,7,8-TCDD	800	410.665	51		40-135	NA	1.023

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/14 00:00
Sample Matrix:	Sludge, Solid	**Date Received:**	08/05/14 09:30
Sample Name:	MOA14DXN002	**Units:**	ng/Kg
Lab Code:	K1408130-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/24/14 17:41
Prep Method:	Method	**Date Extracted:**	8/14/14
Sample Amount:	10.331g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P173052	**Blank File Name:**	P172925
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P173045

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.478	1.54			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/14 00:00
Sample Matrix:	Sludge, Solid	**Date Received:**	08/05/14 09:30
Sample Name:	MOA14DXN002	**Units:**	Percent
Lab Code:	K1408130-011	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/24/14 17:41
Prep Method:	Method	**Date Extracted:**	8/14/14
Sample Amount:	10.331g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P173052	**Blank File Name:**	P172925
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P173045

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1412.000	71		40-135	0.79	1.022
37Cl-2,3,7,8-TCDD	800	448.694	56		40-135	NA	1.023

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	08/03/14 00:00
Sample Matrix:	Sludge, Solid	**Date Received:**	08/05/14 09:30
Sample Name:	MOA14DXN002	**Units:**	Percent
Lab Code:	K1408130-011	**Basis:**	Dry

Total Solids Run Create

Analysis Method:	CAS SOP	**Date Analyzed:**	08/23/14 13:35
Prep Method:	None	**Date Extracted:**	NA
Sample Amount:	6.866g	**Instrument Name:**	E-Balance-01
		GC Column:	
Data File Name:		**Blank File Name:**	
ICAL Date:		**Cal Ver. File Name:**	

Native Analyte Results

Analyte Name	Result	Q	MRL	Dilution Factor
Total Solids	31.5	-	-	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, Solid	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ng/Kg
Lab Code:	EQ1400465-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/19/14 18:34
Prep Method:	Method	**Date Extracted:**	8/14/14
Sample Amount:	10.277g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P172925	**Blank File Name:**	P172925
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P172924

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	0.357	0.487			1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, Solid	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	EQ1400465-01	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/19/14 18:34
Prep Method:	Method	**Date Extracted:**	8/14/14
Sample Amount:	10.277g	**Instrument Name:**	E-HRMS-03
		GC Column:	DB-5MSUI
Data File Name:	P172925	**Blank File Name:**	P172925
ICAL Date:	03/25/14	**Cal Ver. File Name:**	P172924

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1265.567	63		40-135	0.77	1.022
37Cl-2,3,7,8-TCDD	800	403.820	50		40-135	NA	1.022

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Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	pg/L
Lab Code:	EQ1400479-01	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/26/14 14:42
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	8/19/14
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5MSUI
Data File Name:	P230792	**Blank File Name:**	P230792
ICAL Date:	08/24/14	**Cal Ver. File Name:**	P230790

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	ND	U	1.03	5.00			1

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Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	Percent
Lab Code:	EQ1400479-01	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/26/14 14:42
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	8/19/14
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-04
		GC Column:	DB-5MSUI
Data File Name:	P230792	**Blank File Name:**	P230792
ICAL Date:	08/24/14	**Cal Ver. File Name:**	P230790

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	886.759	44		40-135	0.79	1.020
37Cl-2,3,7,8-TCDD	800	260.919	33	**Y**	40-135	NA	1.020

Accuracy & Precision

ALS Environmental - Houston HRMS
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www.alsglobal.com

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dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Analyzed:**	08/16/14
Sample Matrix:	Sludge, Solid	**Date Extracted:**	08/14/14

Duplicate Lab Control Sample Summary
Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Units:**	ng/Kg
Prep Method:	Method	**Basis:**	Dry
		Analysis Lot:	407566

	Lab Control Sample EQ1400465-02			Duplicate Lab Control Sample EQ1400465-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
2,3,7,8-TCDD	20.2	19.5	104	21.2	19.0	111	70-130	5	25

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, Solid	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1400465-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/16/14 12:03
Prep Method:	Method	**Date Extracted:**	8/14/14
Sample Amount:	10.273g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-5MSUI
Data File Name:	U150418	**Blank File Name:**	P172925
ICAL Date:	07/31/14	**Cal Ver. File Name:**	U150414

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	20.2		0.737	0.737	0.85	1.001	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, Solid	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1400465-02	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/16/14 12:03
Prep Method:	Method	**Date Extracted:**	8/14/14
Sample Amount:	10.273g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-5MSUI
Data File Name:	U150418	**Blank File Name:**	P172925
ICAL Date:	07/31/14	**Cal Ver. File Name:**	U150414

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1083.250	54		40-135	0.73	1.020
37Cl-2,3,7,8-TCDD	800	355.905	44		40-135	NA	1.021

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, Solid	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	ng/Kg
Lab Code:	EQ1400465-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/16/14 12:54
Prep Method:	Method	**Date Extracted:**	8/14/14
Sample Amount:	10.518g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-5MSUI
Data File Name:	U150419	**Blank File Name:**	P172925
ICAL Date:	07/31/14	**Cal Ver. File Name:**	U150414

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	21.2		0.939	0.939	0.74	1.001	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Sludge, Solid	**Date Received:**	NA
Sample Name:	Duplicate Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1400465-03	**Basis:**	Dry

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/16/14 12:54
Prep Method:	Method	**Date Extracted:**	8/14/14
Sample Amount:	10.518g	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-5MSUI
Data File Name:	U150419	**Blank File Name:**	P172925
ICAL Date:	07/31/14	**Cal Ver. File Name:**	U150414

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	1081.055	54		40-135	0.76	1.019
37Cl-2,3,7,8-TCDD	800	365.419	46		40-135	NA	1.021

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	pg/L
Lab Code:	EQ1400479-02	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/25/14 14:36
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	8/19/14
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-5MSUI
Data File Name:	U150546	**Blank File Name:**	P230792
ICAL Date:	07/31/14	**Cal Ver. File Name:**	U150543

Native Analyte Results

Analyte Name	Result	Q	EDL	MRL	Ion Ratio	RRT	Dilution Factor
2,3,7,8-TCDD	212		10.6	10.6	0.74	1.001	1

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408130
Project:	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Lab Control Sample	**Units:**	Percent
Lab Code:	EQ1400479-02	**Basis:**	NA

Polychlorinated Dibenzodioxins and Polychlorinated Dibenzofurans by HRGC/HRMS

Analysis Method:	8290	**Date Analyzed:**	08/25/14 14:36
Prep Method:	Method Sep Funnel/Jar	**Date Extracted:**	8/19/14
Sample Amount:	1000mL	**Instrument Name:**	E-HRMS-01
		GC Column:	DB-5MSUI
Data File Name:	U150546	**Blank File Name:**	P230792
ICAL Date:	07/31/14	**Cal Ver. File Name:**	U150543

Labeled Standard Results

Labeled Compounds	Spike Conc.(pg)	Conc. Found (pg)	% Rec	Q	Control Limits	Ion Ratio	RRT
13C-2,3,7,8-TCDD	2000	796.614	40		40-135	0.75	1.025
37Cl-2,3,7,8-TCDD	800	259.394	32	**Y**	40-135	NA	1.026

29-Aug-2014

Howard Holmes
ALS Environmental
1317 South 13th Avenue
Kelso, WA 98626

Tel: (360) 577-7222
Fax: (360) 636-1068

Re: K1408130 Work Order: **1408242**

Dear Howard,

ALS Environmental received 3 samples on 08-Aug-2014 10:41 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 6.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Shawn Smythe

Electronically approved by: Shawn Smythe

Shawn Smythe
Project Manager

ALS Environmental

Date: 29-Aug-14

Client: ALS Environmental
Project: K1408130
Work Order: **1408242**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1408242-01	K1408130-013 / MOA14ASB004	Wastewater		8/4/2014 09:02	8/8/2014 10:41	☐
1408242-02	K1408130-014 / MOA14ASB005	Wastewater		8/4/2014 09:00	8/8/2014 10:41	☐
1408242-03	K1408130-015 / MOA14ASB006	Sludge		8/3/2014	8/8/2014 10:41	☐

Client: ALS Environmental
Project: K1408130
Work Order: 1408242

Case Narrative

All values are in area percent by visual estimate.

Some samples may contain fibers that are not visible by PLM and can only be discovered by electron microscopy techniques.

Reporting Limit = 1%. Results reported as Trace are <1%.

ALS Environmental

Date: *29-Aug-14*

Client: ALS Environmental
Project: K1408130

Work Order: 1408242

Lab ID: 1408242-03A
Client Sample ID: K1408130-015 / MOA14ASB006

Collection Date: 8/3/2014
Matrix: SLUDGE

Analytical Results

Analyses	Result	Units	
Asbestos by PLM ALS ENV004			Date Analyzed **8/20/2014**
Macroscopic Examination	Prep Date: **8/20/2014**		**ALSENV-004** Analyst: **DLM**
Color	Brown		
Description	Soil		
Homogeneity	Heterogenous		
Texture	Slugdy		
Other Materials			**ALSENV-004**
Cellulose	>80<=90	%	
Fiberglass	ND	%	
Non-Fibrous	>5<=10	%	
Other Fibers	ND	%	
Resin/Binder	ND	%	
Asbestiform Minerals			**ALSENV-004**
Amosite	ND	%	
Anthophyllite	ND	%	
Chrysotile	ND	%	
Crocidolite	ND	%	
Tremolite - Actinolite	ND	%	
Total Asbestos	**ND**	**%**	

Note:

ALS Environmental

Date: 29-Aug-14

Client: ALS Environmental
Project: K1408130
WorkOrder: **1408242**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
%	

ALS Environmental

Sample Receipt Checklist

Client Name: ALS-KELSO

Date/Time Received: 08-Aug-14 10:41

Work Order: 1408242

Received by: JNW

Checklist completed by Shawn Smythe 11-Aug-14
eSignature Date

Reviewed by: Shawn Smythe 11-Aug-14
eSignature Date

Matrices:
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Submitted To: Howard Holmes
ALS Environmental
1317 South 13th Avenue
Kelso WA 98626

Test Report
Page 1 of 2
8/29/14

REFERENCE DATA	**Asbestos in Water by TEM**
Sample Type:	Waste Water
Method Reference:	EPA Method 100.2
Client Sample No.:	K1408130-013 / MOA14ASB004 through K1408130-014 / MOA14ASB005
Sample Location:	K1408130
PO No.:	K1408130
ALS Work Order No.:	1408242
ALS Sample No.:	1408242-01 through 1408242-02
Date Received:	8/8/2014
Preparation Date:	8/8/2014
Analysis Date:	8/29/2014

The samples indicated on the following pages were analyzed by Transmission Electron Microscopy (TEM) for asbestos using the method EPA Method 100.2. Sample collection performed by clients outside the laboratory should meet method requirements stipulated therein. If sample collection deviates from any EPA requirements, interpretation of the results under strict EPA regulations cannot be made.

Upon arrival at the laboratory, each sample was ultrasonically treated in its original container for 15 minutes to suspend the solids. Aliquots of this suspension were filtered onto 0.22 μm pore size MCE filters. Whenever possible, a sufficient volume of sample is filtered to yield a Limit of Detection (LOD) of <0.20 MFL. The volumes filtered are based on the clarity of the sample and the number of grid openings analyzed is based on the volume of sample filtered and the current average grid opening area. Portions of selected filters are coated with carbon and mounted on grids for analysis by TEM. Analysis is performed on an FEI Tecnai Spirit G2 Twin TEM with EDAX Genesis System providing energy dispersive X-ray analysis (EDXA) capabilities.

Results apply only to portions of samples analyzed and are tabulated on the following data sheets. Representative EDXA spectra and selected area electron diffraction (SAED) measurements of asbestos types detected are included and are referenced to the fiber identification numbers listed on the count sheets. The limit of detection (LOD) for this method has been determined to be one confirmed asbestos fiber in the total number of grid openings analyzed.

Pamela Johnson
Analyst

Shawn Smythe
Project Manager

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ALS Environmental
4388 Glendale-Milford Road, Cincinnati, Ohio 45242
Phone (513) 733 5336 Fax (513) 733 5347 www.alsenviro.com
A Campbell Brothers Limited Company

CLIENT: ALS Environmental
SAMPLE LOCATION: K1408130

SAMPLE PREP DATA		***ANALYSIS DATA***	
Date Received:	8/8/2014	Date Analyzed:	8/29/2014 & 9:00
Date Filtered:	8/8/2014	Magnification:	9,700 X
Time Filtered:	11:00	Calibration Constant:	1 cm = 1.03 μm
Filter Type:	MCE 0.22 μm	EDXA Resolution:	130.0 eV
Filter Size:	47 mm	Accelerating Voltage:	100 keV
Collection Area:	1075 mm^2	Camera Constant:	129.25 mm-Å

SAMPLE IDENTIFICATION		
Client Sample No.:	K1408130-013 / MOA14ASB004	K1408130-014 / MOA14ASB005
ALS Sample No.:	1408242-01	1408242-02
Date Sampled:	8/4/2014	8/4/2014
Time Sampled:	9:02	9:00
Volume Filtered (L):	0.005	0.005
No. Grid Openings Analyzed:	20	20
Average Grid Opening Area:	0.0106	0.0106
LOD (MFL):	1.01	1.01
Asbestos Fibers ≥ 10 microns		
Chrysotile:	0	0
Amosite:	0	0
Crocidolite:	0	0
Actinolite-Tremolite:	0	0
Anthophyllite:	0	0
TOTAL ASBESTOS		
Count:	**0**	**0**
Concentration (MFL):	**<LOD**	**<LOD**

ND= None Detected *LOD= Limit of Detection* *MFL= Millions of Fibers per Liter*

NOTE: Samples arrived past the EPA method 100.1 48-hour hold time but were still analyzed, per client request. Because samples contained a large amount of suspended solids, we could only filter a small volume without overloading the filters. Therefore it was not possible to attain the EPA method LOD of 0.20 MFL.

Pamela Johnson
Analyst

Shawn Smythe
Project Manager

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ALS Environmental
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ALS Environmental Chain of Custody

1317 South 13th Avenue • Kelso, WA 98626 • 1-360-577-7222 • FAX 1-360-636-1068

ALS Contact: Howard Holmes

Project Number: K1408130
Project Manager: Howard Holmes

1408242

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	Misc Out 1 None
K1408130-013	MOA14ASB004 01	1	Water	8/4/14	0902	Cincinnati	X
K1408130-014	MOA14ASB005 02	1	Water	8/4/14	0900	Cincinnati	X
K1408130-015	MOA14ASB006 03	1	Sludge, Solid	8/3/14	0000	Cincinnati	X

Test Comments

Misc Out 1 - None	K1408130-015	Asbestos by PLM-EPA 600 to ALS Cincinnati
Misc Out 1 - None	K1408130-013,14	Asbestos by TEM 100.2 to ALS Cincinnati

DELIVERY METHOD:
STD / PRTY MAIL UPS
CLIENT DROP BOX
FEDEX ALS COURIER
OTHER: _____

COOLING METHOD: NONE
COOLER WET ICE ICE PACK
CUSTODY SEALS: NONE
COOLER PACKAGE SAMPLES
COOLER TEMP: 1.8 °C

H2

Special Instructions/Comments
Please provide the electronic (PDF and EDD) report to the following e-mail address: ALKLS.Data@alsglobal.com.

H - Test is On Hold P - Test is Authorized for Prep Only

Turnaround Requirements
____ **RUSH** (Surcharges Apply)
PLEASE CIRCLE WORK DAYS
1 2 3 4 5
____ **STANDARD**
Requested FAX Date: _____
Requested Report Date: 08/22/14

Report Requirements
____ I. Results Only
X II. Results + QC Summaries
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
PQL/MDL/J Y
EDD Y

1.8°C

Invoice Information
PO# K1408130
Bill to

Relinquished By: 8/7/14 1200
Received By: ALS 8/8/14 1041
Airbill Number:

K1408130

1408242

X **Ship To: Cincinnati**
ALS Laboratory Group
4388 Glendale Milford Road
Cincinnati, OH 45242

PC HZ Date 8/7/14
SMO JRS Date 8/7/14

Instructions:
Ice X
Dry Ice
No Ice

Shipping:
Overnight X
2nd Day
Ground

Bill to Client Account

Comments:

ALS Environmental
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Kelso, WA 98626
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F: +1 360 636 1068
www.alsglobal.com

August 29, 2014 Analytical Report for Service Request No: K1408351

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.01

Dear Gary:

Enclosed are the results of the samples submitted to our laboratory on August 08, 2014. For your reference, these analyses have been assigned our service request number K1408351.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard B. Holmes

Howard Holmes
Project Manager

HH/aj

RIGHT SOLUTIONS | RIGHT PARTNER

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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/envserv/	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
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories, Incorporated	**Service Request No.:**	K1408351
Project:	516.01	**Date Received:**	08/08/14
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Matrix/Duplicate Matrix Spike (MS/DMS).

Sample Receipt

Twenty water samples were received for analysis at ALS Environmental on 08/08/14. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

No anomalies associated with the analysis of these samples were observed.

Total and Dissolved Metals

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Copper for the Batch QC2 sample were not applicable. The analyzed concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

Approved by____ Howard B. Holmes _____

K1408351

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	FROM:
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion date: 30 Days	MATRIX: Water (Inf & Eff), Solids (Sludge)	P.O. #: AK14-1007	KLI Project Number: 516.01

Sample ID	Sample Location	Sample date & time	No. of contain	Container type	Preservative	EPA 625/8270	8081 A/B Pest OC	8141 A/B PEST_OP	PCBs - 8082	8290/PCDD PCDF	EPA 1664 Oil & Gr.	Metals	Mercury (1631E)	EPA 8260	Total Cyanide	Condition upon receipt	Comments
MOA14MET017	Influent	8/5/14 0900	1	500ml HDPE	6°C, HNO3							X					For total metals
MOA14MET018	Influent		1	500ml HDPE	6°C, HNO3							X					Prefiltered for dissolved metals
MOA14MET019	Effluent		1	500ml HDPE	6°C, HNO3							X					For total metals
MOA14MET020	Effluent		1	500ml HDPE	6°C, HNO3							X					Prefiltered for dissolved metals
MOA14TCN017	Influent		1	500ml HDPE	NaOH, 6°C Eff samp contain L-Ascorbic Acid										X		SM 4500-CN-E low level
MOA14TCN018	Effluent		1	500ml HDPE	NaOH, 6°C Eff samp contain L-Ascorbic Acid										X		SM 4500-CN-E low level
MOA14MRC017	Influent		1	500ml HDPE	HCl 6°C								X				For total metals
MOA14MRC018	Influent		1	500ml HDPE	HCl 6°C								X				Prefiltered for dissolved metals
MOA14MRC019	Effluent		1	500ml HDPE	HCl 6°C								X				For total metals
MOA14MRC020	Effluent		1	500ml HDPE	HCl 6°C								X				Prefiltered for dissolved metals

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID, ANALYTICAL METHOD, MDL, DATE OF EXTRACTION & ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

Comments: Metals to include Ag, As, Be, Cd, Cr, Cu, Mo, Ni, Pb, Sb, Se, Tl, Zn, Hg.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Sheri Trask AWWU-lab	8/6/14; 1130	hand	M Soon	8/6/14 1130
Mar Soon	8/6/14; 1230	FedX		
			Kaila Smith	8/8/14 0950

SAMPLED BY (NAME/SIGNATURE): _____

K1408351

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	FROM:
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion date: 30 Days	MATRIX: Water (Inf & Eff), Solids (Sludge)	P.O. #: AK14-1007	KLI Project Number: 516.01

Sample ID	Sample Location	Sample date & time	No. of contain	Container type	Preservative	EPA 625/8270	8081 A/B Pest OC	8141 A/B PEST_OP	PCBs - 8082	8290/PCDD PCDF	EPA 1664 Oil & Gr.	Metals	Mercury (1631E)	EPA 8260	Total Cyanide	Condition upon receipt	Comments
MOA14MET021	Influent	8/6/14 0900	1	500ml HDPE	6°C, HNO3							X					For total metals
MOA14MET022	Influent	0900	1	500ml HDPE	6°C, HNO3							X					Prefiltered for dissolved metals
MOA14MET023	Effluent	0905	1	500ml HDPE	6°C, HNO3							X					For total metals
MOA14MET024	Effluent	0905	1	500ml HDPE	6°C, HNO3							X					Prefiltered for dissolved metals
MOA14TCN019	Influent	0900	1	500ml HDPE	NaOH, 6°C Eff samp contain L-Ascorbic Acid										X		SM 4500-CN-E low level
MOA14TCN020	Effluent	0905	1	500ml HDPE	NaOH, 6°C Eff samp contain L-Ascorbic Acid										X		SM 4500-CN-E low level
MOA14MRC021	Influent	0900	1	500ml HDPE	HCl 6°C								X				For total metals
MOA14MRC022	Influent	0900	1	500ml HDPE	HCl 6°C								X				Prefiltered for dissolved metals
MOA14MRC023	Effluent	0905	1	500ml HDPE	HCl 6°C								X				For total metals
MOA14MRC024	Effluent	0905	1	500ml HDPE	HCl 6°C								X				Prefiltered for dissolved metals

DATA REPORTS MUST INCLUDE THE FOLLOWING: SAMPLE ID, ANALYTICAL METHOD, MDL, DATE OF EXTRACTION & ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

Comments: Metals to include Ag, As, Be, Cd, Cr, Cu, Mo, Ni, Pb, Sb, Se, Tl, Zn, Hg.

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[illegible] AWWU-Lab	8/6/14; 1130	hand	[illegible]	8/6/14 1130
[illegible]	8/6/14; 1230	FedEx		
			Kaila Smith	8/8/14 0950

SAMPLED BY (NAME/SIGNATURE): _____

PC HH

Cooler Receipt and Preservation Form

Client / Project: Kinnetic Lab Service Request *K14* 8351

Received: 8/8/14 Opened: 8/8/14 By: KD Unloaded: 8/8/14 By: KD

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? _____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
5.8	5.8	2.0	2.0	0	333		7707 7715 8162	

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

SHORT HOLD TIME

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408351
Project:	516.01	**Date Collected:**	08/05/14 - 08/06/14
Sample Matrix:	Water	**Date Received:**	08/8/14
Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA

Cyanide, Total

Sample Name	Lab Code	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
MOA14TCN017	K1408351-005	ND	U	0.0047	0.0009	1	08/13/14 13:38	8/13/14	
MOA14TCN018	K1408351-006	ND	U	0.0047	0.0009	1	08/13/14 13:38	8/13/14	
MOA14TCN019	K1408351-015	ND	U	0.0047	0.0009	1	08/13/14 13:38	8/13/14	
MOA14TCN020	K1408351-016	**0.001**	**J**	0.0047	0.0009	1	08/13/14 13:38	8/13/14	
Method Blank	K1408351-MB	ND	U	0.0047	0.0009	1	08/13/14 13:38	8/13/14	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408351
Project	516.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	08/13/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1409581-03	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1409581-03DUP Result	Average	RPD	RPD Limit
Cyanide, Total	SM 4500-CN- E	0.0047	0.0009	ND	ND	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408351
Project:	516.01	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	08/13/14
		Date Extracted:	08/13/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1409581-03	**Basis:**	NA
Analysis Method:	SM 4500-CN- E		
Prep Method:	SM 4500-CN-C		

		Matrix Spike KQ1409581-03MS			Duplicate Matrix Spike KQ1409581-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	0.102	0.100	102	0.102	0.100	102	23-148	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408351
Project:	516.01	**Date Analyzed:**	08/13/14
Sample Matrix:	Water	**Date Extracted:**	08/13/14

Lab Control Sample Summary
Cyanide, Total

Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA
		Analysis Lot:	406457

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1408351-LCS	0.146	0.150	97	84-115

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408351
Project:	516.01	**Date Collected:**	08/05-08/06/14
Sample Matrix:	Water	**Date Received:**	08/08/14

Mercury, Total

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631E	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MOA14MRC017	K1408351-007	2.5	0.3	5	08/09/14	08/10/14	121	
MOA14MRC019	K1408351-009	0.5	0.06	1	08/09/14	08/10/14	23.8	
MOA14MRC021	K1408351-017	0.5	0.3	5	08/09/14	08/10/14	89.2	
MOA14MRC023	K1408351-019	0.5	0.06	1	08/09/14	08/10/14	26.2	
Method Blank 1	K1408351-MB1	0.5	0.06	1	08/09/14	08/10/14	ND	
Method Blank 2	K1408351-MB2	0.5	0.06	1	08/09/14	08/10/14	ND	
Method Blank 3	K1408351-MB3	0.5	0.06	1	08/09/14	08/10/14	ND	

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408351
Project:	516.01	**Date Collected:**	08/05-08/06/14
Sample Matrix:	Water	**Date Received:**	08/08/14

Mercury, Dissolved

Prep Method:	METHOD	Units:	ng/L
Analysis Method:	1631E	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MOA14MRC018	K1408351-008	0.5	0.06	1	08/09/14	08/10/14	5.85	
MOA14MRC020	K1408351-010	0.5	0.06	1	08/09/14	08/10/14	10.8	
MOA14MRC022	K1408351-018	0.5	0.06	1	08/09/14	08/10/14	5.10	
MOA14MRC024	K1408351-020	0.5	0.06	1	08/09/14	08/10/14	11.8	

ALS Group USA, Corp.
dba ALS Environmental
QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408351
Project:	516.01	**Date Collected:**	08/05/14
Sample Matrix:	Water	**Date Received:**	08/08/14
		Date Extracted:	08/09/14
		Date Analyzed:	08/10/14

Matrix Spike/Duplicate Matrix Spike Summary
Total Metals

Sample Name:	MOA14MRC018	Units:	ng/L
Lab Code:	K1408351-008MS, K1408351-008MSD	Basis:	NA
Test Notes:			

				Spike Level		Sample	Spike Result		Percent Recovery				
Analyte	**Prep Method**	**Analysis Method**	**MRL**	**MS**	**DMS**	**Result**	**MS**	**DMS**	**MS**	**DMS**	**ALS Acceptance Limits**	**Relative Percent Difference**	**Result Notes**
Mercury	METHOD	1631E	0.5	50	50	5.85	44.3	44.5	77	77	71-125	<1	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408351
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/10/14

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Initial)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.10	102	77-123	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408351
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/10/14

Ongoing Precision and Recovery (OPR) Sample Summary
Total Metals

Sample Name: Ongoing Precision and Recovery (Final)

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.01	100	77-123	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1408351
Project:	516.01	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	08/10/14

Quality Control Sample (QCS) Summary
Total Metals

Sample Name: Quality Control Sample

Units: ng/L
Basis: NA

Test Notes:

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	ALS Percent Recovery Acceptance Limits	Result Notes
Mercury	METHOD	1631E	5.00	5.12	102	77-123	

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408351
Project No.:	NA	**Date Collected:**	08/05/14
Project Name:	516.01	**Date Received:**	08/08/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET017** **Lab Code:** **K1408351-001**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/12/14	08/19/14	0.581		
Arsenic	200.8	0.5	0.1	1.0	08/12/14	08/19/14	2.6		
Beryllium	200.8	0.020	0.006	1.0	08/12/14	08/19/14	0.012	J	
Cadmium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.362		
Chromium	200.8	0.20	0.02	1.0	08/12/14	08/19/14	2.37		
Copper	200.8	0.10	0.02	1.0	08/12/14	08/19/14	55.4		
Lead	200.8	0.020	0.005	1.0	08/12/14	08/19/14	2.21		
Molybdenum	200.8	0.050	0.007	1.0	08/12/14	08/19/14	2.23		
Nickel	200.8	0.20	0.02	1.0	08/12/14	08/19/14	5.45		
Selenium	200.8	1.0	0.3	1.0	08/12/14	08/19/14	0.9	J	
Silver	200.8	0.020	0.004	1.0	08/12/14	08/19/14	0.562		
Thallium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.008	J	
Zinc	200.8	0.5	0.2	1.0	08/12/14	08/19/14	165		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408351
Project No.:	NA	**Date Collected:**	08/05/14
Project Name:	516.01	**Date Received:**	08/08/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET018** **Lab Code:** **K1408351-002DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/12/14	08/19/14	0.433		
Arsenic	200.8	0.5	0.1	1.0	08/12/14	08/19/14	1.5		
Beryllium	200.8	0.020	0.006	1.0	08/12/14	08/19/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.058		
Chromium	200.8	0.20	0.02	1.0	08/12/14	08/19/14	0.92		
Copper	200.8	0.10	0.02	1.0	08/12/14	08/19/14	15.5		
Lead	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.382		
Molybdenum	200.8	0.050	0.007	1.0	08/12/14	08/19/14	1.79		
Nickel	200.8	0.20	0.02	1.0	08/12/14	08/19/14	3.71		
Selenium	200.8	1.0	0.3	1.0	08/12/14	08/19/14	0.6	J	
Silver	200.8	0.020	0.004	1.0	08/12/14	08/19/14	0.213		
Thallium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	08/12/14	08/19/14	22.8		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408351
Project No.:	NA	**Date Collected:**	08/05/14
Project Name:	516.01	**Date Received:**	08/08/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET019** **Lab Code:** **K1408351-003**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/12/14	08/19/14	0.504		
Arsenic	200.8	0.5	0.1	1.0	08/12/14	08/19/14	2.6		
Beryllium	200.8	0.020	0.006	1.0	08/12/14	08/19/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.180		
Chromium	200.8	0.20	0.02	1.0	08/12/14	08/19/14	1.38		
Copper	200.8	0.10	0.02	1.0	08/12/14	08/19/14	30.5		
Lead	200.8	0.020	0.005	1.0	08/12/14	08/19/14	1.26		
Molybdenum	200.8	0.050	0.007	1.0	08/12/14	08/19/14	2.11		
Nickel	200.8	0.20	0.02	1.0	08/12/14	08/19/14	4.19		
Selenium	200.8	1.0	0.3	1.0	08/12/14	08/19/14	1.1		
Silver	200.8	0.020	0.004	1.0	08/12/14	08/19/14	0.326		
Thallium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.006	J	
Zinc	200.8	0.5	0.2	1.0	08/12/14	08/19/14	75.1		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408351
Project No.:	NA	**Date Collected:**	08/05/14
Project Name:	516.01	**Date Received:**	08/08/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET020** **Lab Code:** **K1408351-004DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/12/14	08/19/14	0.447		
Arsenic	200.8	0.5	0.1	1.0	08/12/14	08/19/14	2.3		
Beryllium	200.8	0.020	0.006	1.0	08/12/14	08/19/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.095		
Chromium	200.8	0.20	0.02	1.0	08/12/14	08/19/14	1.29		
Copper	200.8	0.10	0.02	1.0	08/12/14	08/19/14	20.1		
Lead	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.512		
Molybdenum	200.8	0.050	0.007	1.0	08/12/14	08/19/14	1.96		
Nickel	200.8	0.20	0.02	1.0	08/12/14	08/19/14	3.78		
Selenium	200.8	1.0	0.3	1.0	08/12/14	08/19/14	1.0	J	
Silver	200.8	0.020	0.004	1.0	08/12/14	08/19/14	0.138		
Thallium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	08/12/14	08/19/14	43.1		

Comments:

Metals

INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408351
Project No.:	NA	**Date Collected:**	08/06/14
Project Name:	516.01	**Date Received:**	08/08/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET021** **Lab Code:** **K1408351-011**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/12/14	08/19/14	0.568		
Arsenic	200.8	0.5	0.1	1.0	08/12/14	08/19/14	2.6		
Beryllium	200.8	0.020	0.006	1.0	08/12/14	08/19/14	0.021		
Cadmium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.276		
Chromium	200.8	0.20	0.02	1.0	08/12/14	08/19/14	2.56		
Copper	200.8	0.10	0.02	1.0	08/12/14	08/19/14	60.1		
Lead	200.8	0.020	0.005	1.0	08/12/14	08/19/14	2.47		
Molybdenum	200.8	0.050	0.007	1.0	08/12/14	08/19/14	3.88		
Nickel	200.8	0.20	0.02	1.0	08/12/14	08/19/14	5.92		
Selenium	200.8	1.0	0.3	1.0	08/12/14	08/19/14	0.8	J	
Silver	200.8	0.020	0.004	1.0	08/12/14	08/19/14	0.233		
Thallium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.008	J	
Zinc	200.8	0.5	0.2	1.0	08/12/14	08/19/14	201		

Comments:

Metals

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INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408351
Project No.:	NA	**Date Collected:**	08/06/14
Project Name:	516.01	**Date Received:**	08/08/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET022** **Lab Code:** **K1408351-012DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/12/14	08/19/14	0.495		
Arsenic	200.8	0.5	0.1	1.0	08/12/14	08/19/14	1.6		
Beryllium	200.8	0.020	0.006	1.0	08/12/14	08/19/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.037		
Chromium	200.8	0.20	0.02	1.0	08/12/14	08/19/14	0.80		
Copper	200.8	0.10	0.02	1.0	08/12/14	08/19/14	7.62		
Lead	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.293		
Molybdenum	200.8	0.050	0.007	1.0	08/12/14	08/19/14	3.42		
Nickel	200.8	0.20	0.02	1.0	08/12/14	08/19/14	3.99		
Selenium	200.8	1.0	0.3	1.0	08/12/14	08/19/14	0.9	J	
Silver	200.8	0.020	0.004	1.0	08/12/14	08/19/14	0.036		
Thallium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	08/12/14	08/19/14	21.5		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408351
Project No.:	NA	**Date Collected:**	08/06/14
Project Name:	516.01	**Date Received:**	08/08/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET023** **Lab Code:** **K1408351-013**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/12/14	08/19/14	0.508		
Arsenic	200.8	0.5	0.1	1.0	08/12/14	08/19/14	2.5		
Beryllium	200.8	0.020	0.006	1.0	08/12/14	08/19/14	0.006	J	
Cadmium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.189		
Chromium	200.8	0.20	0.02	1.0	08/12/14	08/19/14	1.48		
Copper	200.8	0.10	0.02	1.0	08/12/14	08/19/14	31.4		
Lead	200.8	0.020	0.005	1.0	08/12/14	08/19/14	1.64		
Molybdenum	200.8	0.050	0.007	1.0	08/12/14	08/19/14	3.54		
Nickel	200.8	0.20	0.02	1.0	08/12/14	08/19/14	4.51		
Selenium	200.8	1.0	0.3	1.0	08/12/14	08/19/14	1.0	J	
Silver	200.8	0.020	0.004	1.0	08/12/14	08/19/14	0.202		
Thallium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	08/12/14	08/19/14	77.0		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408351
Project No.:	NA	**Date Collected:**	08/06/14
Project Name:	516.01	**Date Received:**	08/08/14
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **MOA14MET024** **Lab Code:** **K1408351-014DISS**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/12/14	08/19/14	0.454		
Arsenic	200.8	0.5	0.1	1.0	08/12/14	08/19/14	2.3		
Beryllium	200.8	0.020	0.006	1.0	08/12/14	08/19/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.072		
Chromium	200.8	0.20	0.02	1.0	08/12/14	08/19/14	0.91		
Copper	200.8	0.10	0.02	1.0	08/12/14	08/19/14	17.9		
Lead	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.519		
Molybdenum	200.8	0.050	0.007	1.0	08/12/14	08/19/14	3.43		
Nickel	200.8	0.20	0.02	1.0	08/12/14	08/19/14	3.94		
Selenium	200.8	1.0	0.3	1.0	08/12/14	08/19/14	1.0		
Silver	200.8	0.020	0.004	1.0	08/12/14	08/19/14	0.064		
Thallium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	08/12/14	08/19/14	42.7		

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client:	Kinnetic Laboratories, Incorpora	**Service Request:**	K1408351
Project No.:	NA	**Date Collected:**	
Project Name:	516.01	**Date Received:**	
Matrix:	WATER	**Units:**	ug/L
		Basis:	NA

Sample Name: **Method Blank** **Lab Code:** **K1408351-MB**

Analyte	Analysis Method	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Result	C	Q
Antimony	200.8	0.050	0.005	1.0	08/12/14	08/19/14	0.008	J	
Arsenic	200.8	0.5	0.1	1.0	08/12/14	08/19/14	0.1	U	
Beryllium	200.8	0.020	0.006	1.0	08/12/14	08/19/14	0.006	U	
Cadmium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.005	U	
Chromium	200.8	0.20	0.02	1.0	08/12/14	08/19/14	0.02	U	
Copper	200.8	0.10	0.02	1.0	08/12/14	08/19/14	0.02	U	
Lead	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.005	U	
Molybdenum	200.8	0.050	0.007	1.0	08/12/14	08/19/14	0.007	U	
Nickel	200.8	0.20	0.02	1.0	08/12/14	08/19/14	0.02	U	
Selenium	200.8	1.0	0.3	1.0	08/12/14	08/19/14	0.3	U	
Silver	200.8	0.020	0.004	1.0	08/12/14	08/19/14	0.008	J	
Thallium	200.8	0.020	0.005	1.0	08/12/14	08/19/14	0.005	U	
Zinc	200.8	0.5	0.2	1.0	08/12/14	08/19/14	0.2	U	

Comments:

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408351

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC1S **Lab Code:** K1408352-011S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	51.2		1.30		50.00	99.8		200.8
Arsenic	70 - 130	52.0		0.9		50.00	102.2		200.8
Beryllium	70 - 130	2.39		0.006	J	2.50	95.4		200.8
Cadmium	70 - 130	24.4		0.201		25.00	96.8		200.8
Chromium	70 - 130	11.9		1.86		10.00	100.4		200.8
Copper	70 - 130	47.1		35.1		12.50	96.0		200.8
Lead	70 - 130	51.4		4.57		50.00	93.7		200.8
Molybdenum	70 - 130	21.2		1.24		20.00	99.8		200.8
Nickel	70 - 130	26.1		2.71		25.00	93.6		200.8
Selenium	70 - 130	50.1		0.3	U	50.00	100.2		200.8
Silver	70 - 130	11.5		0.035		12.50	91.7		200.8
Thallium	70 - 130	47.8		0.005	J	50.00	95.6		200.8
Zinc	70 - 130	114		89.8		25.00	96.8		200.8

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408351

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC2S **Lab Code:** K1408380-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Antimony	70 - 130	47.9		0.259		50.00	95.3		200.8
Arsenic	70 - 130	52.4		1.1		50.00	102.6		200.8
Beryllium	70 - 130	2.46		0.006	U	2.50	98.4		200.8
Cadmium	70 - 130	24.5		0.114		25.00	97.5		200.8
Chromium	70 - 130	10.9		1.04		10.00	98.6		200.8
Copper		66.2		53.5		12.50	101.6		200.8
Lead	70 - 130	48.6		1.23		50.00	94.7		200.8
Molybdenum	70 - 130	20.7		0.872		20.00	99.1		200.8
Nickel	70 - 130	26.0		2.21		25.00	95.2		200.8
Selenium	70 - 130	51.8		1.5		50.00	100.6		200.8
Silver	70 - 130	25.1		15.2		12.50	79.2		200.8
Thallium	70 - 130	49.1		0.014	J	50.00	98.2		200.8
Zinc	70 - 130	97.5		71.9		25.00	102.4		200.8

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 6 -

DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408351

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC1D **Lab Code:** K1408352-011D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	1.30		1.18		9.7		200.8
Arsenic		0.9		0.9		0.0		200.8
Beryllium		0.006	J	0.006	U	200.0		200.8
Cadmium	20	0.201		0.202		0.5		200.8
Chromium	20	1.86		1.73		7.2		200.8
Copper	20	35.1		35.4		0.9		200.8
Lead	20	4.57		4.53		0.9		200.8
Molybdenum	20	1.24		1.18		5.0		200.8
Nickel	20	2.71		2.56		5.7		200.8
Selenium		0.3	U	0.3	U			200.8
Silver		0.035		0.035		0.0		200.8
Thallium		0.005	J	0.005	J	0.0		200.8
Zinc	20	89.8		90.2		0.4		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 6 -

DUPLICATES

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408351

Project No.: NA **Units:** UG/L

Project Name: 516.01 **Basis:** NA

Matrix: WATER

Sample Name: Batch QC2D **Lab Code:** K1408380-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	20	0.259		0.253		2.3		200.8
Arsenic		1.1		1.1		0.0		200.8
Beryllium		0.006	U	0.006	U			200.8
Cadmium	20	0.114		0.103		10.1		200.8
Chromium		1.04		0.92		12.2		200.8
Copper	20	53.5		53.6		0.2		200.8
Lead	20	1.23		1.21		1.6		200.8
Molybdenum	20	0.872		0.856		1.9		200.8
Nickel	20	2.21		2.30		4.0		200.8
Selenium		1.5		1.5		0.0		200.8
Silver	20	15.2		15.3		0.7		200.8
Thallium		0.014	J	0.011	J	24.0		200.8
Zinc	20	71.9		72.1		0.3		200.8

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

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LABORATORY CONTROL SAMPLE

Client: Kinnetic Laboratories, Incorpora **Service Request:** K1408351

Project No.: NA

Project Name: 516.01

Aqueous LCS Source: ALS MIXED **Solid LCS Source:**

Analyte	Aqueous (ug/L) True	Aqueous (ug/L) Found	Aqueous (ug/L) %R	Solid (mg/kg) True	Solid (mg/kg) Found	Solid (mg/kg) C	Solid (mg/kg) Limits	Solid (mg/kg) %R
Antimony	50	49.8	99.6					
Arsenic	50	48.9	97.8					
Beryllium	2.5	2.39	95.6					
Cadmium	25	24.9	99.6					
Chromium	10	9.63	96.3					
Copper	12.5	11.8	94.4					
Lead	50	50.2	100.4					
Molybdenum	20	18.8	94.0					
Nickel	25	23.7	94.8					
Selenium	50	51.5	103.0					
Silver	12.5	12.2	97.6					
Thallium	50	51.5	103.0					
Zinc	25	24.6	98.4					

APPENDIX B

Toxic Pollutant and Pesticide Monitoring, August Sampling

B2 Enterococci

Anchorage Water & Wastewater Utility, Asplund Laboratory

APPENDIX C

ANCHORAGE WATER AND WASTEWATER UTILITY

WATER QUALITY SECTION

Analytical Report

Date collected	Labworks ID	Sample ID	Sample Location	Parameter	Result	Unit	Analyst
8/4/14	AB01054	Effluent 1 Rep 1	Pt. Woronzof WWTF - F.Effluent	Enterococci - Chromogenic	**63**	mpn/100 mL	S. TRASK
8/4/14	AB01055	Effluent 1 Rep 2	Pt. Woronzof WWTF - F.Effluent	Enterococci - Chromogenic	**30**	mpn/100 mL	S. TRASK
8/4/14	AB01056	Effluent 2 Rep 1	Pt. Woronzof WWTF - F.Effluent	Enterococci - Chromogenic	**30**	mpn/100 mL	S. TRASK
8/4/14	AB01057	Effluent 2 Rep 2	Pt. Woronzof WWTF - F.Effluent	Enterococci - Chromogenic	**41**	mpn/100 mL	S. TRASK

Reported by: _____ Date: 10/16/2014

Paul W. Smith, Water Quality Analyst

APPENDIX C

Receiving Water Quality Monitoring

C1 Total Suspended Solids and Cyanide

ALS Environmental &
Anchorage Water & Wastewater Utility, Asplund Laboratory

ANCHORAGE WATER AND WASTEWATER UTILITY

WATER QUALITY SECTION

Analytical Report

ɔronzof Receiving Water ł

Date collected	Labworks ID	Sample ID	Sample Location	Parameter	Result	Unit	Analyst
6/11/14	AB00402	MOA14TSS001	F1-1S	Total Suspended Solids (TSS)	**252**	mg/L	WWAJJ1
6/11/14	AB00403	MOA14TSS002	F1-2S	Total Suspended Solids (TSS)	**296**	mg/L	WWAJJ1
6/11/14	AB00404	MOA14TSS003	F1-3S	Total Suspended Solids (TSS)	**262**	mg/L	WWAJJ1
6/12/14	AB00405	MOA14TSS004	C1-1S	Total Suspended Solids (TSS)	**150**	mg/L	WWAJJ1
6/12/14	AB00406	MOA14TSS005	C1-2S	Total Suspended Solids (TSS)	**124**	mg/L	WWAJJ1
6/12/14	AB00407	MOA14TSS006	C1-2S	Total Suspended Solids (TSS)	**118**	mg/L	WWAJJ1
6/12/14	AB00408	MOA14TSS007	C1-3S	Total Suspended Solids (TSS)	**914**	mg/L	WWAJJ1
6/11/14	AB00409	MOA14TSS008	Pt. Woronzof WWTF - F.Effluent	Total Suspended Solids (TSS)	**46**	mg/L	WWAJJ1

Reported by: _____ Date: 10/16/2014

Paul W. Smith, Water Quality Analyst

ALS Environmental
ALS Group USA, Corp.
1317 South 13th Avenue
Kelso, WA 98626
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F: +1 360 636 1068
www.alsglobal.com

July 2, 2014 Analytical Report for Service Request No: K1406019

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.02

Dear Gary:

Enclosed are the results of the samples submitted to our laboratory on June 14, 2014. For your reference, these analyses have been assigned our service request number K1406019.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/mj

RIGHT SOLUTIONS | RIGHT PARTNER

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	4704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories, Incorporated	**Service Request No.:**	K1406019
Project:	516.01	**Date Received:**	06/14/14
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Matrix/Duplicate Matrix Spike (MS/DMS).

Sample Receipt

Seven water samples were received for analysis at ALS Environmental on 06/14/14. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

Total Cyanide by Standard Method 4500-CN-E:
The matrix spike recoveries for sample Batch QC were outside control criteria because of suspected matrix interference. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. No further corrective action was taken.

No other anomalies associated with the analysis of these samples were observed.

Approved by_____

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax K1406019

Required Completion Date: 30 days.	P.O. #: AK14-1003	KLI Proj. #:516.02

ANALYSIS TYPE: Total Cyanide (SM 4500-CN E Mod). Detection limit <1 µg/L

MATRIX: Sea Water	**Preservative:** NaOH to ph 12, 6°C F1-1 sample contains ascorbic acid.	**Type of Container:** 500ml HDPE

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14TCN001	F1-1S	1	6/11/14 1335		
MOA14TCN002	F1-2S	1	6/11 1405		
MOA14TCN003	F1-3S	1	6/11/14 1420		
MOA14TCN004	C1-1S	1	6/12 1415		
MOA14TCN005	C1-2S	1	6/12 1435		
MOA14TCN006	C1-2S	1	6/12 1435		
MOA14TCN007	C1-3S	1	6/12 1505		

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6/13/14 1300	Fed Ex	[signature] 025	6/14/14 0845

SAMPLED BY (NAME/SIGNATURE): [signature]

C:\Projects\MOA\MOA14\COCs\RecWater

PC HH

Cooler Receipt and Preservation Form

Client / Project: KINNETIC Service Request K14 6019

Received: 6/14/14 Opened: 6/14/14 By: [illegible] Unloaded: 6/14/14 By: [illegible]

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 4 FRONT

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.9	2.6	N/P	—	-0.3	308		770301283826 (MASTER)	
4.1	3.9	N/P	—	-0.2	341			
2.2	2.1	1.0	0.9	-0.1	316			
4.5	4.6	3.2	3.3	0.1	342			

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406019
Project:		**Date Collected:**	06/11/14 - 06/12/14
Sample Matrix:	Ocean Water	**Date Received:**	06/14/14
Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA

Cyanide, Total

Sample Name	Lab Code	Result		MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
MOA14TCN001	K1406019-001	ND	U	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
MOA14TCN002	K1406019-002	ND	U	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
MOA14TCN003	K1406019-003	ND	U	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
MOA14TCN004	K1406019-004	ND	U	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
MOA14TCN005	K1406019-005	ND	U	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
MOA14TCN006	K1406019-006	ND	U	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
MOA14TCN007	K1406019-007	ND	U	0.0047	0.0009	1	06/18/14 09:53	6/17/14	
Method Blank	K1406019-MB	ND	U	0.0047	0.0009	1	06/18/14 09:53	6/17/14	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406019
Project		**Date Collected:**	NA
Sample Matrix:	Ocean Water	**Date Received:**	NA
		Date Analyzed:	06/18/14

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1406678-03	**Basis:**	NA

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample KQ1406678-03DUP Result	Average	RPD	RPD Limit
Cyanide, Total	SM 4500-CN- E	0.0047	0.0009	ND	ND	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406019
Project:		**Date Collected:**	N/A
Sample Matrix:	Ocean Water	**Date Received:**	N/A
		Date Analyzed:	06/18/14
		Date Extracted:	06/17/14

Duplicate Matrix Spike Summary
Cyanide, Total

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1406678-03	**Basis:**	NA
Analysis Method:	SM 4500-CN- E		
Prep Method:	SM 4500-CN-C		

		Matrix Spike KQ1406678-03MS			**Duplicate Matrix Spike** KQ1406678-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Cyanide, Total	ND U	ND	0.100	0 *	ND	0.100	0 *	23-148	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406019
Project:		**Date Analyzed:**	06/18/14
Sample Matrix:	Ocean Water	**Date Extracted:**	06/17/14

Lab Control Sample Summary
Cyanide, Total

Analysis Method:	SM 4500-CN- E	**Units:**	mg/L
Prep Method:	SM 4500-CN-C	**Basis:**	NA
		Analysis Lot:	397714

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1406019-LCS	0.152	0.150	101	84-115

APPENDIX C

Receiving Water Quality Monitoring

C2 Aromatic Hydrocarbons and Color

ALS Environmental & Analytica Environmental Laboratories

ALS Environmental
ALS Group USA, Corp.
1317 South 13th Avenue
Kelso, WA 98626
T: +1 360 577 7222
F: +1 360 636 1068
www.alsglobal.com

July 2, 2014 Analytical Report for Service Request No: K1406022

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 516.02

Dear Gary:

Enclosed are the results of the samples submitted to our laboratory on June 14, 2014. For your reference, these analyses have been assigned our service request number K1406022.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/mj

RIGHT SOLUTIONS | RIGHT PARTNER

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	4704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories, Incorporated	**Service Request No.:**	K1406022
Project:	516.02	**Date Received:**	06/14/14
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

Nine water samples were received for analysis at ALS Environmental on 06/14/14. The following discrepancies were noted upon initial sample inspection. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Volatile Organic Compounds by EPA Method 624

Calibration Verification Exceptions:
The ALS minimum relative response factor criterion for 2-Butanone (MEK) was not met in Continuing Calibration Verification (CCV) J:\MS23\0617F003.D In accordance with ALS standard operating procedures, a Method Reporting Limit (MRL) check standard containing the analyte of concern was analyzed each day of analysis. The MRL check standard verified instrument sensitivity was adequate to detect the analyte at the MRL on the day of analysis. Because the sensitivity was shown to be adequate to detect the compound in question the data quality was not significantly affected. No further corrective action was appropriate.

Matrix Spike Recovery Exceptions:
The matrix spike recoveries of m,p-Xylenes and o-Xylene for sample MOA14VOA006 were outside control criteria. Recoveries in the Laboratory Control Sample (LCS) were acceptable, which indicated the analytical batch was in control. The matrix spike outliers suggested a potential low bias in this matrix. No further corrective action was appropriate.

No other anomalies associated with the analysis of this sample were observed.

Approved by_____

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. K1406022 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion Date: 30 days.	P.O. #: AK14-1003	KLI Proj. #:516.02

ANALYSIS TYPE: : EPA 624, report EPA 602 list plus xylenes. Detection limit 0.5 µg/L.

MATRIX: Water	**Preservative:** HCL, F1-1 sample contains ascorbic acid. 6°C	**Type of Container:** 40 ml glass

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14VOA001	F1-1S	3	6/11/14 1335		
MOA14VOA002	F1-2S	3	6/11/14 1405		
MOA14VOA003	F1-2S	3	6/11/14 1405		
MOA14VOA004	F1-3S	3	6/11/14 1420		
MOA14VOA005	C1-1S	3	6/12/14 1415		
MOA14VOA006	C1-2S	9	6/12/14 1435		
MOA14VOA007	C1-3S	3	6/12/14 1505		
MOA14VOA009	C-STATION	3	6/12/14 1435		
MOA14VOA010	TRIP BLANK	4	NA		

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6/13 1300	Fed Ex	[signature] ALS	6/14/14 0845

SAMPLED BY (NAME/SIGNATURE): [signature]

C:\Projects\MOA\MOA14\COCs\RecWater

PC H17

Cooler Receipt and Preservation Form

Client / Project: KINNETIC Service Request K14 6022

Received: 6/14/14 Opened: 6/14/14 By: [illegible] Unloaded: 6/14/14 By: [illegible]

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 4 FRONT
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.9	2.6	N/P	—	-0.3	308		770301283826 (MASTER)	
4.1	3.9	N/P	—	-0.2	341			
2.2	2.1	1.0	0.9	-0.1	316			
4.5	4.6	3.2	3.3	0.1	342			

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Page ____ *of* ____

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOA001	**Units:**	ug/L
Lab Code:	K1406022-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	**0.11**	J	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	**1.4**		0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	**0.090**	J	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	**0.29**	J	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	**0.13**	J	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	117	76-132	06/17/14	Acceptable
Toluene-d8	98	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	90	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOA002	**Units:**	ug/L
Lab Code:	K1406022-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	**0.050**	J	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	**0.27**	J	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	**0.030**	J	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	**0.030**	J	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	115	76-132	06/17/14	Acceptable
Toluene-d8	98	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	89	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOA003	**Units:**	ug/L
Lab Code:	K1406022-003	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	**0.20**	J	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	ND	U	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	**0.030**	J	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	115	76-132	06/17/14	Acceptable
Toluene-d8	98	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	90	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOA004	**Units:**	ug/L
Lab Code:	K1406022-004	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	**0.040**	J	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	**0.25**	J	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	**0.030**	J	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	**0.030**	J	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	114	76-132	06/17/14	Acceptable
Toluene-d8	99	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	88	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Collected:**	06/12/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOA005	**Units:**	ug/L
Lab Code:	K1406022-005	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	**0.070**	J	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	ND	U	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	ND	U	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	114	76-132	06/17/14	Acceptable
Toluene-d8	99	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	88	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Collected:**	06/12/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOA006	**Units:**	ug/L
Lab Code:	K1406022-006	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	**0.10**	J	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	ND	U	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	ND	U	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	114	76-132	06/17/14	Acceptable
Toluene-d8	99	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	90	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Collected:**	06/12/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOA007	**Units:**	ug/L
Lab Code:	K1406022-007	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	ND	U	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	ND	U	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	116	76-132	06/17/14	Acceptable
Toluene-d8	98	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	89	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Collected:**	06/12/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOA009	**Units:**	ug/L
Lab Code:	K1406022-008	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	**0.25**	J	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	**0.36**	J	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	ND	U	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	**0.15**	J	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	**0.26**	J	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	115	76-132	06/17/14	Acceptable
Toluene-d8	98	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	89	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOA010	**Units:**	ug/L
Lab Code:	K1406022-009	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	ND	U	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	ND	U	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	112	76-132	06/17/14	Acceptable
Toluene-d8	98	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	89	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1405901-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	ND	U	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	ND	U	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	112	76-132	06/17/14	Acceptable
Toluene-d8	98	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	90	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406022
Project: 516.02
Sample Matrix: Water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: METHOD **Units:** Percent
Analysis Method: 624 **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MOA14VOA001	K1406022-001	117	98	90
MOA14VOA002	K1406022-002	115	98	89
MOA14VOA003	K1406022-003	115	98	90
MOA14VOA004	K1406022-004	114	99	88
MOA14VOA005	K1406022-005	114	99	88
MOA14VOA006	K1406022-006	114	99	90
MOA14VOA007	K1406022-007	116	98	89
MOA14VOA009	K1406022-008	115	98	89
MOA14VOA010	K1406022-009	112	98	89
Method Blank	KWG1405901-4	112	98	90
MOA14VOA006MS	KWG1405901-1	106	105	98
MOA14VOA006DMS	KWG1405901-2	109	106	100
Lab Control Sample	KWG1405901-3	109	106	99

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	76-132
Sur2	=	Toluene-d8	80-120
Sur3	=	4-Bromofluorobenzene	68-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Extracted:**	06/17/2014
Sample Matrix:	Water	**Date Analyzed:**	06/17/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	MOA14VOA006	**Units:**	ug/L
Lab Code:	K1406022-006	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624	**Extraction Lot:**	KWG1405901

		MOA14VOA006MS KWG1405901-1 Matrix Spike				MOA14VOA006DMS KWG1405901-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Benzene	ND	8.64	10.0	86		8.97	10.0	90	37-151	4	30
Toluene	0.10	8.29	10.0	82		8.71	10.0	86	47-150	5	30
Ethylbenzene	ND	7.16	10.0	72		7.57	10.0	76	37-162	6	30
m,p-Xylenes	ND	15.0	20.0	75	*	15.9	20.0	80	80-126	6	30
o-Xylene	ND	7.13	10.0	71	*	7.76	10.0	78	78-120	8	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406022
Project:	516.02	**Date Extracted:**	06/17/2014
Sample Matrix:	Water	**Date Analyzed:**	06/17/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1405901

	Lab Control Sample KWG1405901-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Benzene	10.6	10.0	106	37-151
Toluene	10.3	10.0	103	47-150
Ethylbenzene	9.05	10.0	91	37-162
m,p-Xylenes	18.9	20.0	95	80-126
o-Xylene	8.77	10.0	88	78-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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July 2, 2014 Analytical Report for Service Request No: K1406020

Gary Lawley
Kinnetic Laboratories, Incorporated
704 W. 2nd Ave
Anchorage, AK 99501

RE: 506.02

Dear Gary:

Enclosed are the results of the sample submitted to our laboratory on June 14, 2014. For your reference, these analyses have been assigned our service request number K1406020.

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 call if you have any questions. My extension is 3364. You may also contact me via Email at Howard.Holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Howard Holmes
Project Manager

HH/mj

RIGHT SOLUTIONS | RIGHT PARTNER

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 DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	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	2286
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L12-28
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Georgia DNR	http://www.gaepd.org/Documents/techguide_pcb.html#cel	881
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L12-27
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	3016
Maine DHS	Not available	WA0035
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA35
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	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	WA200001
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	4704427-08-TX
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C1203
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
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/anlayte is offered by that state.

ALS ENVIRONMENTAL

Client:	Kinnetic Laboratories, Incorporated	**Service Request No.:**	K1406020
Project:	506.02	**Date Received:**	06/14/14
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS), and Laboratory/Duplicate Laboratory Control Sample (LCS/DLCS).

Sample Receipt

One water sample was received for analysis at ALS Environmental on 06/14/14. The sample was received in good condition and consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4ºC upon receipt at the laboratory.

Volatile Organic Compounds by EPA Method 624

Calibration Verification Exceptions:
The ALS minimum relative response factor criterion for 2-Butanone (MEK) was not met in Continuing Calibration Verification (CCV) J:\MS23\0617F003.D In accordance with ALS standard operating procedures, a Method Reporting Limit (MRL) check standard containing the analyte of concern was analyzed each day of analysis. The MRL check standard verified instrument sensitivity was adequate to detect the analyte at the MRL on the day of analysis. Because the sensitivity was shown to be adequate to detect the compound in question the data quality was not significantly affected. No further corrective action was appropriate.

Matrix Spike Recovery Exceptions:
The matrix spike recoveries of m,p-Xylenes and o-Xylene for sample Batch QCMS were outside control criteria. Recoveries in the Laboratory Control Sample (LCS) were acceptable, which indicated the analytical batch was in control. The matrix spike outliers suggested a potential low bias in this matrix. No further corrective action was appropriate.

No other anomalies associated with the analysis of this sample were observed.

Approved by_____

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**
ALS Environmental 1317 South 13th Ave. Kelso, Washington 98626 Attn: Howard Holmes Ph: 1-360-577-7222	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax K1406020

Required Completion Date: 30 days.	P.O. #: AK14-1003	KLI Proj. #:506.02

ANALYSIS TYPE: EPA 624 report EPA 602 list plus xylenes. Detection limit 0.5 µg/L. Report results to MDL.

MATRIX: Water	**Preservative:** HCL, 6°C Effluent sample contains L-Ascorbic Acid	**Type of Container:** 40 ml glass

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14VOA008	Effluent	3	6/11/14 1300		small bubble in vial #1

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6/12/14 0950	hand	[signature]	6/12 0950
[signature]	6/13 1300	Fed Ex	[signature] MS	6/14/14 0945

SAMPLED BY (NAME/SIGNATURE): [signature]

C:\Projects\MOA\MOA14\COCs\SummerDry

PC HH

Cooler Receipt and Preservation Form

Client / Project: KINNETIC Service Request K14 0620

Received: 6/14/14 Opened: 6/14/14 By: A Unloaded: 6/14/14 By: A

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y N If yes, how many and where? 4 FRONT

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
2.9	2.6	N/P	—	-0.3	308		770301283926 (MASTER)	
4.1	3.9	N/P	—	-0.2	341			
2.2	2.1	1.0	0.9	-0.1	316			
4.5	4.6	3.2	3.3	0.1	342			

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA Y N
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

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

Page ____ *of* ____

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406020
Project:	506.02	**Date Collected:**	06/11/2014
Sample Matrix:	Water	**Date Received:**	06/14/2014

Volatile Organic Compounds

Sample Name:	MOA14VOA008	**Units:**	ug/L
Lab Code:	K1406020-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	**0.14**	J	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	**5.8**		0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	**0.29**	J	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	**0.75**	J	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	**0.34**	J	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	114	76-132	06/17/14	Acceptable
Toluene-d8	96	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	93	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406020
Project:	506.02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1405901-4	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzene	ND	U	0.50	0.031	1	06/17/14	06/17/14	KWG1405901	
Toluene	ND	U	0.50	0.032	1	06/17/14	06/17/14	KWG1405901	
Ethylbenzene	ND	U	0.50	0.030	1	06/17/14	06/17/14	KWG1405901	
m,p-Xylenes	ND	U	1.0	0.14	1	06/17/14	06/17/14	KWG1405901	
o-Xylene	ND	U	0.50	0.024	1	06/17/14	06/17/14	KWG1405901	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	112	76-132	06/17/14	Acceptable
Toluene-d8	98	80-120	06/17/14	Acceptable
4-Bromofluorobenzene	90	68-120	06/17/14	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Kinnetic Laboratories, Incorporated **Service Request:** K1406020
Project: 506.02
Sample Matrix: Water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: METHOD **Units:** Percent
Analysis Method: 624 **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
MOA14VOA008	K1406020-001	114	96	93
Batch QC	K1406022-006	114	99	90
Method Blank	KWG1405901-4	112	98	90
Batch QCMS	KWG1405901-1	106	105	98
Batch QCDMS	KWG1405901-2	109	106	100
Lab Control Sample	KWG1405901-3	109	106	99

Surrogate Recovery Control Limits (%)

Sur1	=	Dibromofluoromethane	76-132
Sur2	=	Toluene-d8	80-120
Sur3	=	4-Bromofluorobenzene	68-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406020
Project:	506.02	**Date Extracted:**	06/17/2014
Sample Matrix:	Water	**Date Analyzed:**	06/17/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1406022-006	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	624	**Extraction Lot:**	KWG1405901

		Batch QCMS KWG1405901-1 Matrix Spike				Batch QCDMS KWG1405901-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Benzene	ND	8.64	10.0	86		8.97	10.0	90	37-151	4	30
Toluene	0.10	8.29	10.0	82		8.71	10.0	86	47-150	5	30
Ethylbenzene	ND	7.16	10.0	72		7.57	10.0	76	37-162	6	30
m,p-Xylenes	ND	15.0	20.0	75	*	15.9	20.0	80	80-126	6	30
o-Xylene	ND	7.13	10.0	71	*	7.76	10.0	78	78-120	8	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Kinnetic Laboratories, Incorporated	**Service Request:**	K1406020
Project:	506.02	**Date Extracted:**	06/17/2014
Sample Matrix:	Water	**Date Analyzed:**	06/17/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	624	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1405901

	Lab Control Sample KWG1405901-3 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Benzene	10.6	10.0	106	37-151
Toluene	10.3	10.0	103	47-150
Ethylbenzene	9.05	10.0	91	37-162
m,p-Xylenes	18.9	20.0	95	80-126
o-Xylene	8.77	10.0	88	78-120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytica Alaska Incorporated
website:
www.analyticagroup.com

ANALYTICA
Environmental Laboratories

6/24/2014

Kinnetic Laboratories
704 W. 2nd Avenue
Anchorage, AK 99501
Attn: Gary Lawley

Work Order #: A1406215
Date: 6/24/2014
Work ID: MOA Sampling Program 2014
Date Received: 6/12/2014

Sample Identification

Lab Sample Number	Client Description	Lab Sample Number	Client Description
A1406215-01	MOA14CLR001 / E1-1S	A1406215-02	MOA14CLR002 / E1-2S
A1406215-03	MOA14CLR003 / E1-3S	A1406215-04	MOA14CLR004 / E1-4S
A1406215-05	MOA14CLR005 / E2-1S	A1406215-06	MOA14CLR006 / E2-2S
A1406215-07	MOA14CLR007 / E2-3S	A1406215-08	MOA14CLR008 / E2-4S
A1406215-09	MOA14CLR009 / E3-1S	A1406215-10	MOA14CLR010 / E3-2S
A1406215-11	MOA14CLR011 / E3-3S	A1406215-12	MOA14CLR012 / E3-4S

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. Listings of data qualifiers, analytical codes, key dates, and QC relationships are provided at the end of the report.

Sincerely,

Claire K. Toon

Claire Toon
Project Manager

"The Science of Analysis, The Art of Service"

Case Narrative

Analytica Group, LLC - Anchorage

Work Order: A1406215

Samples were prepared and analyzed according to EPA or equivalent methods outlined in the following references:

Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005.

SAMPLE RECEIPT:
Twelve (12) samples were received on 6/12/2014 12:25:00 PM, at a temperature of 4.6°C, at Analytica-Anchorage. The samples were received in good condition and in order per chain of custody.

REVIEW FOR COMPLIANCE WITH ANALYTICA QA PLAN
A summary of our review is shown below.

All analytical results contained in this report have been reviewed under Analytica's internal quality assurance and quality control program. Any deviations in quality control parameters for specific analyses are noted in the following text. All method specifications were met for the following tests, unless otherwise noted:

Test Method: SM2120B - Color, Visual Comparison Method - True Color - Ocean Water

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR001 / E1-1S**

Matrix: Ocean Water

Collection Date: 6/11/2014 6:48:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-01A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR002 / E1-2S**

Matrix: Ocean Water

Collection Date: 6/11/2014 6:56:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-02A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR003 / E1-3S**

Matrix: Ocean Water

Collection Date: 6/11/2014 7:07:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-03A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR004 / E1-4S**

Matrix: Ocean Water

Collection Date: 6/11/2014 7:23:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-04A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR005 / E2-1S**

Matrix: Ocean Water

Collection Date: 6/11/2014 8:14:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-05A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR006 / E2-2S**

Matrix: Ocean Water

Collection Date: 6/11/2014 8:21:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-06A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR007 / E2-3S**

Matrix: Ocean Water

Collection Date: 6/11/2014 8:30:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-07A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**5.0**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR008 / E2-4S**

Matrix: Ocean Water

Collection Date: 6/11/2014 8:43:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-08A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR009 / E3-1S**

Matrix: Ocean Water

Collection Date: 6/11/2014 10:19:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-09A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR010 / E3-2S**

Matrix: Ocean Water

Collection Date: 6/11/2014 10:28:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-10A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR011 / E3-3S**

Matrix: Ocean Water

Collection Date: 6/11/2014 10:40:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-11A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**15**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR012 / E3-4S**

Matrix: Ocean Water

Collection Date: 6/11/2014 10:54:00AM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406215-12A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**5.0**		Color Unit	5.0	5.0	1

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Tests Run at: Analytica Environmental Laboratories - Anchorage, Alaska

Workorder (SDG): A1406215

Project: MOA Sampling Program 2014

Project Number:

Prep Batch: **A140619023**

QUALITY CONTROL REPORT

SAMPLE DUPLICATE REPORT

Analysis: SM2120B - Color, Visual Comparison Method - True Color

Base Sample: A1406215-10A
Prep Date: 6/12/2014

Samp. Anal. Date: 6/12/2014 1:30:00PM

DUP Anal. Date: 6/12/2014 1:30:00PM

Units: Color Unit

Matrix: Ocean Water

Analyte Name	SampResult	DUPRes.	RPD	RPDLim	Flag
Color, true	10.0	10.0	0.0	0	

Analysis: SM2120B - Color, Visual Comparison Method - True Color

Base Sample: A1406216-08A
Prep Date: 6/12/2014

Samp. Anal. Date: 6/12/2014 1:30:00PM

DUP Anal. Date: 6/12/2014 1:30:00PM

Units: Color Unit

Matrix: Ocean Water

Analyte Name	SampResult	DUPRes.	RPD	RPDLim	Flag
Color, true	ND	ND	0.0	0	

FOOTNOTES TO QC REPORT

Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.

Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.

Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.

Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little signifcance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: **Lab Project Number:**

Prep Date:

Lab Method Blank Id:
Prep Batch ID:

Method:

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

SampleNum	ClientSampleName	DataFile	AnalysisDate

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

DATA FLAGS AND DEFINITIONS

The PQL is the Method Quantitation Limit as defined by USACE.
Reporting Limit: Limit below which results are shown as "ND". This may be the PQL, MDL, or a value between. See the report conventions below.

Result Field:

ND = Not Detected at or above the Reporting Limit
NA = Analyte not applicable (see Case Narrative for discussion)

Qualifier Fields:

LOW = Recovery is below Lower Control Limit
HIGH = Recovery , RPD, or other parameter is above Upper Control Limit
E = Reported concentration is above the instrument calibration upper range

Organic Analysis Flags:

B = Analyte was detected in the laboratory method blank
J = Analyte was detected above MDL or Reporting Limit but below the Quant Limit (PQL)

Inorganic Analysis Flags:

J = Analyte was detected above the Reporting Limit but below the Quant Limit (PQL)
W = Post digestion spike did not meet criteria
S = Reported value determined by the Method of Standard Additions (MSA)

Other Flags may be applied. See Case Narrative for Description

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406215

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

REPORTING CONVENTIONS FOR THIS REPORT

A1406215

Test Pkg Name	Basis	# Sig Figs	Reporting Limit
2120B/2120B (Aqueous) - True Color	As Received		Report to PQL

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:** A1406215
Analytica Alaska Incorporated Analytica International Incorporated 4307 Arctic Blvd. Anchorage, AK 99503 (907) 258-2155	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax
Required Completion Date: 30 days.	P.O. #: AK14-1006 / KLI Proj. #:516.02

ANALYSIS TYPE: Color determination (SM 2120B).

MATRIX: Water | **Preservative:** None, 6°C | **Type of Container:** 250 ml HDPE

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14CLR001	E1-1S	1	6/11/14 0648		
MOA14CLR002	E1-2S	1	0656		
MOA14CLR003	E1-3S	1	0707		
MOA14CLR004	E1-4S	1	0723		
MOA14CLR005	E2-1S	1	0814		
MOA14CLR006	E2-2S	1	0821		
MOA14CLR007	E2-3S	1	0830		
MOA14CLR008	E2-4S	1	0843		
MOA14CLR009	E3-1S	1	1019		
MOA14CLR010	E3-2S	1	1028		
MOA14CLR011	E3-3S	1	1040		
MOA14CLR012	E3-4S	1	6/11/14 1054		

One in ten color samples should also be run in duplicate. Please report duplicates with a "D" or "DUP" appended to the SAMPLE ID.

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6/12/14 12:23	HAND	Michelle Spiegel-Freeman	6-12-14 @ 12:25

SAMPLED BY (NAME/SIGNATURE): _____

TEMP 4.6°C
83135#

C:\Projects\MOA\MOA14\COCs\RecWater

Analytica Alaska Incorporated
website:
www.analyticagroup.com

ANALYTICA
Environmental Laboratories

6/24/2014

Kinnetic Laboratories
704 W. 2nd Avenue
Anchorage, AK 99501
Attn: Gary Lawley

Work Order #: A1406216
Date: 6/24/2014
Work ID: MOA Sampling Program 2014
Date Received: 6/12/2014

Sample Identification

Lab Sample Number	Client Description	Lab Sample Number	Client Description
A1406216-01	MOA14CLR013 / F1-1S	A1406216-02	MOA14CLR014 / F1-2S
A1406216-03	MOA14CLR015 / F1-3S	A1406216-04	MOA14CLR016 / F1-4S
A1406216-05	MOA14CLR017 / F2-1S	A1406216-06	MOA14CLR018 / F2-2S
A1406216-07	MOA14CLR019 / F2-3S	A1406216-08	MOA14CLR020 / F2-4S
A1406216-09	MOA14CLR021 / F3-1S	A1406216-10	MOA14CLR022 / F3-2S
A1406216-11	MOA14CLR023 / F3-3S	A1406216-12	MOA14CLR024 / F3-4S

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. Listings of data qualifiers, analytical codes, key dates, and QC relationships are provided at the end of the report.

Sincerely,

Claire Toon
Project Manager

"The Science of Analysis, The Art of Service"

Case Narrative

Analytica Group, LLC - Anchorage

Work Order: A1406216

Samples were prepared and analyzed according to EPA or equivalent methods outlined in the following references:

Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005.

SAMPLE RECEIPT:
Twelve (12) samples were received on 6/12/2014 12:25:00 PM, at a temperature of 4.6°C, at Analytica-Anchorage. The samples were received in good condition and in order per chain of custody.

REVIEW FOR COMPLIANCE WITH ANALYTICA QA PLAN
A summary of our review is shown below.

All analytical results contained in this report have been reviewed under Analytica's internal quality assurance and quality control program. Any deviations in quality control parameters for specific analyses are noted in the following text. All method specifications were met for the following tests, unless otherwise noted:

Test Method: SM2120B - Color, Visual Comparison Method - True Color - Ocean Water

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR013 / F1-1S**

Matrix: Ocean Water

Collection Date: 6/11/2014 1:35:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-01A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**15**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR014 / F1-2S**

Matrix: Ocean Water

Collection Date: 6/11/2014 2:05:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-02A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR015 / F1-3S**

Matrix: Ocean Water

Collection Date: 6/11/2014 2:20:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-03A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR016 / F1-4S**

Matrix: Ocean Water

Collection Date: 6/11/2014 2:37:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-04A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR017 / F2-1S**

Matrix: Ocean Water

Collection Date: 6/11/2014 3:05:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-05A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		ND		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR018 / F2-2S**

Matrix: Ocean Water

Collection Date: 6/11/2014 3:11:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-06A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		ND		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR019 / F2-3S**

Matrix: Ocean Water

Collection Date: 6/11/2014 3:22:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-07A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		ND		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR020 / F2-4S**

Matrix: Ocean Water

Collection Date: 6/11/2014 3:50:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-08A	Analysis Date:	6/12/2014 1:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140619023		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		ND		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR021 / F3-1S**

Matrix: Ocean Water

Collection Date: 6/11/2014 4:20:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-09A	Analysis Date:	6/12/2014 3:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620002		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		ND		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR022 / F3-2S**

Matrix: Ocean Water

Collection Date: 6/11/2014 4:26:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-10A	Analysis Date:	6/12/2014 3:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620002		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		ND		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR023 / F3-3S**

Matrix: Ocean Water

Collection Date: 6/11/2014 4:37:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-11A	Analysis Date:	6/12/2014 3:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620002		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		ND		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR024 / F3-4S**

Matrix: Ocean Water

Collection Date: 6/11/2014 4:47:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406216-12A	Analysis Date:	6/12/2014 3:30:00PM
Prep Date:	6/12/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620002		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		ND		Color Unit	5.0	5.0	1

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Tests Run at: Analytica Environmental Laboratories - Anchorage, Alaska
Workorder (SDG): A1406216
Project: MOA Sampling Program 2014
Project Number:

QUALITY CONTROL REPORT

Prep Batch: **A140619023**

SAMPLE DUPLICATE REPORT

Analysis: SM2120B - Color, Visual Comparison Method - True Color
Base Sample: A1406215-10A
Prep Date: 6/12/2014

Samp. Anal. Date: 6/12/2014 1:30:00PM
DUP Anal. Date: 6/12/2014 1:30:00PM
Units: Color Unit
Matrix: Ocean Water

Analyte Name	SampResult	DUPRes.	RPD	RPDLim	Flag
Color, true	10.0	10.0	0.0	0	

Analysis: SM2120B - Color, Visual Comparison Method - True Color
Base Sample: A1406216-08A
Prep Date: 6/12/2014

Samp. Anal. Date: 6/12/2014 1:30:00PM
DUP Anal. Date: 6/12/2014 1:30:00PM
Units: Color Unit
Matrix: Ocean Water

Analyte Name	SampResult	DUPRes.	RPD	RPDLim	Flag
Color, true	ND	ND	0.0	0	

Prep Batch: **A140620002**

SAMPLE DUPLICATE REPORT

Analysis: SM2120B - Color, Visual Comparison Method - True Color
Base Sample: A1406216-12A
Prep Date: 6/12/2014

Samp. Anal. Date: 6/12/2014 3:30:00PM
DUP Anal. Date: 6/12/2014 3:30:00PM
Units: Color Unit
Matrix: Ocean Water

Analyte Name	SampResult	DUPRes.	RPD	RPDLim	Flag
Color, true	ND	ND	0.0	0	

FOOTNOTES TO QC REPORT

Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.

Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.

Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.

Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little signifcance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: **Lab Project Number:**

Prep Date:

Lab Method Blank Id:
Prep Batch ID:

Method:

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

SampleNum	ClientSampleName	DataFile	AnalysisDate

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

DATA FLAGS AND DEFINITIONS

The PQL is the Method Quantitation Limit as defined by USACE.
Reporting Limit: Limit below which results are shown as "ND". This may be the PQL, MDL, or a value between. See the report conventions below.

Result Field:

ND = Not Detected at or above the Reporting Limit
NA = Analyte not applicable (see Case Narrative for discussion)

Qualifier Fields:

LOW = Recovery is below Lower Control Limit
HIGH = Recovery , RPD, or other parameter is above Upper Control Limit
E = Reported concentration is above the instrument calibration upper range

Organic Analysis Flags:

B = Analyte was detected in the laboratory method blank
J = Analyte was detected above MDL or Reporting Limit but below the Quant Limit (PQL)

Inorganic Analysis Flags:

J = Analyte was detected above the Reporting Limit but below the Quant Limit (PQL)
W = Post digestion spike did not meet criteria
S = Reported value determined by the Method of Standard Additions (MSA)

Other Flags may be applied. See Case Narrative for Description

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406216

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

REPORTING CONVENTIONS FOR THIS REPORT

A1406216

Test Pkg Name	Basis	# Sig Figs	Reporting Limit
2120B/2120B (Aqueous) - True Color	As Received		Report to PQL

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:** A1406Q16
Analytica Alaska Incorporated Analytica International Incorporated 4307 Arctic Blvd. Anchorage, AK 99503 (907) 258-2155	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax
Required Completion Date: 30 days.	P.O. #: AK14-1006 / KLI Proj. #:516.02

ANALYSIS TYPE: Color determination (SM 2120B).

MATRIX: Water | **Preservative:** None, 6°C | **Type of Container:** 250 ml HDPE

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14CLR013	F1-1S	1	6/11/14 1335		
MOA14CLR014	F1-2S	1	1405		
MOA14CLR015	F1-3S	1	1420		
MOA14CLR016	F1-4S	1	1437		
MOA14CLR017	F2-1S	1	1505		
MOA14CLR018	F2-2S	1	1511		
MOA14CLR019	F2-3S	1	1522		
MOA14CLR020	F2-4S	1	1550		
MOA14CLR021	F3-1S	1	1620		
MOA14CLR022	F3-2S	1	1626		
MOA14CLR023	F3-3S	1	1637		
MOA14CLR024	F3-4S	1	6/11/14 1647		

One in ten color samples should also be run in duplicate. Please report duplicates with a "D" or "DUP" appended to the SAMPLE ID.

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6/12/14 12:23	HAND	[signature]	6-12-14 @12:25pm

SAMPLED BY (NAME/SIGNATURE): _____

TEMP - 4.6°C
83135#

C:\Projects\MOA\MOA14\COCs\RecWater

Analytica Alaska Incorporated
website:
www.analyticagroup.com

ANALYTICA
Environmental Laboratories

6/25/2014

Kinnetic Laboratories
704 W. 2nd Avenue
Anchorage, AK 99501
Attn: Gary Lawley

Work Order #: A1406223
Date: 6/25/2014
Work ID: MOA Sampling Program 2014
Date Received: 6/13/2014

Sample Identification

Lab Sample Number	Client Description	Lab Sample Number	Client Description
A1406223-01	MOA14CLR025 / C1-1S	A1406223-02	MOA14CLR026 / C1-2S
A1406223-03	MOA14CLR027 / C1-3S	A1406223-04	MOA14CLR028 / C1-4S
A1406223-05	MOA14CLR029 / C2-1S	A1406223-06	MOA14CLR030 / C2-2S(A)
A1406223-07	MOA14CLR031 / C2-2S(B)	A1406223-08	MOA14CLR032 / C2-2S(C)
A1406223-09	MOA14CLR033 / C2-3S	A1406223-10	MOA14CLR034 / C2-4S
A1406223-11	MOA14CLR035 / C3-1S(A)	A1406223-12	MOA14CLR036 / C3-1S(B)
A1406223-13	MOA14CLR037 / C3-1S(C)	A1406223-14	MOA14CLR038 / C3-2S
A1406223-15	MOA14CLR039 / C3-3S	A1406223-16	MOA14CLR040 / C3-4S

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. Listings of data qualifiers, analytical codes, key dates, and QC relationships are provided at the end of the report.

Sincerely,

Claire Toon
Project Manager

"The Science of Analysis, The Art of Service"

Case Narrative

Analytica Group, LLC - Anchorage

Work Order: A1406223

Samples were prepared and analyzed according to EPA or equivalent methods outlined in the following references:

Standard Methods for the Examination of Water and Wastewater, 21st Edition, 2005.

SAMPLE RECEIPT:
Sixteen (16) samples were received on 6/13/2014 1:32:00 PM, at a temperature of 5.2°C, at Analytica-Anchorage. The samples were received in good condition and in order per chain of custody.

REVIEW FOR COMPLIANCE WITH ANALYTICA QA PLAN
A summary of our review is shown below.

All analytical results contained in this report have been reviewed under Analytica's internal quality assurance and quality control program. Any deviations in quality control parameters for specific analyses are noted in the following text. All method specifications were met for the following tests, unless otherwise noted:

Test Method: SM2120B - Color, Visual Comparison Method - True Color - Ocean Water

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR025 / C1-1S**

Matrix: Ocean Water

Collection Date: 6/12/2014 2:15:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-01A	Analysis Date:	6/13/2014 3:00:00PM
Prep Date:	6/13/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620003		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**15**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR026 / C1-2S**

Matrix: Ocean Water

Collection Date: 6/12/2014 2:35:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-02A	Analysis Date:	6/13/2014 3:00:00PM
Prep Date:	6/13/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620003		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR027 / C1-3S**

Matrix: Ocean Water

Collection Date: 6/12/2014 3:05:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-03A	Analysis Date:	6/13/2014 3:00:00PM
Prep Date:	6/13/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620003		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR028 / C1-4S**

Matrix: Ocean Water

Collection Date: 6/12/2014 3:22:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-04A	Analysis Date:	6/13/2014 3:00:00PM
Prep Date:	6/13/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620003		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR029 / C2-1S**

Matrix: Ocean Water

Collection Date: 6/12/2014 3:57:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-05A	Analysis Date:	6/13/2014 3:00:00PM
Prep Date:	6/13/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620003		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR030 / C2-2S(A)**

Matrix: Ocean Water

Collection Date: 6/12/2014 4:07:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-06A	Analysis Date:	6/13/2014 3:00:00PM
Prep Date:	6/13/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620003		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**15**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR031 / C2-2S(B)**

Matrix: Ocean Water

Collection Date: 6/12/2014 4:07:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-07A	Analysis Date:	6/13/2014 3:00:00PM
Prep Date:	6/13/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620003		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR032 / C2-2S(C)**

Matrix: Ocean Water

Collection Date: 6/12/2014 4:07:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-08A	Analysis Date:	6/13/2014 3:00:00PM
Prep Date:	6/13/2014	Instrument:	Visual Analysi
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620003		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**5.0**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR033 / C2-3S**

Matrix: Ocean Water

Collection Date: 6/12/2014 4:29:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-09A	Analysis Date:	6/13/2014 3:45:00PM
Prep Date:	6/13/2014	Instrument:	Micro
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620004		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR034 / C2-4S**

Matrix: Ocean Water

Collection Date: 6/12/2014 4:55:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-10A	Analysis Date:	6/13/2014 3:45:00PM
Prep Date:	6/13/2014	Instrument:	Micro
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620004		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR035 / C3-1S(A)**

Matrix: Ocean Water

Collection Date: 6/12/2014 5:48:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-11A	Analysis Date:	6/13/2014 3:45:00PM
Prep Date:	6/13/2014	Instrument:	Micro
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620004		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR036 / C3-1S(B)**

Matrix: Ocean Water

Collection Date: 6/12/2014 5:48:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-12A	Analysis Date:	6/13/2014 3:45:00PM
Prep Date:	6/13/2014	Instrument:	Micro
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620004		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**5.0**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR037 / C3-1S(C)**

Matrix: Ocean Water

Collection Date: 6/12/2014 5:48:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-13A	Analysis Date:	6/13/2014 3:45:00PM
Prep Date:	6/13/2014	Instrument:	Micro
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620004		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR038 / C3-2S**

Matrix: Ocean Water

Collection Date: 6/12/2014 6:02:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-14A	Analysis Date:	6/13/2014 3:45:00PM
Prep Date:	6/13/2014	Instrument:	Micro
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620004		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR039 / C3-3S**

Matrix: Ocean Water

Collection Date: 6/12/2014 6:12:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-15A	Analysis Date:	6/13/2014 3:45:00PM
Prep Date:	6/13/2014	Instrument:	Micro
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620004		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Report Section: Client Sample Report

Client Sample Name: **MOA14CLR040 / C3-4S**

Matrix: Ocean Water

Collection Date: 6/12/2014 6:25:00PM

The following test was conducted by: Analytica - Anchorage

Lab Sample Number:	A1406223-16A	Analysis Date:	6/13/2014 3:45:00PM
Prep Date:	6/13/2014	Instrument:	Micro
Analytical Method ID:	SM2120B - Color, Visual Comparison Method - True Color	File Name:	
Prep Method ID:	Color	Dilution Factor:	1
Prep Batch Number:	A140620004		
Report Basis:	As Received	Analyst Initials:	KM
Sample prep wt./vol:	50.00 ml	Prep Extract Vol:	50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	Rerun #:
Color, true		**10**		Color Unit	5.0	5.0	1

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

Tests Run at: Analytica Environmental Laboratories - Anchorage, Alaska

Workorder (SDG): A1406223

Project: MOA Sampling Program 2014

Project Number:

QUALITY CONTROL REPORT

Prep Batch: **A140620003**

SAMPLE DUPLICATE REPORT

Analysis: SM2120B - Color, Visual Comparison Method - True Color

Base Sample: A1406223-08A
Prep Date: 6/13/2014

Samp. Anal. Date: 6/13/2014 3:00:00PM

DUP Anal. Date: 6/13/2014 3:00:00PM

Units: Color Unit

Matrix: Ocean Water

Analyte Name	SampResult	DUPRes.	RPD	RPDLim	Flag
Color, true	5.00	5.00	0.0	0	

Prep Batch: **A140620004**

SAMPLE DUPLICATE REPORT

Analysis: SM2120B - Color, Visual Comparison Method - True Color

Base Sample: A1406223-16A
Prep Date: 6/13/2014

Samp. Anal. Date: 6/13/2014 3:45:00PM

DUP Anal. Date: 6/13/2014 3:45:00PM

Units: Color Unit

Matrix: Ocean Water

Analyte Name	SampResult	DUPRes.	RPD	RPDLim	Flag
Color, true	10.0	10.0	0.0	0	

FOOTNOTES TO QC REPORT

Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.

Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.

Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.

Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little signifcance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: **Lab Project Number:**

Prep Date:

Lab Method Blank Id:
Prep Batch ID:

Method:

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

SampleNum	ClientSampleName	DataFile	AnalysisDate

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

DATA FLAGS AND DEFINITIONS

The PQL is the Method Quantitation Limit as defined by USACE.
Reporting Limit: Limit below which results are shown as "ND". This may be the PQL, MDL, or a value between. See the report conventions below.

Result Field:

ND = Not Detected at or above the Reporting Limit
NA = Analyte not applicable (see Case Narrative for discussion)

Qualifier Fields:

LOW = Recovery is below Lower Control Limit
HIGH = Recovery , RPD, or other parameter is above Upper Control Limit
E = Reported concentration is above the instrument calibration upper range

Organic Analysis Flags:

B = Analyte was detected in the laboratory method blank
J = Analyte was detected above MDL or Reporting Limit but below the Quant Limit (PQL)

Inorganic Analysis Flags:

J = Analyte was detected above the Reporting Limit but below the Quant Limit (PQL)
W = Post digestion spike did not meet criteria
S = Reported value determined by the Method of Standard Additions (MSA)

Other Flags may be applied. See Case Narrative for Description

Detailed Analytical Report

Analytica Group, LLC - Anchorage

Workorder (SDG): A1406223

Project: **MOA Sampling Program 2014**

Client: **Kinnetic Laboratories**

Client Project Number: **KLI Proj: 516.02**

REPORTING CONVENTIONS FOR THIS REPORT

A1406223

Test Pkg Name	Basis	# Sig Figs	Reporting Limit
2120B/2120B (Aqueous) - True Color	As Received		Report to PQL

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:** A1406223
Analytica Alaska Incorporated Analytica International Incorporated 4307 Arctic Blvd. Anchorage, AK 99503 (907) 258-2155	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax
Required Completion Date: 30 days.	P.O. #: AK14-1006 / KLI Proj. #:516.02

ANALYSIS TYPE: Color determination (SM 2120B).

MATRIX: Water | **Preservative:** None, 6°C | **Type of Container:** 250 ml HDPE

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14CLR025	C1-1S	1	6/12/14 1415		
MOA14CLR026	C1-2S	1	1435		
MOA14CLR027	C1-3S	1	1505		
MOA14CLR028	C1-4S	1	1522		
MOA14CLR029	C2-1S	1	1557		
MOA14CLR030	C2-2S(A)	1	1607		
MOA14CLR031	C2-2S(B)	1	1607		
MOA14CLR032	C2-2S(C)	1	1607		
MOA14CLR033	C2-3S	1	1629		
MOA14CLR034	C2-4S	1	1655		
MOA14CLR035	C3-1S(A)	1	1748		
MOA14CLR036	C3-1S(B)	1	1748		
MOA14CLR037	C3-1S(C)	1	1748		
MOA14CLR038	C3-2S	1	1802		
MOA14CLR039	C3-3S	1	1812		
MOA14CLR040	C3-4S	1	1825		

One in ten color samples should also be run in duplicate. Please report duplicates with a "D" or "DUP" appended to the SAMPLE ID.

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6/13/14 1332	hand	[signature]	6/13/14 1332

SAMPLED BY (NAME/SIGNATURE): [signature] 5.2(83135)

C:\Projects\MOA\MOA14\COCs\RecWater

APPENDIX C

Receiving Water Quality Monitoring

C3 Polycyclic Aromatic Hydrocarbons

TDI-Brooks International, Inc.

Privileged and Confidential Attorney Client Communication/Attorney Work Product

TDI - BROOKS INTERNATIONAL, INC.
B&B Laboratories, Inc.
College Station, TX

Kinnetic Laboratories, Inc.
Asplund WPCF Project
June 11, 2014 and June 12, 2014 Collection Dates

Determination of:
Polycyclic Aromatic Hydrocarbons (PAHs) in Water Samples

(QC Batch ENV 3298)

July 10, 2014

Technical Report 14-3272

Kinnetic Laboratories, Inc.
Asplund WPCF Project
June 11, 2014 and June 12, 2014
Collection Dates
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B&B Laboratories
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Narrative

Technical Report 14-3272
Kinnetic Laboratories, Inc.
WPCF Project
Water Samples
June 11, 2014 and June 12, 2014 Collection Dates

July 10, 2014

Introduction

B&B Laboratories received a shipment of one (1) ice chest that was sent by Mark Savoie of Kinnetic Labs using FedEx on June 16, 2014 and arrived on June 17, 2014 in College Station, Texas. The ice chest arrived sealed and in good condition.

Cooler Number	Temperature	Samples Received
1	4.2°C No Temperature Blank	Ten (10) water samples in 1L B/R bottles.

The water samples were collected between June 11, 2014 and June 12, 2014 in support of the Asplund WPCF Project (Kinnetic Labs Project #516.02). The water samples were logged in according to B&B Laboratories standard operating procedure (B&B 1009) and were stored in an access-controlled refrigerator (4.0°C) prior to analysis. The water samples were analyzed for Polycyclic Aromatic Hydrocarbons (PAH) by GC/MS-SIM and selected biological markers by GC/MS-SIM.

The analytical results for PAH, selected hopane's, and TAS compounds in the water samples are included in this report.

Analytical Methods

The standard operating procedures for PAH, hopane's, and TAS are listed in Table 1.

Table 1. Standard Operating Procedures for each analytical test.

Matrix	Extraction	PAH
Water	B&B 1011	B&B 1006

Data Reporting

The reporting units for each analyte are listed in Table 2. Analytes that are detected below the method detection limit are qualified as "J". Analytes that are detected in the method blanks greater than 3X MDL are qualified with a "B". Analytical interference's that are detected in the sample are qualified with an "I". Analytes not detected in the samples are qualified with a "U". The RPD for analytes in duplicate samples that are <3X MDL are qualified with a "X". Spiked levels of analytes in matrix spikes that are <50% of the native levels are considered invalid spikes and are qualified with a "Y". Any QC result reported to be outside the corresponding QC criteria is discussed in the QA/QC variance section of this report. Data Qualifier Definitions are listed in Table 3. The method detection limits (MDL) for each analyte are listed in Table 4.

Table 2. Analytical reporting units.

Matrix	PAH
Water	ng/L

Table 3. Data Qualifier Definitions.

Qualifier	Definition
B	Analyte detected in the method blank greater than 3X MDL
D	Diluted Value
E	Analyte concentration exceeds the calibration range of the GC/MS for that specific analysis.
I	Analytical interference
J	Analyte detected below the method detection limit
L	Loss due to matrix effect
NA	Not Applicable
U	Analyte not detected
X	Analyte <3X MDL
Y	Spiked level of analyte <50% of the native concentration
*	Outside QA limits, refer to narrative

Table 4. Method Detection Limits.

PAH Sample size Unit of measure	Water MDLs 1L, 1ml final extract volume ng/L
cis/trans Decalin	1.14
C1-Decalins	2.28
C2-Decalins	2.28
C3-Decalins	2.28
C4-Decalins	2.28
Naphthalene	2.91
C1-Naphthalenes	1.36
C2-Naphthalenes	5.82
C3-Naphthalenes	5.82
C4-Naphthalenes	5.82
Benzothiophene	1.29
C1-Benzothiophenes	2.57
C2-Benzothiophenes	2.57
C3-Benzothiophenes	2.57
C4-Benzothiophenes	2.57
Biphenyl	5.09
Acenaphthylene	1.17
Acenaphthene	1.44
Dibenzofuran	1.19
Fluorene	0.81
C1-Fluorenes	1.63
C2-Fluorenes	1.63
C3-Fluorenes	1.63
Carbazole	0.83
Anthracene	0.77
Phenanthrene	2.26
C1-Phenanthrenes/Anthracenes	0.70
C2-Phenanthrenes/Anthracenes	3.03
C3-Phenanthrenes/Anthracenes	3.03
C4-Phenanthrenes/Anthracenes	3.03
Dibenzothiophene	0.82
C1-Dibenzothiophenes	0.67
C2-Dibenzothiophenes	1.34
C3-Dibenzothiophenes	1.34
C4-Dibenzothiophenes	1.34
Fluoranthene	1.09
Pyrene	1.37
C1-Fluoranthenes/Pyrenes	2.47
C2-Fluoranthenes/Pyrenes	2.47
C3-Fluoranthenes/Pyrenes	2.47
C4-Fluoranthenes/Pyrenes	2.47
Naphthobenzothiophene	1.03
C1-Naphthobenzothiophenes	2.07
C2-Naphthobenzothiophenes	2.07
C3-Naphthobenzothiophenes	2.07
C4-Naphthobenzothiophenes	2.07
Benz(a)anthracene	0.74
Chrysene/Triphenylene	0.80
C1-Chrysenes	1.60

PAH (continued)	Water MDLs
Sample size	1L, 1ml final extract volume
Unit of measure	ng/L
C2-Chrysenes	1.60
C3-Chrysenes	1.60
C4-Chrysenes	1.60
Benzo(b)fluoranthene	2.38
Benzo(k,j)fluoranthene	2.51
Benzo(a)fluoranthene	2.51
Benzo(e)pyrene	2.69
Benzo(a)pyrene	1.91
Perylene	0.63
Indeno(1,2,3-c,d)pyrene	1.39
Dibenzo(a,h)anthracene	1.14
Benzo(g,h,i)perylene	2.51
Individual Alkyl Isomers,TAS, and Hopane's	
2-Methylnaphthalene	1.10
1-Methylnaphthalene	1.42
2,6-Dimethylnaphthalene	0.70
1,6,7-Trimethylnaphthalene	0.67
1-Methylfluorene	1.47
4-Methyldibenzothiophene	0.97
2/3-Methyldibenzothiophene	0.97
1-Methyldibenzothiophene	0.97
3-Methylphenanthrene	0.94
2/4-Methylphenanthrene	0.94
2-Methylanthracene	0.94
9-Methylphenanthrene	0.94
1-Methylphenanthrene	0.94
3,6-Dimethylphenanthrene	1.67
Retene	1.59
2-Methylfluoranthene	1.15
Benzo(b)fluorene	1.37
C29-Hopane	8.19
18a-Oleanane	8.19
C30-Hopane	8.19
C20-TAS	2.60
C21-TAS	2.60
C26(20S)-TAS	2.60
C26(20R)/C27(20S)-TAS	2.60
C28(20S)-TAS	2.60
C27(20R)-TAS	2.60
C28(20R)-TAS	2.60

Quality Assurance/Quality Control - Waters

Polycyclic Aromatic Hydrocarbons (PAH)

The quality assurance/quality control procedure for this program included the analyses of a method blank, blank spike/blank spike duplicate, and a matrix spike/matrix spike duplicate per analytical batch of no more than 20 samples. One standard-reference-oil (SRM 2779) was analyzed with this data set. Method blanks are used to determine that sample preparation and analyses are free of contaminants. The blank spike/blank spike duplicate and matrix spike/matrix spike duplicate are used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. SRMs are used to verify analytical accuracy. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies no more than 2 analytes to exceed 3x target MDL unless analyte not detected in associated sample(s) or analyte concentration >10x blank value. The QC criteria for spike recoveries are between 40-120% (except for Biphenyl which is 40% to 140% and for Decalin which is 25% to 120%). The QC criterion for RPDs for valid spiked duplicates is $\leq$30%, The QC criterion for the reference oil 1582 SRM is $\pm$ 20% the laboratory derived mean. The QC criterion for the reference oil 2779 SRM is $\pm$ 20% the NIST reference range.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene. Refer to Table 5 for Method Performance Criteria for PAH.

Quality Assurance/Quality Control Variances – Water

Polycyclic Aromatic Hydrocarbons (PAH)

Initial Calibration (Six-Point)

Observation

- No variances were observed.

Initial Calibration Verification and Continuing Calibration Checks (The CCC is a prepared from a second source.)

Observation

- No variances were observed.

Surrogate Recoveries

Observation

- No variances were observed.

Method Blank

Observation

- No variances were observed.

Blank Spike/Blank Spike Duplicate

Observation

- No variances were observed.

Matrix Spike/Matrix Spike Duplicate

Observation

- No variances were observed.

Standard Reference Materials

Observation

- No variances were observed.

Additional QC Batch Information

Observation

- No variances were observed.

Table 5. Method Performance Criteria for Extended PAH (Parent and Alkyl Homologs) and Related Compounds.

Element or Sample Type	Minimum Frequency	Measurement Quality Objective/ Acceptance Criteria	Corrective Action
Tuning	Prior to every sequence	Tune as specified in laboratory SOP	Resolve before proceeding.
Initial Calibration (All parent PAH and selected alkyl homologue PAH)	Prior to every sequence, or as needed based on continuing calibration/verification check.	6-point calibration curve over two orders of magnitude RPD ≤ 20%	Resolve before proceeding.
Continuing Calibration Verification (CCV)	Every 12 hours or 6-9 field samples	RPD ≤ 25%, No more than 2 analytes can be between 25% and 35% RPD.	Perform instrument maintenance. Re-analyze affected samples.
Initial Calibration Verification (Second Source or can be met if CCV is second source)	Per initial calibration	%R target analytes 80-120%	Resolve before proceeding.
SRM 1941b for sediment; SRM 1974c for tissue If available use SRMs for appropriate matrices	One per batch/every 20 field samples	Within ±30% of NIST 95% uncertainty range for analytes within the quantitation range. No more than 2 analytes may exceed this criterion.	Resolve before proceeding.
SRM 2779 Reference Oil	One per batch/every 20 field samples	Peak resolution >70% of 4/9-methylphenanthrene from 1-methylphenanthrene (m/z 192). Within ±20% of NIST 95% uncertainty range for analytes within the quantitation range. No more than 2 analytes may exceed this criterion.	Resolve before proceeding.
Matrix Spike/Matrix Spike Duplicate (Sediments, Soils, Tissues only)	One per batch/every 20 field samples	%R 40% - 120% for target analytes, except biphenyl (40-140%), decalin (25-120%) and perylene (10-120%); RPD ≤30%, average %R 60-120% for valid spikes. No more than 2 analytes may exceed 40-120% recovery or >35% RPD.	Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.
Blank Spike/Blank Spike Duplicate	One per batch/every 20 field samples	See MS/MSD criteria above.	Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.
Method Blank	One per batch/every 20 field samples	No more than 2 analytes to exceed 3x target MDL unless analyte not detected in associated sample(s) or analyte concentration >10x blank value	Resolve before proceeding. Lab manager may be contacted to resolve issues.
Laboratory Duplicate (not required for aqueous samples)	One per batch/every 20 field samples	RPD ≤ 30% if analyte concentration is 3x greater than the MDL, no more than 2 individual analyte RPDs with conc. 3x MDL can exceed 35%.	Evaluate impact to data, discuss with lab manager, and determine if corrective action is needed.

Table 5. Continued. Method Performance Criteria for Extended PAH (Parent and Alkyl Homologs) and Related Compounds.

Element or Sample Type	Minimum Frequency	Measurement Quality Objective/ Acceptance Criteria	Corrective Action
Mass Discrimination	Initial calibration and CCVs (mid-level)	Ratio for the concentration of Benzo[g,h,i]perylene to phenanthrene ≥0.70	Resolve before proceeding.
Internal Standard (IS)	Every sample	50% - 200% of the area of the IS in the associated calibration standard	Resolve before proceeding.
Surrogates	Every sample	%R 40-120% except d12-perylene which is 10-120%	Re-extract affected samples. Evaluate impact to data, discuss with lab manager, if corrective action is needed.

We appreciate the opportunity to serve your analytical needs and please do not hesitate to contact us should you have any questions.

Juan A. Ramirez
Environmental Laboratory Manager

Donell S. Frank
Project Quality Manager

Sample/Analyses Description

B&B Laboratories
Project J14120
Report 14-3272

Kinnetic Labs - Asplund WPCF
Sample Inventory

Client Project #AK14-1005

#	File Number	Client Identification	Collection Date	Received Date	Analysis	Matrix	Comments	B&B SDG	Client Project #
1	RCA0989	MOA14PAH001	06/11/14	06/17/14	PAH	Water		14061702	AK14-1005
2	RCA0990	MOA14PAH002	06/11/14	06/17/14	PAH	Water		14061702	AK14-1005
3	RCA0991	MOA14PAH003	06/11/14	06/17/14	PAH	Water		14061702	AK14-1005
4	RCA0992	MOA14PAH004	06/12/14	06/17/14	PAH	Water		14061702	AK14-1005
5	RCA0993	MOA14PAH005	06/12/14	06/17/14	PAH	Water	1 of 4	14061702	AK14-1005
6	RCA0994	MOA14PAH005	06/12/14	06/17/14	PAH	Water	2 of 4, MS	14061702	AK14-1005
7	RCA0995	MOA14PAH005	06/12/14	06/17/14	PAH	Water	3 of 4, MSD	14061702	AK14-1005
8	RCA0997	MOA14PAH006	06/12/14	06/17/14	PAH	Water		14061702	AK14-1005
9	RCA0998	MOA14PAH007	06/11/14	06/17/14	PAH	Water		14061702	AK14-1005

Water Samples

Polycyclic Aromatic Hydrocarbon Concentration

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	RCA0989.D	RCA0990.D	RCA0991.D	RCA0992.D	RCA0993.D
Client Name	MOA14PAH001	MOA14PAH002	MOA14PAH003	MOA14PAH004	MOA14PAH005
Matrix	Water	Water	Water	Water	Water
Collection Date	06/11/14	06/11/14	06/11/14	06/12/14	06/12/14
Received Date	06/17/14	06/17/14	06/17/14	06/17/14	06/17/14
Extraction Date	06/24/14	06/24/14	06/24/14	06/24/14	06/24/14
Extraction Batch	ENV 3298	ENV 3298	ENV 3298	ENV 3298	ENV 3298
Date Acquired	6/28/14 4:09	6/28/14 5:19	6/28/14 6:28	6/28/14 8:47	6/28/14 9:56
Method	PAH-2014.M	PAH-2014.M	PAH-2014.M	PAH-2014.M	PAH-2014.M
Sample Volume (L)	0.93	1.03	0.97	1.05	1.05
% Dry	NA	NA	NA	NA	NA
% Moisture	NA	NA	NA	NA	NA
Dilution	1X	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q
cis/trans Decalin	<1.2	U	<1.1	U	<1.2	U	<1.1	U	<1.1	U
C1-Decalins	<2.5	U	<2.3	U	<2.4	U	<2.3	U	<2.3	U
C2-Decalins	<2.5	U	<2.3	U	<2.4	U	<2.3	U	<2.3	U
C3-Decalins	<2.5	U	<2.3	U	<2.4	U	<2.3	U	<2.3	U
C4-Decalins	<2.5	U	<2.3	U	<2.4	U	<2.3	U	<2.3	U
Naphthalene	39.2		6.40		5.93		8.68		5.16	
C1-Naphthalenes	25.4		5.78		5.56		4.54		4.79	
C2-Naphthalenes	33.8		9.56		7.07		4.64	J	5.57	J
C3-Naphthalenes	53.5		<5.8	U	<6	U	<5.8	U	2.72	J
C4-Naphthalenes	20.0		<5.8	U	<6	U	<5.8	U	<5.8	U
Benzothiophene	1.0	J	<1.3	U	<1.3	U	<1.3	U	<1.3	U
C1-Benzothiophenes	<2.8	U	<2.6	U	<2.7	U	<2.6	U	<2.6	U
C2-Benzothiophenes	<2.8	U	<2.6	U	<2.7	U	<2.6	U	<2.6	U
C3-Benzothiophenes	<2.8	U	<2.6	U	<2.7	U	<2.6	U	<2.6	U
C4-Benzothiophenes	<2.8	U	<2.6	U	<2.7	U	<2.6	U	<2.6	U
Biphenyl	9.06		2.70	J	2.52	J	1.97	J	2.00	J
Acenaphthylene	0.527	J	<1.2	U	0.614	J	0.541	J	0.118	J
Acenaphthene	6.34		<1.4	U	<1.5	U	<1.4	U	<1.4	U
Dibenzofuran	6.98		1.78		1.64		1.21		1.22	
Fluorene	9.11		1.02		0.906		0.690	J	0.635	J
C1-Fluorenes	7.42		<1.6	U	<1.7	U	<1.6	U	<1.6	U
C2-Fluorenes	11.2		<1.6	U	<1.7	U	<1.6	U	<1.6	U
C3-Fluorenes	<1.7	U	<1.6	U	<1.7	U	<1.6	U	<1.6	U
Carbazole	11.8		1.09		0.826	J	0.547	J	0.580	J
Anthracene	3.42		0.220	J	0.190	J	0.182	J	0.120	J
Phenanthrene	42.8		4.12		3.83		2.46		2.39	
C1-Phenanthrenes/Anthracenes	14.4		2.66		2.40		1.29		1.47	
C2-Phenanthrenes/Anthracenes	21.2		2.82	J	2.82	J	<3	U	<3	U
C3-Phenanthrenes/Anthracenes	12.4		<3	U	2.47	J	<3	U	<3	U
C4-Phenanthrenes/Anthracenes	<3.3	U	<3	U	<3.1	U	<3	U	<3	U
Dibenzothiophene	3.58		0.51	J	0.449	J	0.317	J	0.240	J
C1-Dibenzothiophenes	3.78		0.58	J	0.540	J	<0.7	U	<0.7	U
C2-Dibenzothiophenes	4.00		<1.3	U	<1.4	U	<1.3	U	<1.3	U
C3-Dibenzothiophenes	<1.4	U	<1.3	U	<1.4	U	<1.3	U	<1.3	U
C4-Dibenzothiophenes	<1.4	U	<1.3	U	<1.4	U	<1.3	U	<1.3	U
Fluoranthene	19.8		1.11		0.800	J	0.588	J	0.551	J
Pyrene	16.0		0.932	J	0.735	J	0.538	J	0.408	J
C1-Fluoranthenes/Pyrenes	9.01		1.31	J	<2.5	U	<2.5	U	<2.5	U
C2-Fluoranthenes/Pyrenes	<2.7	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U
C3-Fluoranthenes/Pyrenes	<2.7	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U
C4-Fluoranthenes/Pyrenes	<2.7	U	<2.5	U	<2.5	U	<2.5	U	<2.5	U
Naphthobenzothiophene	2.29		<1	U	<1.1	U	<1	U	<1	U
C1-Naphthobenzothiophenes	<2.2	U	<2.1	U	<2.1	U	<2.1	U	<2.1	U
C2-Naphthobenzothiophenes	<2.2	U	<2.1	U	<2.1	U	<2.1	U	<2.1	U
C3-Naphthobenzothiophenes	<2.2	U	<2.1	U	<2.1	U	<2.1	U	<2.1	U
C4-Naphthobenzothiophenes	<2.2	U	<2.1	U	<2.1	U	<2.1	U	<2.1	U
Benz(a)anthracene	2.14		0.512	J	<0.8	U	0.574	J	0.618	J
Chrysene/Triphenylene	2.72		0.213	J	<0.8	U	0.109	J	0.252	J
C1-Chrysenes	2.17		<1.6	U	<1.6	U	<1.6	U	<1.6	U
C2-Chrysenes	<1.7	U	<1.6	U	<1.6	U	<1.6	U	<1.6	U
C3-Chrysenes	<1.7	U	<1.6	U	<1.6	U	<1.6	U	<1.6	U
C4-Chrysenes	<1.7	U	<1.6	U	<1.6	U	<1.6	U	<1.6	U
Benzo(b)fluoranthene	2.47	J	<2.4	U	<2.5	U	<2.4	U	<2.4	U
Benzo(k,j)fluoranthene	0.684	J	<2.5	U	<2.6	U	<2.5	U	<2.5	U
Benzo(a)fluoranthene	<2.7	U	<2.5	U	<2.6	U	<2.5	U	<2.5	U
Benzo(e)pyrene	<2.9	U	<2.7	U	<2.8	U	<2.7	U	<2.7	U
Benzo(a)pyrene	<2.1	U	<1.9	U	<2	U	<1.9	U	<1.9	U
Perylene	2.9		1.09		0.980		0.39	J	0.434	J
Indeno(1,2,3-c,d)pyrene	<1.5	U	<1.4	U	<1.4	U	<1.4	U	<1.4	U
Dibenzo(a,h)anthracene	<1.2	U	<1.1	U	<1.2	U	<1.1	U	<1.1	U
Benzo(g,h,i)perylene	<2.7	U	<2.5	U	<2.6	U	<2.5	U	<2.5	U
Total PAHs	401		44.4		40.3		29.3		29.3	

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	RCA0989.D	RCA0990.D	RCA0991.D	RCA0992.D	RCA0993.D
Client Name	MOA14PAH001	MOA14PAH002	MOA14PAH003	MOA14PAH004	MOA14PAH005
Matrix	Water	Water	Water	Water	Water
Collection Date	06/11/14	06/11/14	06/11/14	06/12/14	06/12/14
Received Date	06/17/14	06/17/14	06/17/14	06/17/14	06/17/14
Extraction Date	06/24/14	06/24/14	06/24/14	06/24/14	06/24/14
Extraction Batch	ENV 3298	ENV 3298	ENV 3298	ENV 3298	ENV 3298
Date Acquired	6/28/14 4:09	6/28/14 5:19	6/28/14 6:28	6/28/14 8:47	6/28/14 9:56
Method	PAH-2014.M	PAH-2014.M	PAH-2014.M	PAH-2014.M	PAH-2014.M
Sample Volume (L)	0.93	1.03	0.97	1.05	1.05
% Dry	NA	NA	NA	NA	NA
% Moisture	NA	NA	NA	NA	NA
Dilution	1X	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q
Individual Alkyl Isomers and Hopanes										
2-Methylnaphthalene	21.7		5.36		5.18		4.20		4.41	
1-Methylnaphthalene	17.9		3.59		3.44		2.83		3.02	
2,6-Dimethylnaphthalene	7.62		1.28		1.25		0.625	J	0.892	
1,6,7-Trimethylnaphthalene	2.76		<0.7	U	<0.7	U	0.362	J	0.263	J
1-Methylfluorene	3.56		<1.5	U	<1.5	U	<1.5	U	<1.5	U
4-Methyldibenzothiophene	2.18		0.348	J	0.288	J	<1	U	<1	U
2/3-Methyldibenzothiophene	2.39		0.342	J	0.150	J	<1	U	<1	U
1-Methyldibenzothiophene	1.01	J	0.164	J	0.359	J	<1	U	<1	U
3-Methylphenanthrene	5.28		0.789	J	0.801	J	0.360	J	0.399	J
2-Methylphenanthrene	5.69		0.956		0.841	J	0.497	J	0.548	J
2-Methylanthracene	0.52	J	0.090	J	0.082	J	0.056	J	0.075	J
4/9-Methylphenanthrene	4.22		0.915	J	0.701	J	0.379	J	0.463	J
1-Methylphenanthrene	2.82		0.672	J	0.664	J	0.370	J	0.411	J
3,6-Dimethylphenanthrene	1.23	J	0.292	J	0.176	J	<1.7	U	<1.7	U
Retene	5.87		2.72		<1.6	U	<1.6	U	<1.6	U
2-Methylfluoranthene	1.48		0.271	J	<1.2	U	<1.1	U	<1.1	U
Benzo(b)fluorene	2.40		0.269	J	<1.4	U	<1.4	U	<1.4	U
C29-Hopane	<8.8	U	<8.2	U	<8.4	U	<8.2	U	<8.2	U
18a-Oleanane	<8.8	U	<8.2	U	<8.4	U	<8.2	U	<8.2	U
C30-Hopane	<8.8	U	<8.2	U	<8.4	U	<8.2	U	<8.2	U
C20-TAS	<2.8	U	<2.6	U	<2.7	U	<2.6	U	<2.6	U
C21-TAS	<2.8	U	<2.6	U	<2.7	U	<2.6	U	<2.6	U
C26(20S)-TAS	<2.8	U	<2.6	U	<2.7	U	<2.6	U	<2.6	U
C26(20R)/C27(20S)-TAS	<2.8	U	<2.6	U	<2.7	U	<2.6	U	<2.6	U
C28(20S)-TAS	<2.8	U	<2.6	U	<2.7	U	<2.6	U	<2.6	U
C27(20R)-TAS	<2.8	U	<2.6	U	<2.7	U	<2.6	U	<2.6	U
C28(20R)-TAS	<2.8	U	<2.6	U	<2.7	U	<2.6	U	<2.6	U
Surrogate Recovery										
Naphthalene-d8	98		93		82		86		88	
Acenaphthene-d10	88		91		84		86		87	
Phenanthrene-d10	89		89		88		90		89	
Chrysene-d12	90		90		92		84		86	
Perylene-d12	92		92		93		92		95	

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	RCA0997.D		RCA0998.D	
Client Name	MOA14PAH006		MOA14PAH007	
Matrix	Water		Water	
Collection Date	06/12/14		06/11/14	
Received Date	06/17/14		06/17/14	
Extraction Date	06/24/14		06/24/14	
Extraction Batch	ENV 3298		ENV 3298	
Date Acquired	6/28/14 13:25		6/28/14 14:34	
Method	PAH-2014.M		PAH-2014.M	
Sample Volume (L)	1.06		1.04	
% Dry	NA		NA	
% Moisture	NA		NA	
Dilution	1X		1X	
Target Compounds	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q
cis/trans Decalin	<1.1	U	<1.1	U
C1-Decalins	<2.3	U	<2.3	U
C2-Decalins	<2.3	U	<2.3	U
C3-Decalins	<2.3	U	<2.3	U
C4-Decalins	<2.3	U	<2.3	U
Naphthalene	13.3		205	
C1-Naphthalenes	11.5		132	
C2-Naphthalenes	13.6		175	
C3-Naphthalenes	7.88		146	
C4-Naphthalenes	<5.8	U	<5.8	U
Benzothiophene	<1.3	U	<1.3	U
C1-Benzothiophenes	<2.6	U	<2.6	U
C2-Benzothiophenes	<2.6	U	<2.6	U
C3-Benzothiophenes	<2.6	U	<2.6	U
C4-Benzothiophenes	<2.6	U	<2.6	U
Biphenyl	3.06	J	36.5	
Acenaphthylene	1.97		<1.2	U
Acenaphthene	<1.4	U	53.4	
Dibenzofuran	1.97		44.4	
Fluorene	1.20		68.4	
C1-Fluorenes	<1.6	U	41.7	
C2-Fluorenes	<1.6	U	<1.6	U
C3-Fluorenes	<1.6	U	<1.6	U
Carbazole	0.649	J	146	
Anthracene	<0.8	U	37.5	
Phenanthrene	5.44		348	
C1-Phenanthrenes/Anthracenes	4.20		101	
C2-Phenanthrenes/Anthracenes	4.21		111	
C3-Phenanthrenes/Anthracenes	<3	U	75.3	
C4-Phenanthrenes/Anthracenes	<3	U	<3	U
Dibenzothiophene	0.591	J	25.5	
C1-Dibenzothiophenes	0.790		28.3	
C2-Dibenzothiophenes	<1.3	U	32.5	
C3-Dibenzothiophenes	<1.3	U	<1.3	U
C4-Dibenzothiophenes	<1.3	U	<1.3	U
Fluoranthene	0.863	J	204	
Pyrene	0.940	J	154	
C1-Fluoranthenes/Pyrenes	<2.5	U	92.4	
C2-Fluoranthenes/Pyrenes	<2.5	U	36.9	
C3-Fluoranthenes/Pyrenes	<2.5	U	20.3	
C4-Fluoranthenes/Pyrenes	<2.5	U	<2.5	U
Naphthobenzothiophene	<1	U	22.7	
C1-Naphthobenzothiophenes	<2.1	U	<2.1	U
C2-Naphthobenzothiophenes	<2.1	U	<2.1	U
C3-Naphthobenzothiophenes	<2.1	U	<2.1	U
C4-Naphthobenzothiophenes	<2.1	U	<2.1	U
Benz(a)anthracene	<0.7	U	38.9	
Chrysene/Triphenylene	<0.8	U	40.0	
C1-Chrysenes	<1.6	U	29.7	
C2-Chrysenes	<1.6	U	<1.6	U
C3-Chrysenes	<1.6	U	<1.6	U
C4-Chrysenes	<1.6	U	<1.6	U
Benzo(b)fluoranthene	<2.4	U	36.2	
Benzo(k,j)fluoranthene	<2.5	U	9.90	
Benzo(a)fluoranthene	<2.5	U	2.56	
Benzo(e)pyrene	<2.7	U	<2.7	U
Benzo(a)pyrene	<1.9	U	<1.9	U
Perylene	2.25		3.2	
Indeno(1,2,3-c,d)pyrene	<1.4	U	<1.4	U
Dibenzo(a,h)anthracene	<1.1	U	<1.1	U
Benzo(g,h,i)perylene	<2.5	U	<2.5	U
Total PAHs	74.4		2498	

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	RCA0997.D	RCA0998.D
Client Name	MOA14PAH006	MOA14PAH007
Matrix	Water	Water
Collection Date	06/12/14	06/11/14
Received Date	06/17/14	06/17/14
Extraction Date	06/24/14	06/24/14
Extraction Batch	ENV 3298	ENV 3298
Date Acquired	6/28/14 13:25	6/28/14 14:34
Method	PAH-2014.M	PAH-2014.M
Sample Volume (L)	1.06	1.04
% Dry	NA	NA
% Moisture	NA	NA
Dilution	1X	1X

Target Compounds	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q
Individual Alkyl Isomers and Hopanes				
2-Methylnaphthalene	10.4		110	
1-Methylnaphthalene	7.46		96.8	
2,6-Dimethylnaphthalene	2.39		30.7	
1,6,7-Trimethylnaphthalene	1.21		16.3	
1-Methylfluorene	<1.5	U	24.1	
4-Methyldibenzothiophene	0.504	J	16.1	
2/3-Methyldibenzothiophene	0.340	J	21.7	
1-Methyldibenzothiophene	0.322	J	3.97	
3-Methylphenanthrene	1.26		38.1	
2-Methylphenanthrene	1.56		41.4	
2-Methylanthracene	0.114	J	5.67	
4/9-Methylphenanthrene	1.15		28.0	
1-Methylphenanthrene	1.32		16.6	
3,6-Dimethylphenanthrene	0.309	J	9.69	
Retene	<1.6	U	<1.6	U
2-Methylfluoranthene	<1.1	U	12.3	
Benzo(b)fluorene	<1.4	U	25.9	
C29-Hopane	<8.2	U	<8.2	U
18a-Oleanane	<8.2	U	<8.2	U
C30-Hopane	<8.2	U	<8.2	U
C20-TAS	<2.6	U	<2.6	U
C21-TAS	<2.6	U	<2.6	U
C26(20S)-TAS	<2.6	U	<2.6	U
C26(20R)/C27(20S)-TAS	<2.6	U	<2.6	U
C28(20S)-TAS	<2.6	U	<2.6	U
C27(20R)-TAS	<2.6	U	<2.6	U
C28(20R)-TAS	<2.6	U	<2.6	U

Surrogate Recovery		
Naphthalene-d8	94	99
Acenaphthene-d10	91	88
Phenanthrene-d10	90	91
Chrysene-d12	89	93
Perylene-d12	96	93

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Method Blank Report

Sample Name	ENV3298A.D
Client Name	Method Blank
Matrix	Water
Collection Date	NA
Received Date	NA
Extraction Date	06/24/14
Extraction Batch	ENV 3298
Date Acquired	6/28/14 0:41
Method	PAH-2014.M
Sample Volume (L)	1.00
% Dry	NA
% Moisture	NA
Dilution	1X

Target Compounds	Su. Corrected Conc. (ng/L)	Q	3X MDL	Actual MDL
cis/trans Decalin	<1.1	U	3.43	1.14
C1-Decalins	<2.3	U	6.85	2.28
C2-Decalins	<2.3	U	6.85	2.28
C3-Decalins	<2.3	U	6.85	2.28
C4-Decalins	<2.3	U	6.85	2.28
Naphthalene	2.86	J	8.72	2.91
C1-Naphthalenes	1.60		4.09	1.36
C2-Naphthalenes	<5.8	U	17.4	5.82
C3-Naphthalenes	<5.8	U	17.4	5.82
C4-Naphthalenes	<5.8	U	17.4	5.82
Benzothiophene	<1.3	U	3.86	1.29
C1-Benzothiophenes	<2.6	U	7.72	2.57
C2-Benzothiophenes	<2.6	U	7.72	2.57
C3-Benzothiophenes	<2.6	U	7.72	2.57
C4-Benzothiophenes	<2.6	U	7.72	2.57
Biphenyl	1.16	J	15.3	5.09
Acenaphthylene	0.952	J	3.52	1.17
Acenaphthene	<1.4	U	4.31	1.44
Dibenzofuran	1.02	J	3.57	1.19
Fluorene	0.50	J	2.44	0.813
C1-Fluorenes	<1.6	U	4.88	1.63
C2-Fluorenes	<1.6	U	4.88	1.63
C3-Fluorenes	<1.6	U	4.88	1.63
Carbazole	0.608	J	2.50	0.833
Anthracene	<0.8	U	2.30	0.77
Phenanthrene	1.99	J	6.79	2.26
C1-Phenanthrenes/Anthracenes	<0.7	U	2.10	0.701
C2-Phenanthrenes/Anthracenes	<3	U	9.09	3.03
C3-Phenanthrenes/Anthracenes	<3	U	9.09	3.03
C4-Phenanthrenes/Anthracenes	<3	U	9.09	3.03
Dibenzothiophene	0.289	J	2.47	0.824
C1-Dibenzothiophenes	<0.7	U	2.01	0.670
C2-Dibenzothiophenes	<1.3	U	4.02	1.34
C3-Dibenzothiophenes	<1.3	U	4.02	1.34
C4-Dibenzothiophenes	<1.3	U	4.02	1.34
Fluoranthene	0.654	J	3.28	1.09
Pyrene	0.529	J	4.12	1.37
C1-Fluoranthenes/Pyrenes	<2.5	U	7.41	2.47
C2-Fluoranthenes/Pyrenes	<2.5	U	7.41	2.47
C3-Fluoranthenes/Pyrenes	<2.5	U	7.41	2.47
C4-Fluoranthenes/Pyrenes	<2.5	U	7.41	2.47
Naphthobenzothiophene	<1	U	3.10	1.03
C1-Naphthobenzothiophenes	<2.1	U	6.20	2.07
C2-Naphthobenzothiophenes	<2.1	U	6.20	2.07
C3-Naphthobenzothiophenes	<2.1	U	6.20	2.07
C4-Naphthobenzothiophenes	<2.1	U	6.20	2.07
Benz(a)anthracene	<0.7	U	2.21	0.737
Chrysene/Triphenylene	<0.8	U	2.40	0.799
C1-Chrysenes	<1.6	U	4.80	1.60
C2-Chrysenes	<1.6	U	4.80	1.60
C3-Chrysenes	<1.6	U	4.80	1.60
C4-Chrysenes	<1.6	U	4.80	1.60
Benzo(b)fluoranthene	<2.4	U	7.15	2.38
Benzo(k,j)fluoranthene	<2.5	U	7.53	2.51
Benzo(a)fluoranthene	<2.5	U	7.53	2.51
Benzo(e)pyrene	<2.7	U	8.08	2.69
Benzo(a)pyrene	<1.9	U	5.74	1.91
Perylene	<0.6	U	1.90	0.635
Indeno(1,2,3-c,d)pyrene	<1.4	U	4.18	1.39
Dibenzo(a,h)anthracene	<1.1	U	3.41	1.14
Benzo(g,h,i)perylene	<2.5	U	7.53	2.51
Total PAHs	12.2			

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Method Blank Report

Sample Name	ENV3298A.D
Client Name	Method Blank
Matrix	Water
Collection Date	NA
Received Date	NA
Extraction Date	06/24/14
Extraction Batch	ENV 3298
Date Acquired	6/28/14 0:41
Method	PAH-2014.M
Sample Volume (L)	1.00
% Dry	NA
% Moisture	NA
Dilution	1X

Target Compounds	Su. Corrected Conc. (ng/L)	Q	3X MDL	Actual MDL
Individual Alkyl Isomers and Hopanes				
2-Methylnaphthalene	1.356		3.31	1.10
1-Methylnaphthalene	1.141	J	4.26	1.42
2,6-Dimethylnaphthalene	<0.7	U	2.09	0.696
1,6,7-Trimethylnaphthalene	<0.7	U	2.00	0.668
1-Methylfluorene	<1.5	U	4.41	1.47
4-Methyldibenzothiophene	<1	U	2.90	0.966
2/3-Methyldibenzothiophene	<1	U	2.90	0.966
1-Methyldibenzothiophene	<1	U	2.90	0.966
3-Methylphenanthrene	<0.9	U	2.82	0.939
2-Methylphenanthrene	<0.9	U	2.82	0.939
2-Methylanthracene	<0.9	U	2.82	0.939
4/9-Methylphenanthrene	<0.9	U	2.82	0.939
1-Methylphenanthrene	<0.9	U	2.82	0.939
3,6-Dimethylphenanthrene	<1.7	U	5.01	1.669
Retene	<1.6	U	4.78	1.59
2-Methylfluoranthene	<1.1	U	3.44	1.15
Benzo(b)fluorene	<1.4	U	4.12	1.37
C29-Hopane	<8.2	U	24.58	8.19
18a-Oleanane	<8.2	U	24.58	8.19
C30-Hopane	<8.2	U	24.58	8.19
C20-TAS	<2.6	U	7.80	2.60
C21-TAS	<2.6	U	7.80	2.60
C26(20S)-TAS	<2.6	U	7.80	2.60
C26(20R)/C27(20S)-TAS	<2.6	U	7.80	2.60
C28(20S)-TAS	<2.6	U	7.80	2.60
C27(20R)-TAS	<2.6	U	7.80	2.60
C28(20R)-TAS	<2.6	U	7.80	2.60

Surrogate Recovery	
Naphthalene-d8	83
Acenaphthene-d10	82
Phenanthrene-d10	81
Chrysene-d12	84
Perylene-d12	87

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Blank Spike Report

Sample Name	ENV3298B.D	ENV3298C.D
Client Name	Blank Spike	Blank Spike Dupl.
Matrix	Water	Water
Collection Date	NA	NA
Received Date	NA	NA
Extraction Date	06/24/14	06/24/14
Extraction Batch	ENV 3298	ENV 3298
Date Acquired	6/28/14 1:51	6/28/14 3:00
Method	PAH-2014.M	PAH-2014.M
Sample Volume (L)	1.00	1.00
% Dry	NA	NA
% Moisture	NA	NA
Dilution	1X	1X

Target Compounds	Su. Corrected Conc. (ng/L)	Q	Recovery (%)	Q	Su. Corrected Conc. (ng/L)	Q	Recovery (%)	Q	RPD (%)	Q	Spike amount (ng)
cis/trans Decalin	72.8		74		81.1		82		11		99.0
C1-Decalins	NA				NA						
C2-Decalins	NA				NA						
C3-Decalins	NA				NA						
C4-Decalins	NA				NA						
Naphthalene	99		100		103		105		4		98.6
C1-Naphthalenes	NA				NA						
C2-Naphthalenes	NA				NA						
C3-Naphthalenes	NA				NA						
C4-Naphthalenes	NA				NA						
Benzothiophene	98.5		99		102		102		4		99.7
C1-Benzothiophenes	NA				NA						
C2-Benzothiophenes	NA				NA						
C3-Benzothiophenes	NA				NA						
C4-Benzothiophenes	NA				NA						
Biphenyl	101		101		104		104		3		99.7
Acenaphthylene	97.8		98		97.8		98		0		99.9
Acenaphthene	99.8		99		101		101		1		101
Dibenzofuran	103		103		103		103		0		99.8
Fluorene	98.4		100		98.4		100		0		98.6
C1-Fluorenes	NA				NA						
C2-Fluorenes	NA				NA						
C3-Fluorenes	NA				NA						
Carbazole	102		102		100		100		2		99.7
Anthracene	99.1		99		97.9		98		1		100
Phenanthrene	104		104		103		104		0		99.7
C1-Phenanthrenes/Anthracenes	NA				NA						
C2-Phenanthrenes/Anthracenes	NA				NA						
C3-Phenanthrenes/Anthracenes	NA				NA						
C4-Phenanthrenes/Anthracenes	NA				NA						
Dibenzothiophene	101		102		101		102		0		98.9
C1-Dibenzothiophenes	NA				NA						
C2-Dibenzothiophenes	NA				NA						
C3-Dibenzothiophenes	NA				NA						
C4-Dibenzothiophenes	NA				NA						
Fluoranthene	105		104		104		103		1		101
Pyrene	105		105		103		103		2		100
C1-Fluoranthenes/Pyrenes	NA				NA						
C2-Fluoranthenes/Pyrenes	NA				NA						
C3-Fluoranthenes/Pyrenes	NA				NA						
C4-Fluoranthenes/Pyrenes	NA				NA						
Naphthobenzothiophene	107		106		103		103		3		101
C1-Naphthobenzothiophenes	NA				NA						
C2-Naphthobenzothiophenes	NA				NA						
C3-Naphthobenzothiophenes	NA				NA						
C4-Naphthobenzothiophenes	NA				NA						
Benz(a)anthracene	104		105		105		106		1		99.0
Chrysene/Triphenylene	105		106		103		104		2		99.1
C1-Chrysenes	NA				NA						
C2-Chrysenes	NA				NA						
C3-Chrysenes	NA				NA						
C4-Chrysenes	NA				NA						
Benzo(b)fluoranthene	105		105		103		104		1		100
Benzo(k,j)fluoranthene	101		101		100		100		1		100
Benzo(a)fluoranthene	NA				NA						
Benzo(e)pyrene	108		107		106		106		1		100
Benzo(a)pyrene	103		103		101		101		2		99.9
Perylene	104		104		103		103		1		100
Indeno(1,2,3-c,d)pyrene	102		102		100		100		2		100
Dibenzo(a,h)anthracene	98.1		99		97.5		98		1		99.2
Benzo(g,h,i)perylene	104		106		103		105		1		98.6
Average % Recovery			101				101				

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Blank Spike Report

Sample Name	ENV3298B.D	ENV3298C.D
Client Name	Blank Spike	Blank Spike Dupl.
Matrix	Water	Water
Collection Date	NA	NA
Received Date	NA	NA
Extraction Date	06/24/14	06/24/14
Extraction Batch	ENV 3298	ENV 3298
Date Acquired	6/28/14 1:51	6/28/14 3:00
Method	PAH-2014.M	PAH-2014.M
Sample Volume (L)	1.00	1.00
% Dry	NA	NA
% Moisture	NA	NA
Dilution	1X	1X

Target Compounds	Su. Corrected Conc. (ng/L)	Q	Recovery (%)	Q	Su. Corrected Conc. (ng/L)	Q	Recovery (%)	Q	RPD (%)	Q	Spike amount (ng)
Individual Alkyl Isomers and Hopanes											
2-Methylnaphthalene	94.7		95		99.2		100		5		99.3
1-Methylnaphthalene	98.1		99		102		102		4		99.5
2,6-Dimethylnaphthalene	94.6		95		98.0		98		4		100
1,6,7-Trimethylnaphthalene	97.2		97		97.7		98		1		100
1-Methylfluorene	101		100		100		99		1		101
4-Methyldibenzothiophene	102		101		101		100		1		101
2/3-Methyldibenzothiophene	NA				NA						
1-Methyldibenzothiophene	NA				NA						
3-Methylphenanthrene	NA				NA						
2-Methylphenanthrene	NA				NA						
2-Methylanthracene	NA				NA						
4/9-Methylphenanthrene	NA				NA						
1-Methylphenanthrene	101		101		102		103		2		99.3
3,6-Dimethylphenanthrene	102		102		102		101		1		100
Retene	100		100		101		101		1		100
2-Methylfluoranthene	104		104		107		107		2		100
Benzo(b)fluorene	103		103		100		99		3		100
C29-Hopane	NA				NA						
18a-Oleanane	NA				NA						
C30-Hopane	107		107		107		107		0		100
C20-TAS	NA				NA						
C21-TAS	NA				NA						
C26(20S)-TAS	NA				NA						
C26(20R)/C27(20S)-TAS	112		112		108		108		4		100
C28(20S)-TAS	NA				NA						
C27(20R)-TAS	NA				NA						
C28(20R)-TAS	NA				NA						

Surrogate Recovery		
Naphthalene-d8	81	91
Acenaphthene-d10	83	89
Phenanthrene-d10	85	90
Chrysene-d12	86	93
Perylene-d12	87	93

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Matrix Spike Report

Sample Name	RCA0993.D	RCA0994.D	RCA0995.D
Client Name	MOA14PAH005	MS (MOA14PAH005)	MSD (MOA14PAH005)
Matrix	Water	Water	Water
Collection Date	06/12/14	06/12/14	06/12/14
Received Date	06/17/14	06/17/14	06/17/14
Extraction Date	06/24/14	06/24/14	06/24/14
Extraction Batch	ENV 3298	ENV 3298	ENV 3298
Date Acquired	6/28/14 9:56	6/28/14 11:06	6/28/14 12:15
Method	PAH-2014.M	PAH-2014.M	PAH-2014.M
Sample Volume (L)	1.05	1.05	1.05
% Dry	NA	NA	NA
% Moisture	NA	NA	NA
Dilution	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q	Recovery (%)	Q	Q1	Su. Corrected Conc. (ng/L)	Q	Recovery (%)	Q	Q1	RPD (%)	Q	Spike Amount (ng)
cis/trans Decalin	<1.1	U	68.8		73			72.0		76			5		99.0
C1-Decalins	<2.3	U	NA					NA							
C2-Decalins	<2.3	U	NA					NA							
C3-Decalins	<2.3	U	NA					NA							
C4-Decalins	<2.3	U	NA					NA							
Naphthalene	5.16		99.5		100			95.2		96			4		99
C1-Naphthalenes	4.79		NA					NA							
C2-Naphthalenes	5.57	J	NA					NA							
C3-Naphthalenes	2.72	J	NA					NA							
C4-Naphthalenes	<5.8	U	NA					NA							
Benzothiophene	<1.3	U	95.3		100			91.9		97			4		99.7
C1-Benzothiophenes	<2.6	U	NA					NA							
C2-Benzothiophenes	<2.6	U	NA					NA							
C3-Benzothiophenes	<2.6	U	NA					NA							
C4-Benzothiophenes	<2.6	U	NA					NA							
Biphenyl	2.00	J	96.4		99			93.6		96			3		99.7
Acenaphthylene	0.118	J	88.7		93			85.4		90			4		99.9
Acenaphthene	<1.4	U	93.5		98			91.1		95			3		101
Dibenzofuran	1.216		97.5		101			95.4		99			2		100
Fluorene	0.635	J	93.0		98			92.1		97			1		99
C1-Fluorenes	<1.6	U	NA					NA							
C2-Fluorenes	<1.6	U	NA					NA							
C3-Fluorenes	<1.6	U	NA					NA							
Carbazole	0.58	J	88.5		93			88.1		92			0		99.7
Anthracene	0.12	J	85.8		90			88.0		92			3		100
Phenanthrene	2.39		99.8		103			101		104			1		99.7
C1-Phenanthrenes/Anthracenes	1.47		NA					NA							
C2-Phenanthrenes/Anthracenes	<3	U	NA					NA							
C3-Phenanthrenes/Anthracenes	<3	U	NA					NA							
C4-Phenanthrenes/Anthracenes	<3	U	NA					NA							
Dibenzothiophene	0.240	J	96.1		102			97.0		103			1		98.9
C1-Dibenzothiophenes	<0.7	U	NA					NA							
C2-Dibenzothiophenes	<1.3	U	NA					NA							
C3-Dibenzothiophenes	<1.3	U	NA					NA							
C4-Dibenzothiophenes	<1.3	U	NA					NA							
Fluoranthene	0.551	J	92.6		96			96.2		100			4		101
Pyrene	0.408	J	93.3		97			96.1		100			3		100
C1-Fluoranthenes/Pyrenes	<2.5	U	NA					NA							
C2-Fluoranthenes/Pyrenes	<2.5	U	NA					NA							
C3-Fluoranthenes/Pyrenes	<2.5	U	NA					NA							
C4-Fluoranthenes/Pyrenes	<2.5	U	NA					NA							
Naphthobenzothiophene	<1	U	NA					NA							
C1-Naphthobenzothiophenes	<2.1	U	NA					NA							
C2-Naphthobenzothiophenes	<2.1	U	NA					NA							
C3-Naphthobenzothiophenes	<2.1	U	NA					NA							
C4-Naphthobenzothiophenes	<2.1	U	NA					NA							
Benz(a)anthracene	0.618	J	81.6		86			87.9		93			7		99
Chrysene/Triphenylene	0.252	J	91.6		97			94.5		100			3		99.1
C1-Chrysenes	<1.6	U	NA					NA							
C2-Chrysenes	<1.6	U	NA					NA							
C3-Chrysenes	<1.6	U	NA					NA							
C4-Chrysenes	<1.6	U	NA					NA							
Benzo(b)fluoranthene	<2.4	U	89.0		94			95.9		101			8		100
Benzo(k,j)fluoranthene	<2.5	U	90.5		95			94.7		99			5		100
Benzo(a)fluoranthene	<2.5	U	NA					NA							
Benzo(e)pyrene	<2.7	U	93.5		98			99.9		105			7		100
Benzo(a)pyrene	<1.9	U	88.4		93			93.2		98			5		100
Perylene	0.434	J	92.8		97			97.4		102			5		100
Indeno(1,2,3-c,d)pyrene	<1.4	U	84.2		88			89.2		94			6		100
Dibenzo(a,h)anthracene	<1.1	U	86.2		91			89.7		95			4		99.2
Benzo(g,h,i)perylene	<2.5	U	88.8		95			94.7		101			6		98.6
Average % Recovery					95					97					

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Matrix Spike Report

Sample Name	RCA0993.D	RCA0994.D	RCA0995.D
Client Name	MOA14PAH005	MS (MOA14PAH005)	MSD (MOA14PAH005)
Matrix	Water	Water	Water
Collection Date	06/12/14	06/12/14	06/12/14
Received Date	06/17/14	06/17/14	06/17/14
Extraction Date	06/24/14	06/24/14	06/24/14
Extraction Batch	ENV 3298	ENV 3298	ENV 3298
Date Acquired	6/28/14 9:56	6/28/14 11:06	6/28/14 12:15
Method	PAH-2014.M	PAH-2014.M	PAH-2014.M
Sample Volume (L)	1.05	1.05	1.05
% Dry	NA	NA	NA
% Moisture	NA	NA	NA
Dilution	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/L)	Q	Su. Corrected Conc. (ng/L)	Q	Recovery (%)	Q	Q1	Su. Corrected Conc. (ng/L)	Q	Recovery (%)	Q	Q1	RPD (%)	Q	Spike Amount (ng)
Individual Alkyl Isomers and Hopanes															
2-Methylnaphthalene	4.41		95.0		96			90.6		91			5		99
1-Methylnaphthalene	3.02		94.5		97			91.5		93			3		100
2,6-Dimethylnaphthalene	0.892		85.2		89			85.2		89			0		100
1,6,7-Trimethylnaphthalene	0.263	J	88.2		92			88.8		93			1		100
1-Methylfluorene	<1.5	U	94.0		98			93.0		97			1		101
4-Methyldibenzothiophene	<1	U	95.2		99			96.7		101			2		101
2/3-Methyldibenzothiophene	<1	U	NA					NA							
1-Methyldibenzothiophene	<1	U	NA					NA							
3-Methylphenanthrene	0.399	J	NA					NA							
2-Methylphenanthrene	0.548	J	NA					NA							
2-Methylanthracene	0.075	J	NA					NA							
4/9-Methylphenanthrene	0.463	J	NA					NA							
1-Methylphenanthrene	0.411	J	94.8		100			97.6		103			3		99.3
3,6-Dimethylphenanthrene	<1.7	U	91.9		96			96.1		101			4		100
Retene	<1.6	U	89.9		94			92.8		97			3		100.1
2-Methylfluoranthene	<1.1	U	88.4		93			94.6		99			7		100
Benzo(b)fluorene	<1.4	U	86.8		91			88.3		92			2		100
C29-Hopane	<8.2	U	NA					NA							
18a-Oleanane	<8.2	U	NA					NA							
C30-Hopane	<8.2	U	NA					NA							
C20-TAS	<2.6	U	NA					NA							
C21-TAS	<2.6	U	NA					NA							
C26(20S)-TAS	<2.6	U	NA					NA							
C26(20R)/C27(20S)-TAS	<2.6	U	92.4		97			93.2		98			1		100
C28(20S)-TAS	<2.6	U	NA					NA							
C27(20R)-TAS	<2.6	U	NA					NA							
C28(20R)-TAS	<2.6	U	NA					NA							

Surrogate Recovery			
Naphthalene-d8	88	90	85
Acenaphthene-d10	87	91	87
Phenanthrene-d10	89	91	90
Chrysene-d12	86	90	91
Perylene-d12	95	93	94

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Standard Reference Material Report

Sample Name	MS70111K.D
Client Name	PAH-WKSRM2779-4.0-004
Matrix	Gulf of Mexico Crude Oil
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3298
Date Acquired	6/27/14 23:32
Method	PAH-2014.M
Sample Weight (mg)	4.09

Target Compounds	Su. Corrected Conc. (ng/mg)	Q	Q1	RPD (%)	SRM 2779 Certified Value (ug/g)	-20% Certified Value (ug/g)	+20% Certified Value (ug/g)
cis/trans Decalin	794						
C1-Decalins	1152						
C2-Decalins	936						
C3-Decalins	748						
C4-Decalins	476						
Naphthalene	804			6	855 ± 46	647	1081
C1-Naphthalenes	1643						
C2-Naphthalenes	2087						
C3-Naphthalenes	1477						
C4-Naphthalenes	815						
Benzothiophene	10.8						
C1-Benzothiophenes	34.9						
C2-Benzothiophenes	23.2						
C3-Benzothiophenes	33.2						
C4-Benzothiophenes	27.9						
Biphenyl	188						
Acenaphthylene	7.28	J					
Acenaphthene	10.1						
Dibenzofuran	33.9						
Fluorene	139						
C1-Fluorenes	331						
C2-Fluorenes	444						
C3-Fluorenes	293						
Carbazole	4.6	J					
Anthracene	3.9	J		12	3.42 ± 0.59	2.26	4.81
Phenanthrene	269			4	258 ± 27	185	342
C1-Phenanthrenes/Anthracenes	639						
C2-Phenanthrenes/Anthracenes	755						
C3-Phenanthrenes/Anthracenes	485						
C4-Phenanthrenes/Anthracenes	198						
Dibenzothiophene	48.7			6	51.8 ± 2.1	39.8	64.7
C1-Dibenzothiophenes	139						
C2-Dibenzothiophenes	200						
C3-Dibenzothiophenes	126						
C4-Dibenzothiophenes	57.7						
Fluoranthene	4.37	J		0	4.36 ± 0.40	3.17	5.71
Pyrene	12.2			19	14.81 ± 0.39	11.5	18.2
C1-Fluoranthenes/Pyrenes	74.9						
C2-Fluoranthenes/Pyrenes	148						
C3-Fluoranthenes/Pyrenes	96.2						
C4-Fluoranthenes/Pyrenes	90.5						
Naphthobenzothiophene	32.9						
C1-Naphthobenzothiophenes	66.9						
C2-Naphthobenzothiophenes	92.3						
C3-Naphthobenzothiophenes	65.3						
C4-Naphthobenzothiophenes	24.1						
Benz(a)anthracene	6.08	J		15	7.03 ± 0.85	4.94	9.46
Chrysene/Triphenylene	51.9			9	47.4 ± 1.7	36.6	58.9
C1-Chrysenes	124						
C2-Chrysenes	163						
C3-Chrysenes	107						
C4-Chrysenes	57.3						
Benzo(b)fluoranthene	6.59	J		16	5.62 ± 0.34	4.22	7.15
Benzo(k,j)fluoranthene	0.779	J					
Benzo(a)fluoranthene	<10	U					
Benzo(e)pyrene	10.9			1	10.78 ± 0.60	8.14	13.7
Benzo(a)pyrene	1.96	J					
Perylene	0.519	J					
Indeno(1,2,3-c,d)pyrene	0.525	J					
Dibenzo(a,h)anthracene	0.453	J		24	0.574 ± 0.091	0.386	0.798
Benzo(g,h,i)perylene	1.95	J		8	2.11 ± 0.26	1.48	2.84
Total PAHs	16673						

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Standard Reference Material Report

Sample Name	MS70111K.D
Client Name	PAH-WKSRM2779-4.0-004
Matrix	Gulf of Mexico Crude Oil
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3298
Date Acquired	6/27/14 23:32
Method	PAH-2014.M
Sample Weight (mg)	4.09

Target Compounds	Su. Corrected Conc. (ng/mg)	Q	RPD (%)	SRM 2779 Certified Value (ug/g)	-20% Certified Value (ug/g)	+20% Certified Value (ug/g)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	1479		10	1630 ± 50	1264	2016
1-Methylnaphthalene	1071		6	1140 ± 20	896	1392
2,6-Dimethylnaphthalene	606					
1,6,7-Trimethylnaphthalene	204					
1-Methylfluorene	283					
4-Methyldibenzothiophene	114					
2/3-Methyldibenzothiophene	54.8					
1-Methyldibenzothiophene	36.1					
3-Methylphenanthrene	190		8	206 ± 32	139	286
2-Methylphenanthrene	213		8	230 ± 14	173	293
2-Methylanthracene	17.2					
4/9-Methylphenanthrene	246		6	232 ± 19	170	301
1-Methylphenanthrene	155		9	169 ± 10	127	215
3,6-Dimethylphenanthrene	48.6					
Retene	6.4	J				
2-Methylfluoranthene	6.80	J				
Benzo(b)fluorene	18.0					
C29-Hopane	26.1					
18a-Oleanane	<10	U				
C30-Hopane	50.7					
C20-TAS	7.65	J				
C21-TAS	9.29	J				
C26(20S)-TAS	4.86	J				
C26(20R)/C27(20S)-TAS	17.1					
C28(20S)-TAS	15.3					
C27(20R)-TAS	10.4					
C28(20R)-TAS	11.1					

Surrogate Recovery	
Naphthalene-d8	94
Acenaphthene-d10	101
Phenanthrene-d10	95
Chrysene-d12	97
Perylene-d12	101

Peak Resolution	
4/9-Methylphenanthrene from 1-Methylyphenanthrene (m/z 192)	94%

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

Sample Name	MS70111J.D
Client Name	PAH-WKCCV-250-041
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3298
Date Acquired	6/27/14 22:22
Method	PAH-2014.M
Sample Volume (mL)	1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	LCM Certified Conc. (ng/mL)	-15% Certified Conc. (ng/mL)	+15% Certified Conc. (ng/mL)
cis/trans Decalin	272		9.4	248	210	285
C1-Decalins	NA					
C2-Decalins	NA					
C3-Decalins	NA					
C4-Decalins	NA					
Naphthalene	273		10.3	247	210	283
C1-Naphthalenes	NA					
C2-Naphthalenes	NA					
C3-Naphthalenes	NA					
C4-Naphthalenes	NA					
Benzothiophene	277		10.4	249	212	287
C1-Benzothiophenes	NA					
C2-Benzothiophenes	NA					
C3-Benzothiophenes	NA					
C4-Benzothiophenes	NA					
Biphenyl	274		9.3	249	212	287
Acenaphthylene	243		2.7	250	212	287
Acenaphthene	263		4.3	252	214	289
Dibenzofuran	272		8.7	250	212	287
Fluorene	254		3.0	247	210	283
C1-Fluorenes	NA					
C2-Fluorenes	NA					
C3-Fluorenes	NA					
Carbazole	242		2.8	249	212	287
Anthracene	263		5.0	250	213	288
Phenanthrene	279		11.2	249	212	287
C1-Phenanthrenes/Anthracenes	NA					
C2-Phenanthrenes/Anthracenes	NA					
C3-Phenanthrenes/Anthracenes	NA					
C4-Phenanthrenes/Anthracenes	NA					
Dibenzothiophene	275		10.5	247	210	284
C1-Dibenzothiophenes	NA					
C2-Dibenzothiophenes	NA					
C3-Dibenzothiophenes	NA					
C4-Dibenzothiophenes	NA					
Fluoranthene	266		5.5	252	214	290
Pyrene	271		7.9	250	213	288
C1-Fluoranthenes/Pyrenes	NA					
C2-Fluoranthenes/Pyrenes	NA					
C3-Fluoranthenes/Pyrenes	NA					
C4-Fluoranthenes/Pyrenes	NA					
Naphthobenzothiophene	259		3.0	251	214	289
C1-Naphthobenzothiophenes	NA					
C2-Naphthobenzothiophenes	NA					
C3-Naphthobenzothiophenes	NA					
C4-Naphthobenzothiophenes	NA					
Benz(a)anthracene	237		4.2	248	210	285
Chrysene/Triphenylene	270		8.6	248	211	285
C1-Chrysenes	NA					
C2-Chrysenes	NA					
C3-Chrysenes	NA					
C4-Chrysenes	NA					
Benzo(b)fluoranthene	255		2.4	249	212	286
Benzo(k,j)fluoranthene	255		1.7	251	213	288
Benzo(a)fluoranthene	NA					
Benzo(e)pyrene	270		7.3	251	213	288
Benzo(a)pyrene	265		6.0	250	212	287
Perylene	269		7.5	250	213	288
Indeno(1,2,3-c,d)pyrene	261		4.3	250	213	288
Dibenzo(a,h)anthracene	261		5.3	248	211	285
Benzo(g,h,i)perylene	265		7.2	247	210	283

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

Sample Name	MS70111J.D
Client Name	PAH-WKCCV-250-041
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3298
Date Acquired	6/27/14 22:22
Method	PAH-2014.M
Sample Volume (mL)	1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	LCM Certified Conc. (ng/mL)	-15% Certified Conc. (ng/mL)	+15% Certified Conc. (ng/mL)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	268		7.8	248	211	285
1-Methylnaphthalene	270		8.3	249	211	286
2,6-Dimethylnaphthalene	263		5.0	250	212	287
1,6,7-Trimethylnaphthalene	254		1.5	251	213	288
1-Methylfluorene	243		3.7	252	214	290
4-Methyldibenzothiophene	270		7.0	252	214	289
2/3-Methyldibenzothiophene	NA					
1-Methyldibenzothiophene	NA					
3-Methylphenanthrene	NA					
2-Methylphenanthrene	NA					
2-Methylanthracene	NA					
4/9-Methylphenanthrene	NA					
1-Methylphenanthrene	258		3.7	248	211	285
3,6-Dimethylphenanthrene	250		0.2	251	213	288
Retene	240		4.1	250	213	288
2-Methylfluoranthene	249		0.7	250	213	288
Benzo(b)fluorene	240		4.6	251	213	289
C29-Hopane	NA					
18a-Oleanane	NA					
C30-Hopane	247		1.1	250	213	288
C20-TAS	NA					
C21-TAS	NA					
C26(20S)-TAS	NA					
C26(20R)/C27(20S)-TAS	230		8.2	250	213	288
C28(20S)-TAS	NA					
C27(20R)-TAS	NA					
C28(20R)-TAS	NA					

Surrogate Recovery	
Naphthalene-d8	111
Acenaphthene-d10	105
Phenanthrene-d10	109
Chrysene-d12	108
Perylene-d12	105

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

Sample Name	MS70111I.D
Client Name	PAH-WKICV-250-007
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3298
Date Acquired	6/27/14 21:13
Method	PAH-2014.M
Sample Volume (mL)	1.0

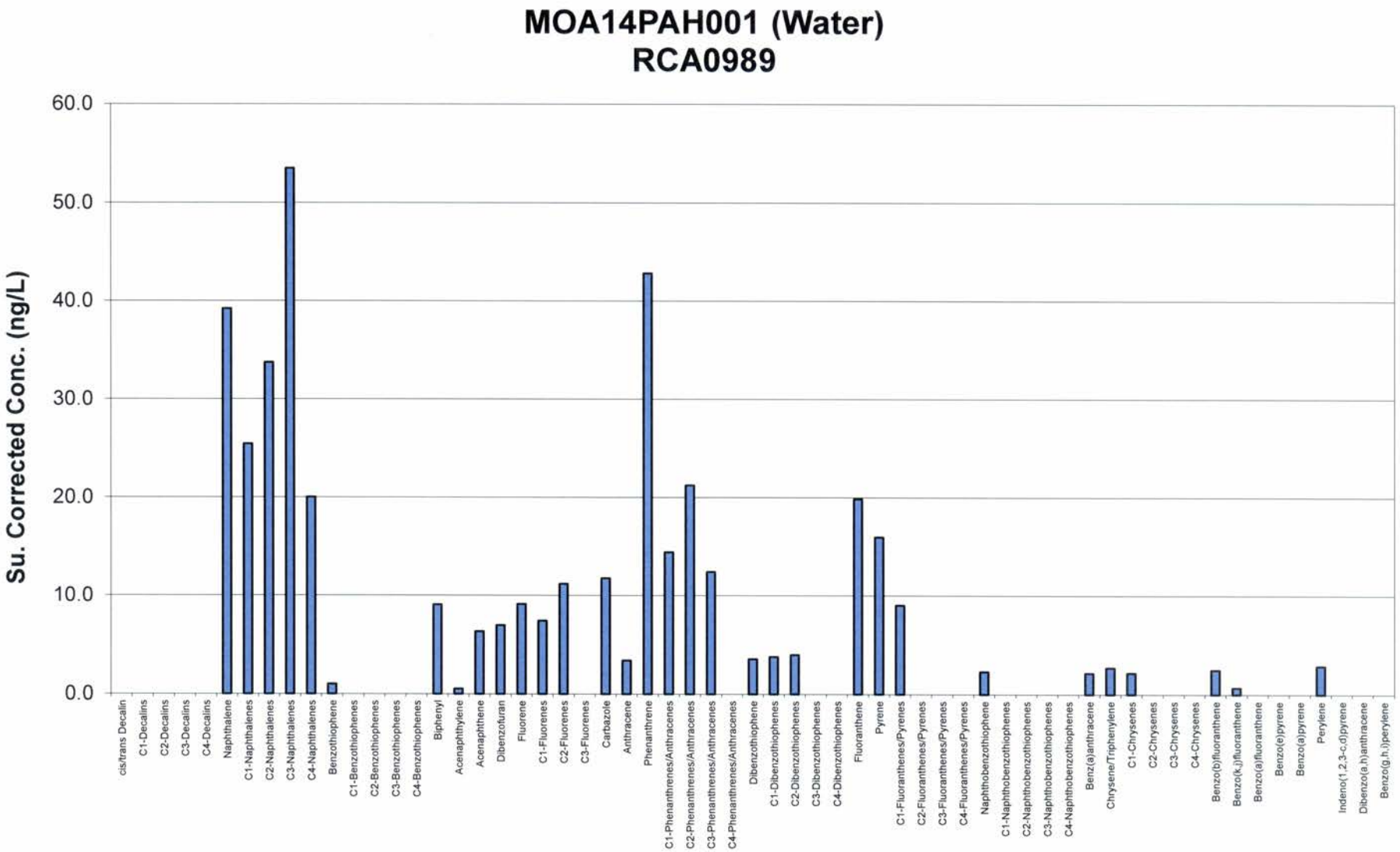
Target Compounds	Concentration (ng/mL)	Q	RPD (%)	ICV Certified Conc. (ng/mL)	-20% Certified Conc. (ng/mL)	+20% Certified Conc. (ng/mL)
cis/trans Decalin	230		8.4	250	200	300
C1-Decalins	NA					
C2-Decalins	NA					
C3-Decalins	NA					
C4-Decalins	NA					
Naphthalene	234		6.5	250	200	300
C1-Naphthalenes	NA					
C2-Naphthalenes	NA					
C3-Naphthalenes	NA					
C4-Naphthalenes	NA					
Benzothiophene	231		8.2	250	200	300
C1-Benzothiophenes	NA					
C2-Benzothiophenes	NA					
C3-Benzothiophenes	NA					
C4-Benzothiophenes	NA					
Biphenyl	226		10.2	251	201	301
Acenaphthylene	214		15.8	250	200	300
Acenaphthene	231		8.0	250	200	300
Dibenzofuran	227		9.6	250	200	300
Fluorene	226		10.3	250	200	300
C1-Fluorenes	NA					
C2-Fluorenes	NA					
C3-Fluorenes	NA					
Carbazole	200	*	22.4	250	200	300
Anthracene	229		8.8	250	200	300
Phenanthrene	240		3.9	250	200	300
C1-Phenanthrenes/Anthracenes	NA					
C2-Phenanthrenes/Anthracenes	NA					
C3-Phenanthrenes/Anthracenes	NA					
C4-Phenanthrenes/Anthracenes	NA					
Dibenzothiophene	226		10.0	250	200	300
C1-Dibenzothiophenes	NA					
C2-Dibenzothiophenes	NA					
C3-Dibenzothiophenes	NA					
C4-Dibenzothiophenes	NA					
Fluoranthene	230		8.5	250	200	300
Pyrene	240		4.3	250	200	300
C1-Fluoranthenes/Pyrenes	NA					
C2-Fluoranthenes/Pyrenes	NA					
C3-Fluoranthenes/Pyrenes	NA					
C4-Fluoranthenes/Pyrenes	NA					
Naphthobenzothiophene	NA					
C1-Naphthobenzothiophenes	NA					
C2-Naphthobenzothiophenes	NA					
C3-Naphthobenzothiophenes	NA					
C4-Naphthobenzothiophenes	NA					
Benz(a)anthracene	211		16.9	250	200	300
Chrysene/Triphenylene	236		5.9	250	200	300
C1-Chrysenes	NA					
C2-Chrysenes	NA					
C3-Chrysenes	NA					
C4-Chrysenes	NA					
Benzo(b)fluoranthene	242		3.3	250	200	300
Benzo(k,j)fluoranthene	227		9.9	250	200	300
Benzo(a)fluoranthene	NA					
Benzo(e)pyrene	222		11.7	250	200	300
Benzo(a)pyrene	238		4.8	250	200	300
Perylene	223		11.8	251	200	301
Indeno(1,2,3-c,d)pyrene	221		12.5	250	200	300
Dibenzo(a,h)anthracene	224		10.9	250	200	300
Benzo(g,h,i)perylene	235		6.3	250	200	300

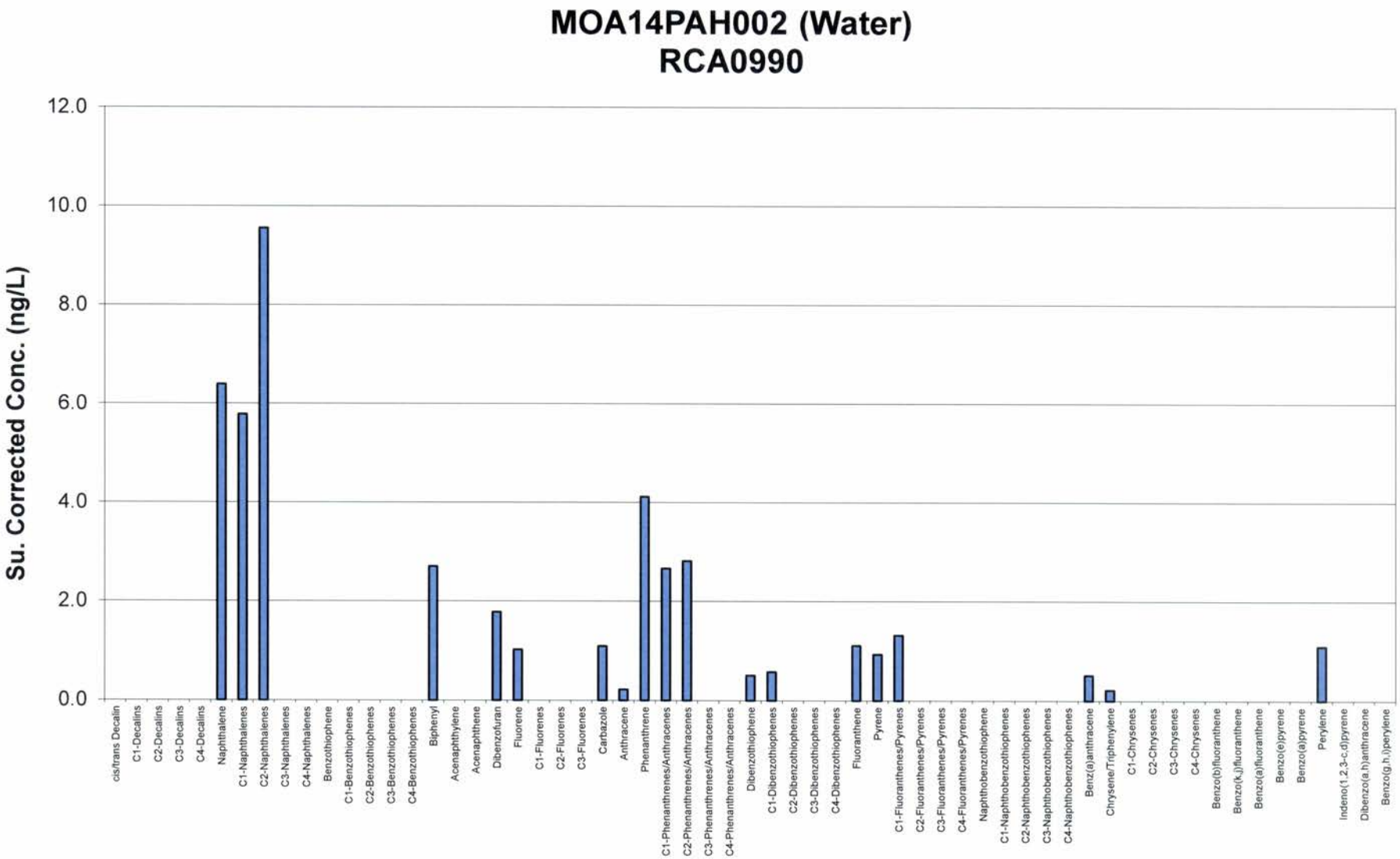
Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

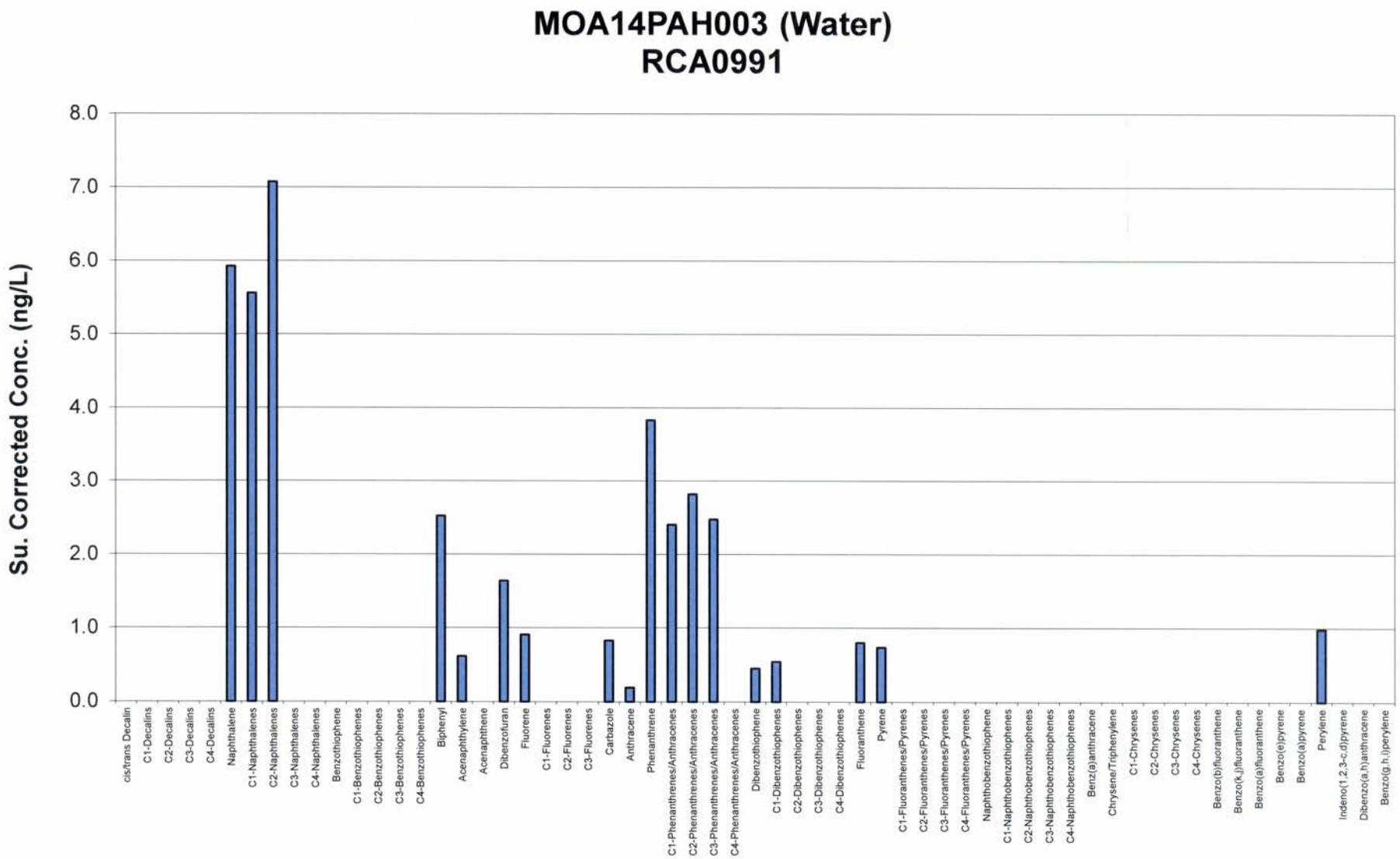
Sample Name	MS70111I.D
Client Name	PAH-WKICV-250-007
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3298
Date Acquired	6/27/14 21:13
Method	PAH-2014.M
Sample Volume (mL)	1.0

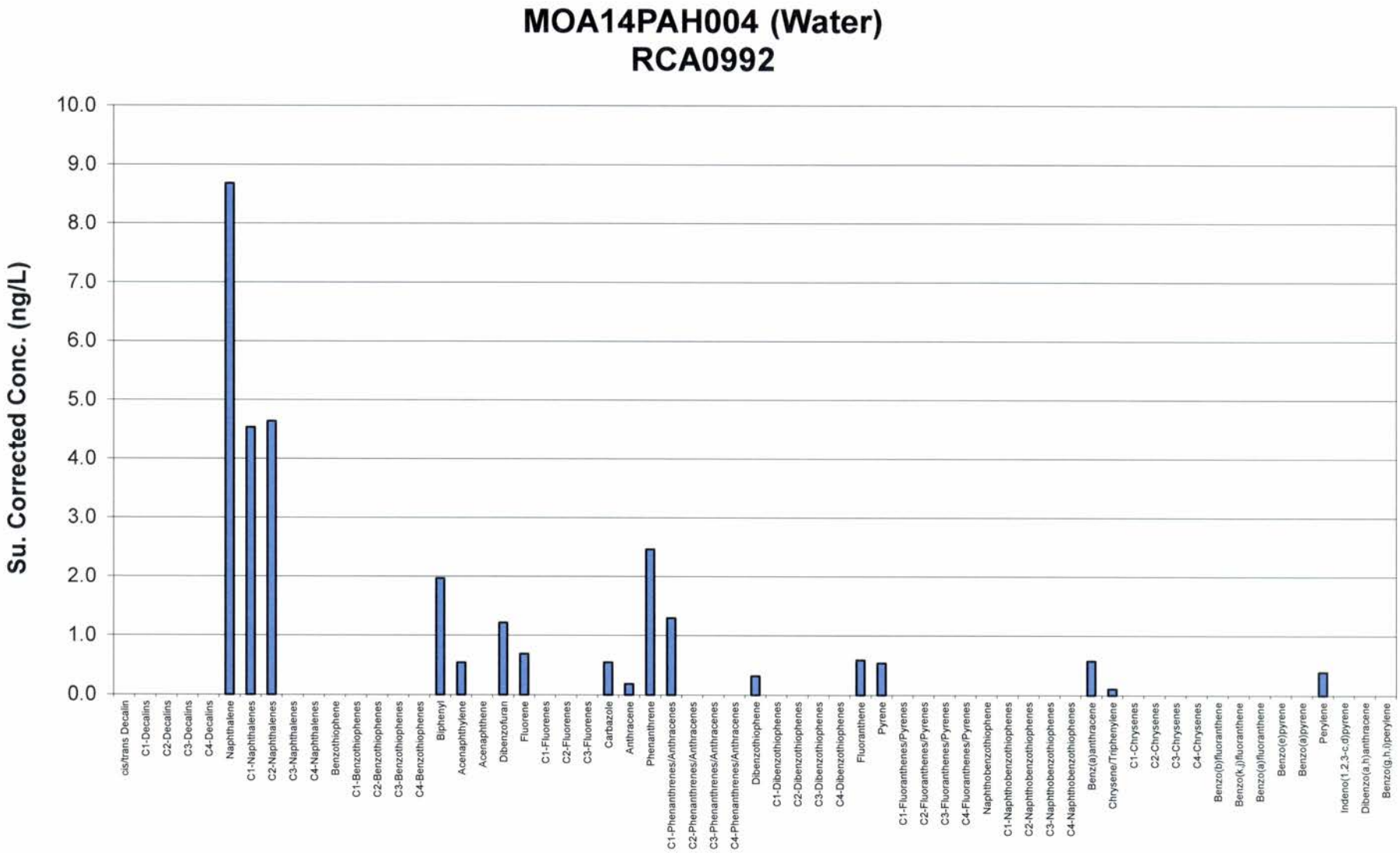
Target Compounds	Concentration (ng/mL)	Q	RPD (%)	ICV Certified Conc. (ng/mL)	-20% Certified Conc. (ng/mL)	+20% Certified Conc. (ng/mL)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	240		4.1	250	200	301
1-Methylnaphthalene	238		5.3	251	200	301
2,6-Dimethylnaphthalene	221		12.3	250	200	300
1,6,7-Trimethylnaphthalene	225		10.8	250	200	301
1-Methylfluorene	NA					
4-Methyldibenzothiophene	NA					
2/3-Methyldibenzothiophene	NA					
1-Methyldibenzothiophene	NA					
3-Methylphenanthrene	NA					
2-Methylphenanthrene	NA					
2-Methylanthracene	NA					
4/9-Methylphenanthrene	NA					
1-Methylphenanthrene	222		12.1	250	200	300
3,6-Dimethylphenanthrene	NA					
Retene	NA					
2-Methylfluoranthene	NA					
Benzo(b)fluorene	NA					
C29-Hopane	NA					
18a-Oleanane	NA					
C30-Hopane	NA					
C20-TAS	NA					
C21-TAS	NA					
C26(20S)-TAS	NA					
C26(20R)/C27(20S)-TAS	NA					
C28(20S)-TAS	NA					
C27(20R)-TAS	NA					
C28(20R)-TAS	NA					
Surrogate Recovery						
Naphthalene-d8	250		0.2	250	200	300
Acenaphthene-d10	240		4.2	250	200	300
Phenanthrene-d10	249		0.6	250	200	300
Chrysene-d12	247		1.2	250	200	300
Perylene-d12	244		2.3	250	200	300

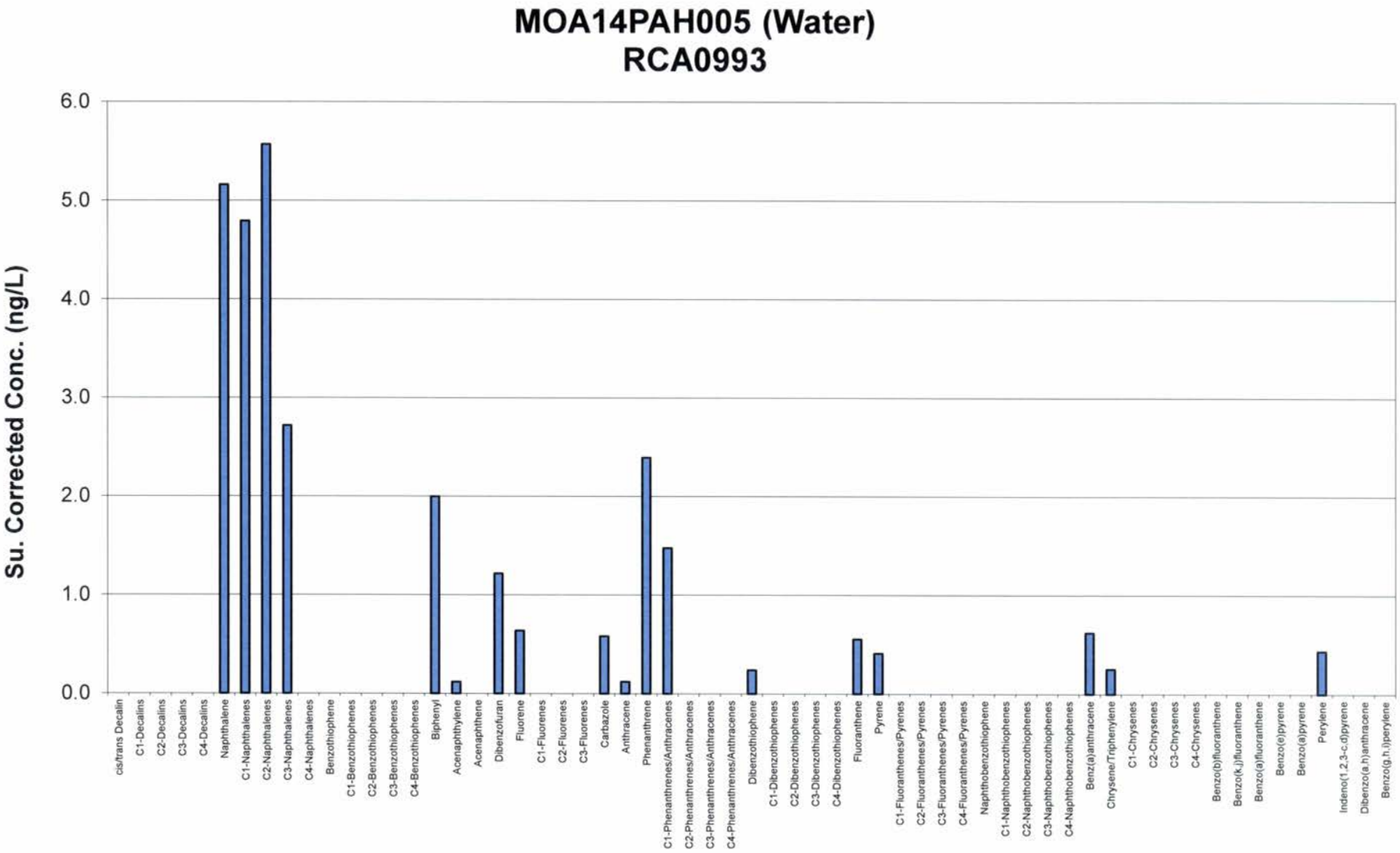
Polycyclic Aromatic Hydrocarbon Histograms

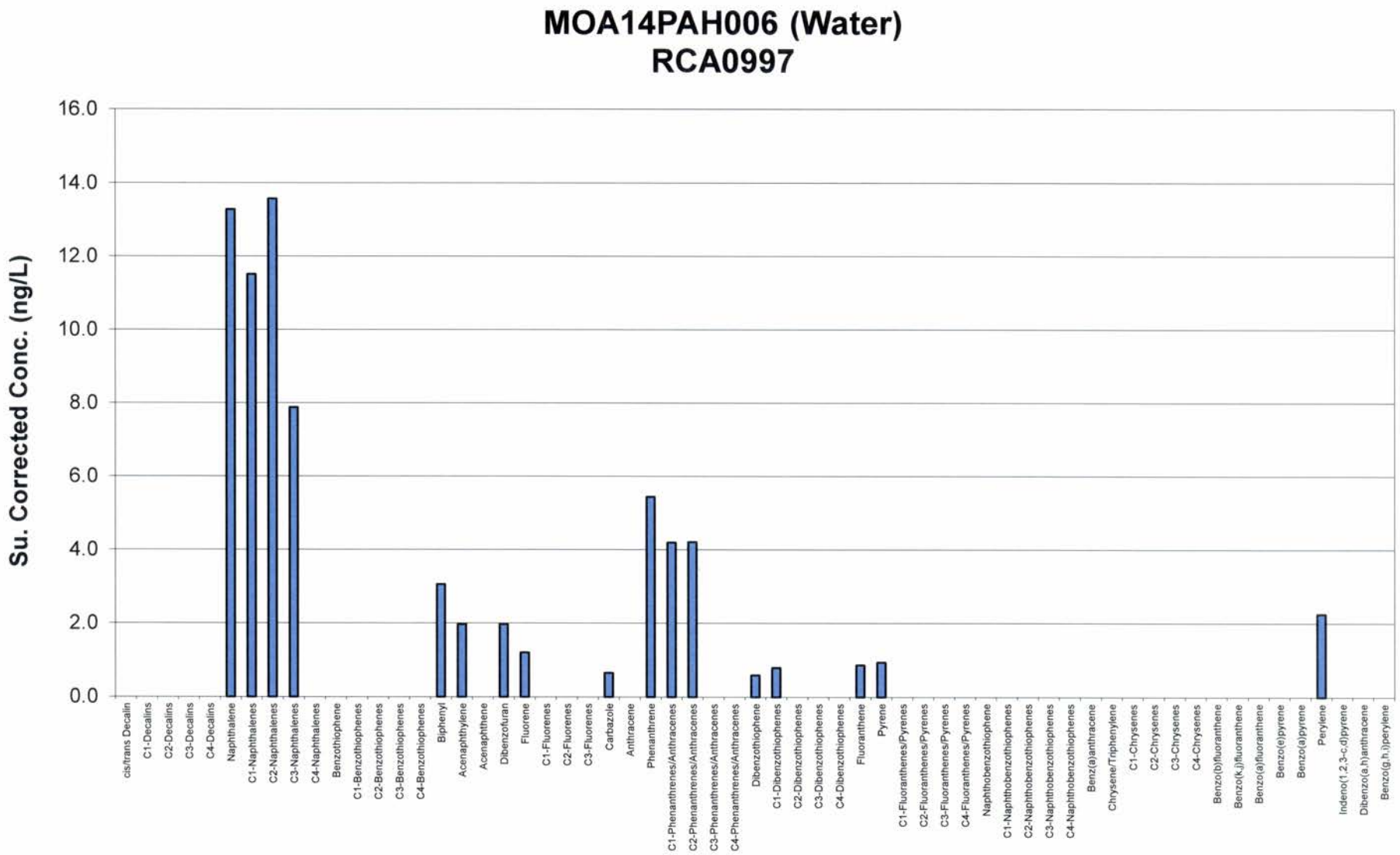

MOA14PAH001 (Water)
RCA0989
Su. Corrected Conc. (ng/L)
60.0
50.0
40.0
30.0
20.0
10.0
0.0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

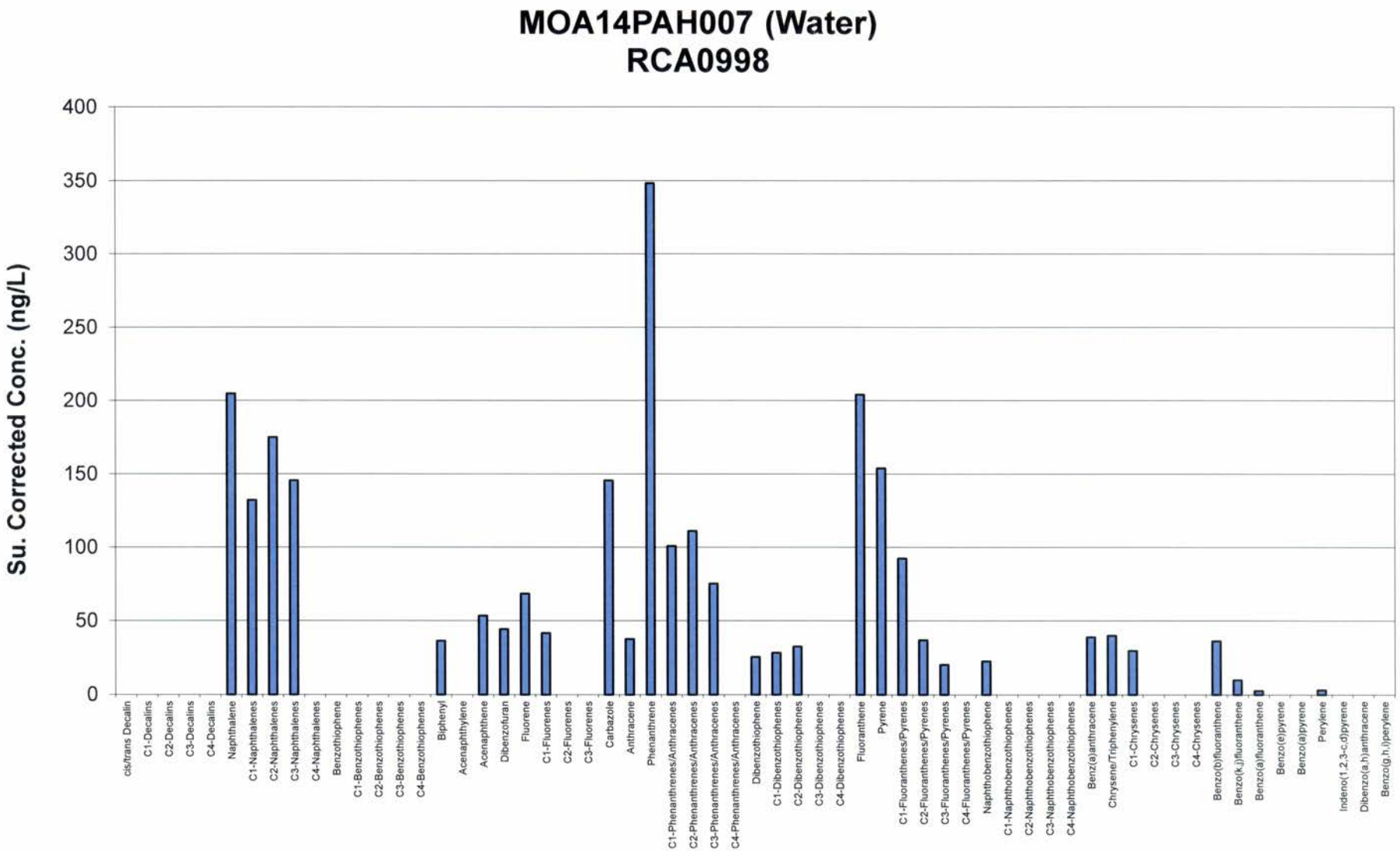

MOA14PAH002 (Water)
RCA0990
Su. Corrected Conc. (ng/L)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene


MOA14PAH003 (Water)
RCA0991
Su. Corrected Conc. (ng/L)
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene


MOA14PAH004 (Water)
RCA0992
Su. Corrected Conc. (ng/L)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

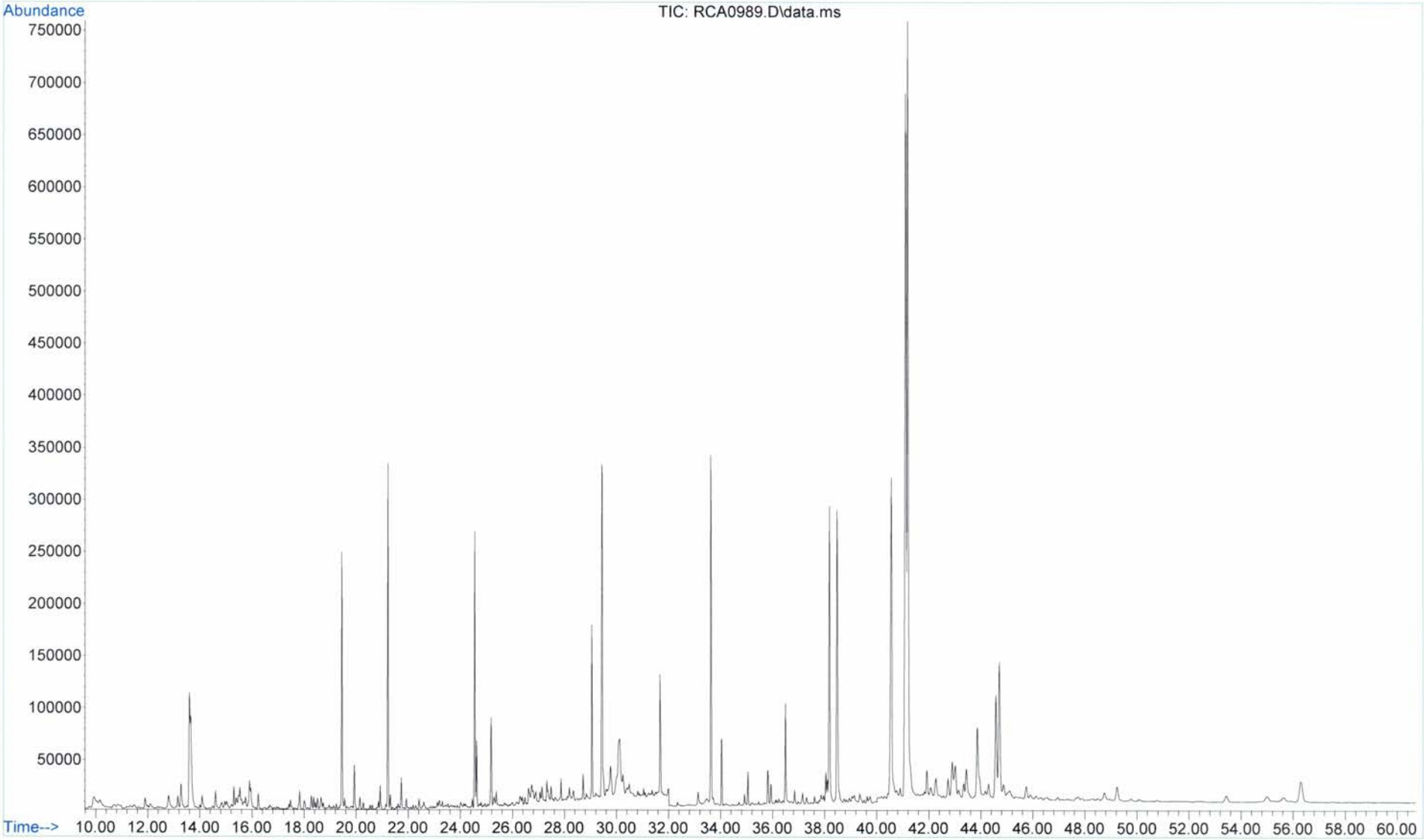

MOA14PAH005 (Water)
RCA0993
Su. Corrected Conc. (ng/L)
6.0
5.0
4.0
3.0
2.0
1.0
0.0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene


MOA14PAH006 (Water)
RCA0997
Su. Corrected Conc. (ng/L)
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

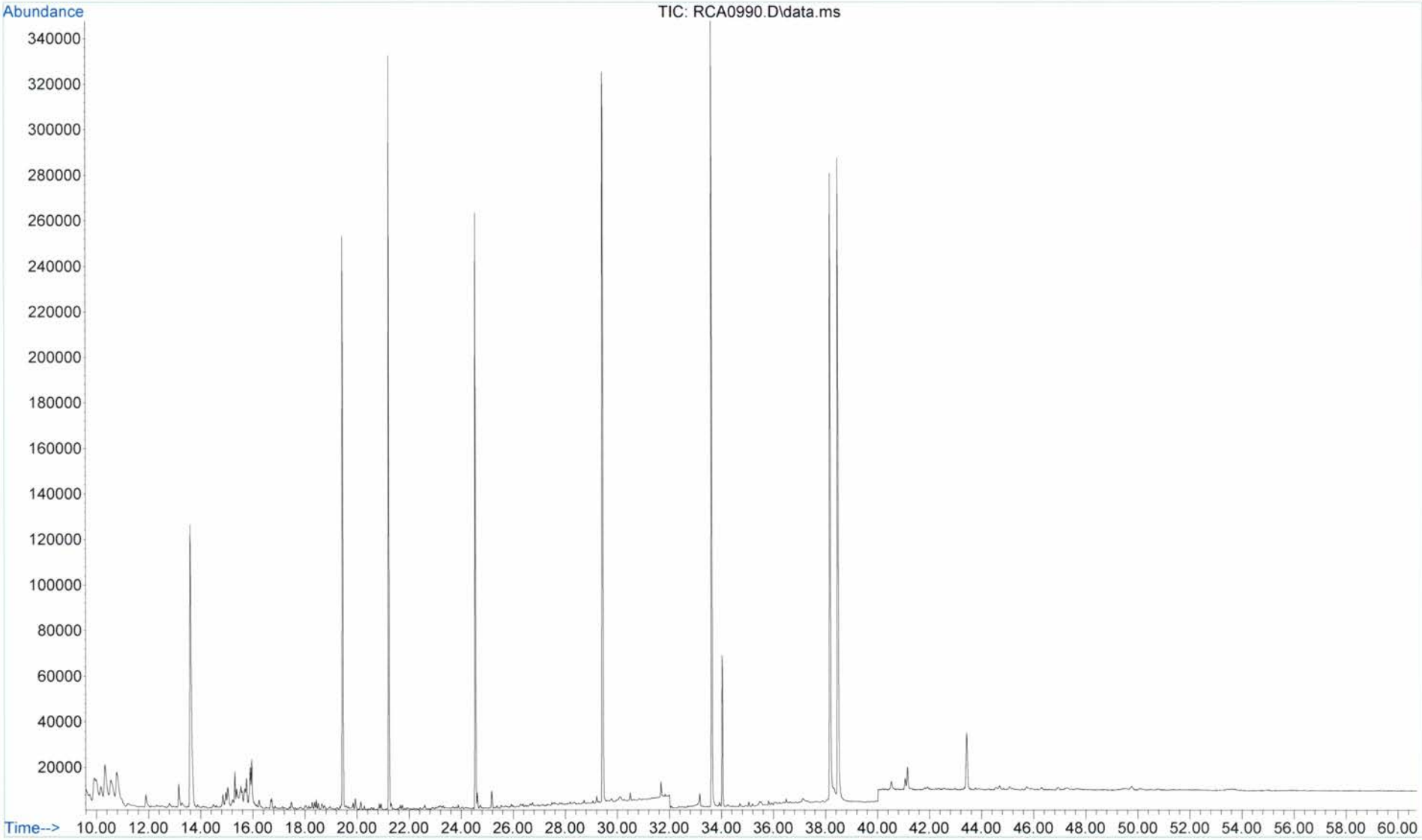

MOA14PAH007 (Water)
RCA0998
Su. Corrected Conc. (ng/L)
400
350
300
250
200
150
100
50
0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

Polycyclic Aromatic Hydrocarbon Total Ion Chromatograms

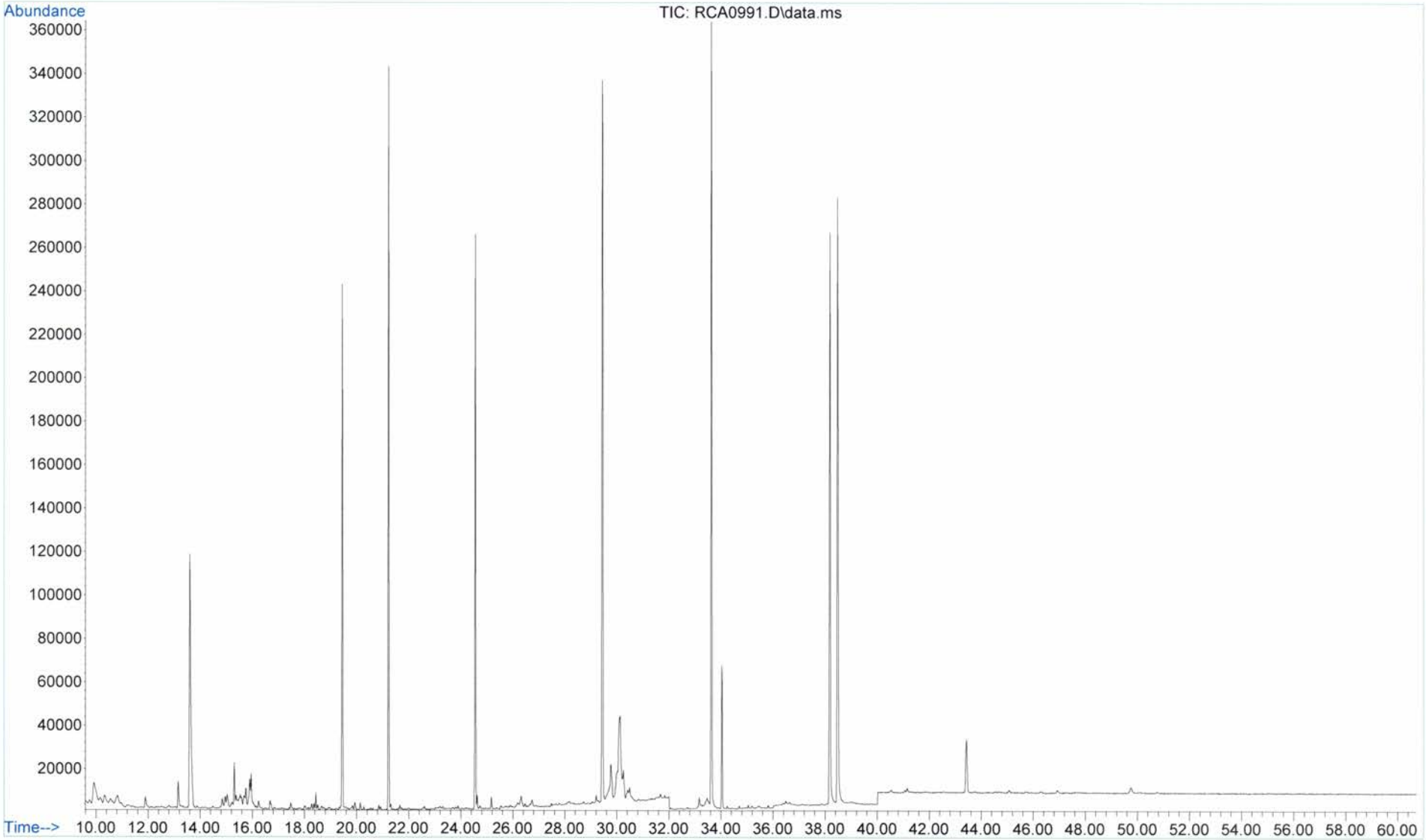
```
File        :C:\GCMS7\MS70111\RCA0989.D
Operator    : ECM(YMIAO)
Acquired    : 28 Jun 2014    4:09      using AcqMethod PAH-2014.M
Instrument  :   GCMS 7
Sample Name: MOA14PAH001
Misc Info   :
Vial Number: 15
```



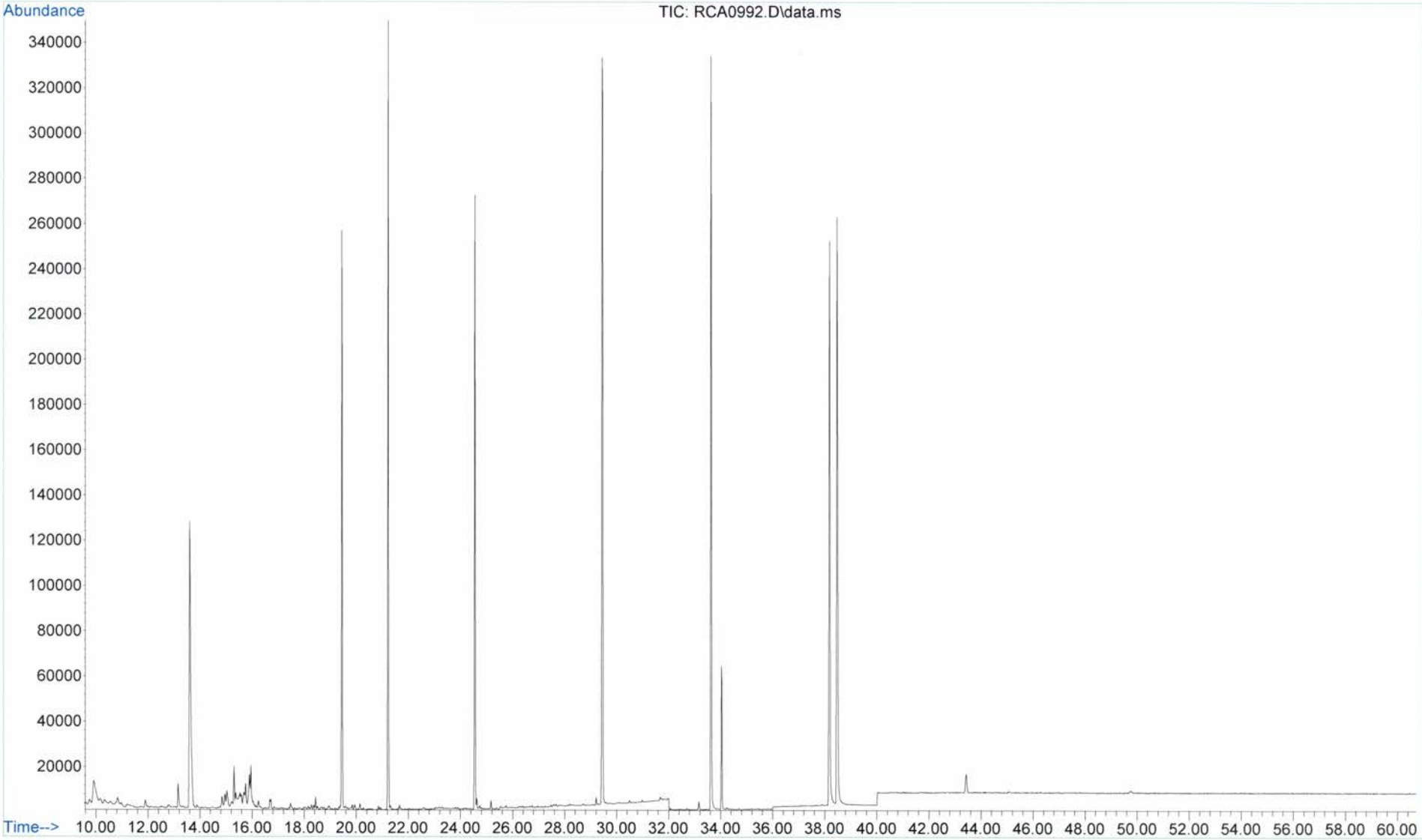
```
File        :C:\GCMS7\MS70111\RCA0990.D
Operator    : ECM(YMIAO)
Acquired    : 28 Jun 2014   5:19     using AcqMethod PAH-2014.M
Instrument  :   GCMS 7
Sample Name: MOA14PAH002
Misc Info   :
Vial Number: 16
```



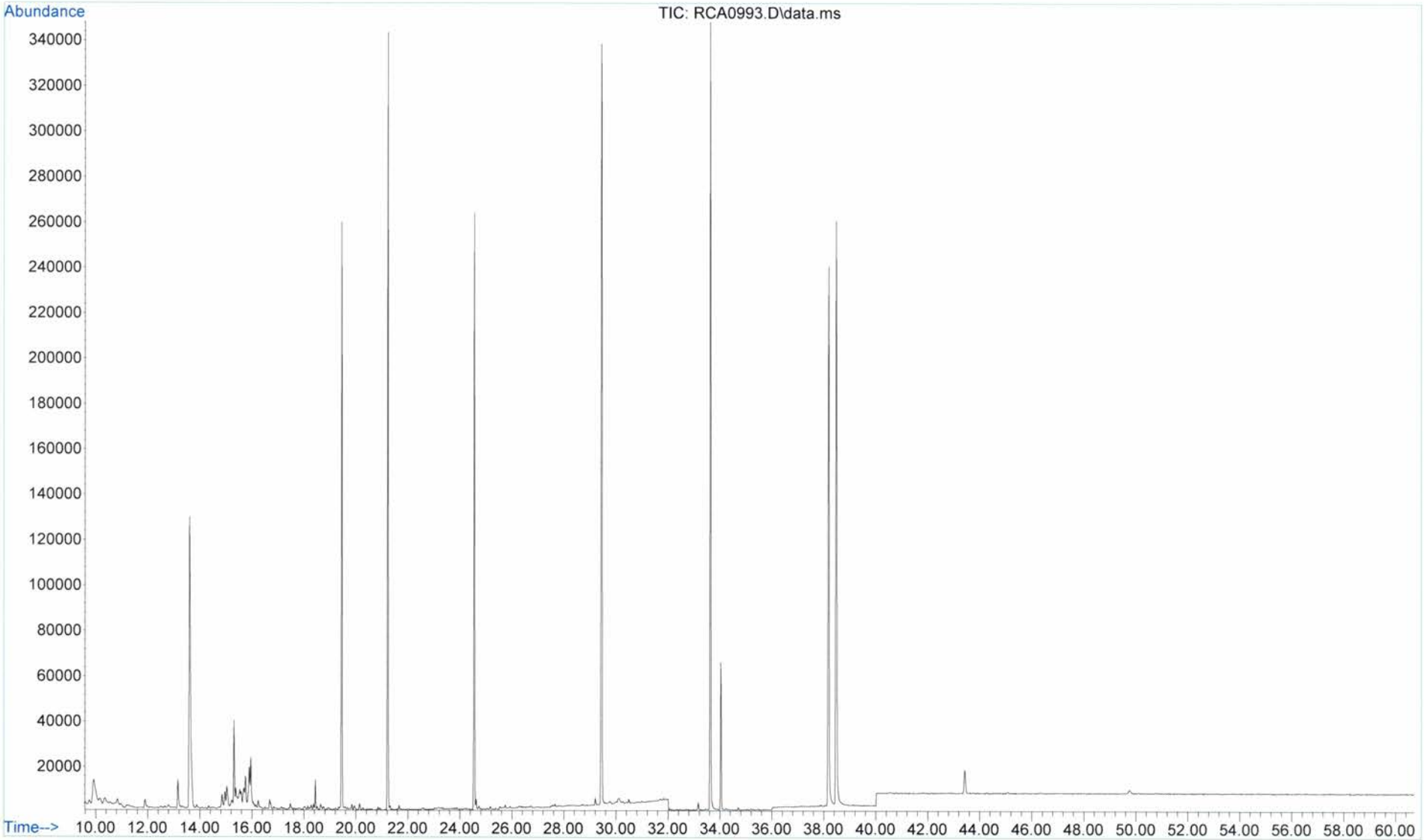
```
File        :C:\GCMS7\MS70111\RCA0991.D
Operator    : ECM(YMIAO)
Acquired    : 28 Jun 2014    6:28      using AcqMethod PAH-2014.M
Instrument  :   GCMS 7
Sample Name: MOA14PAH003
Misc Info   :
Vial Number: 17
```



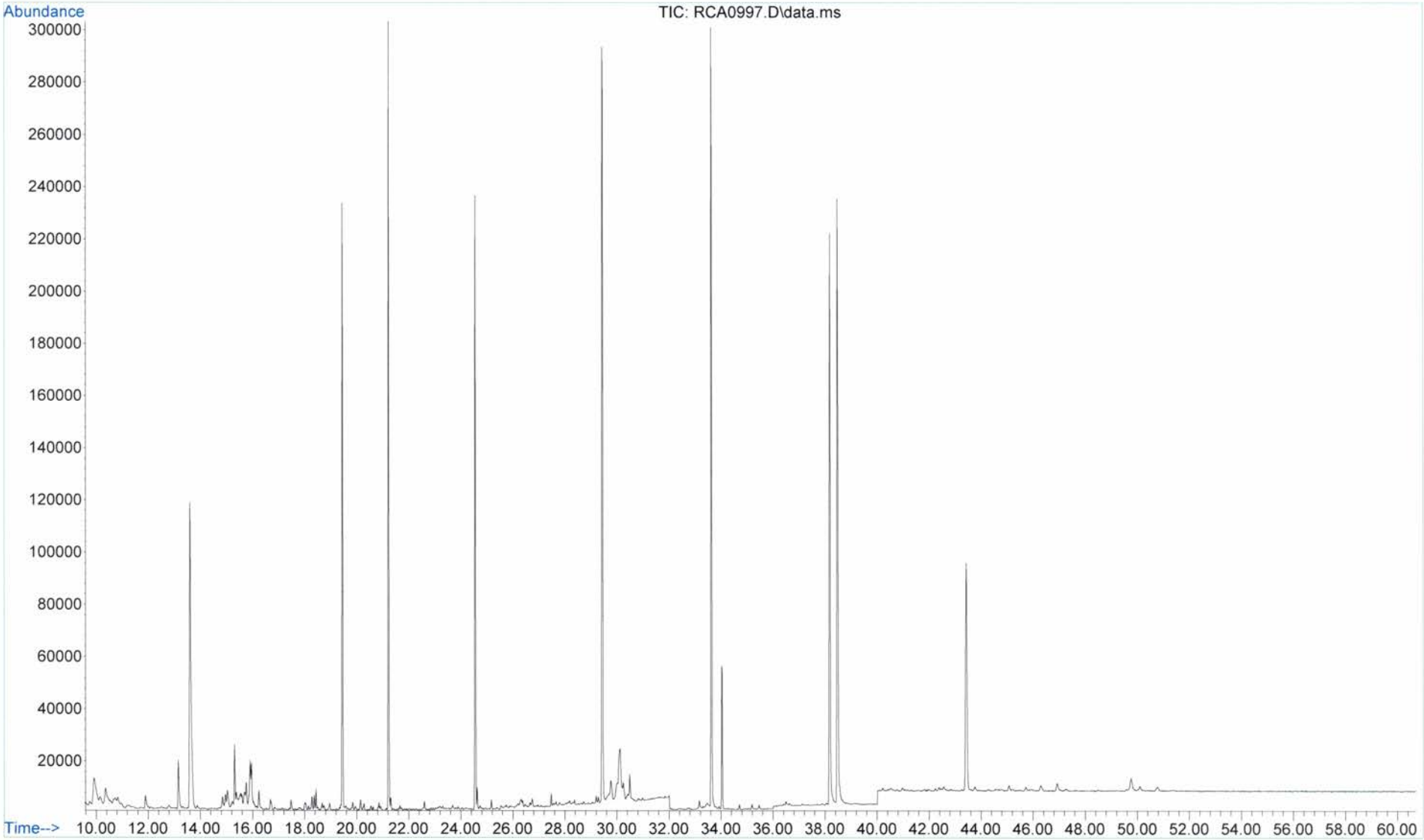
```
File        :C:\GCMS7\MS70111\RCA0992.D
Operator    : ECM(YMIAO)
Acquired    : 28 Jun 2014    8:47      using AcqMethod PAH-2014.M
Instrument :    GCMS 7
Sample Name: MOA14PAH004
Misc Info   :
Vial Number: 19
```



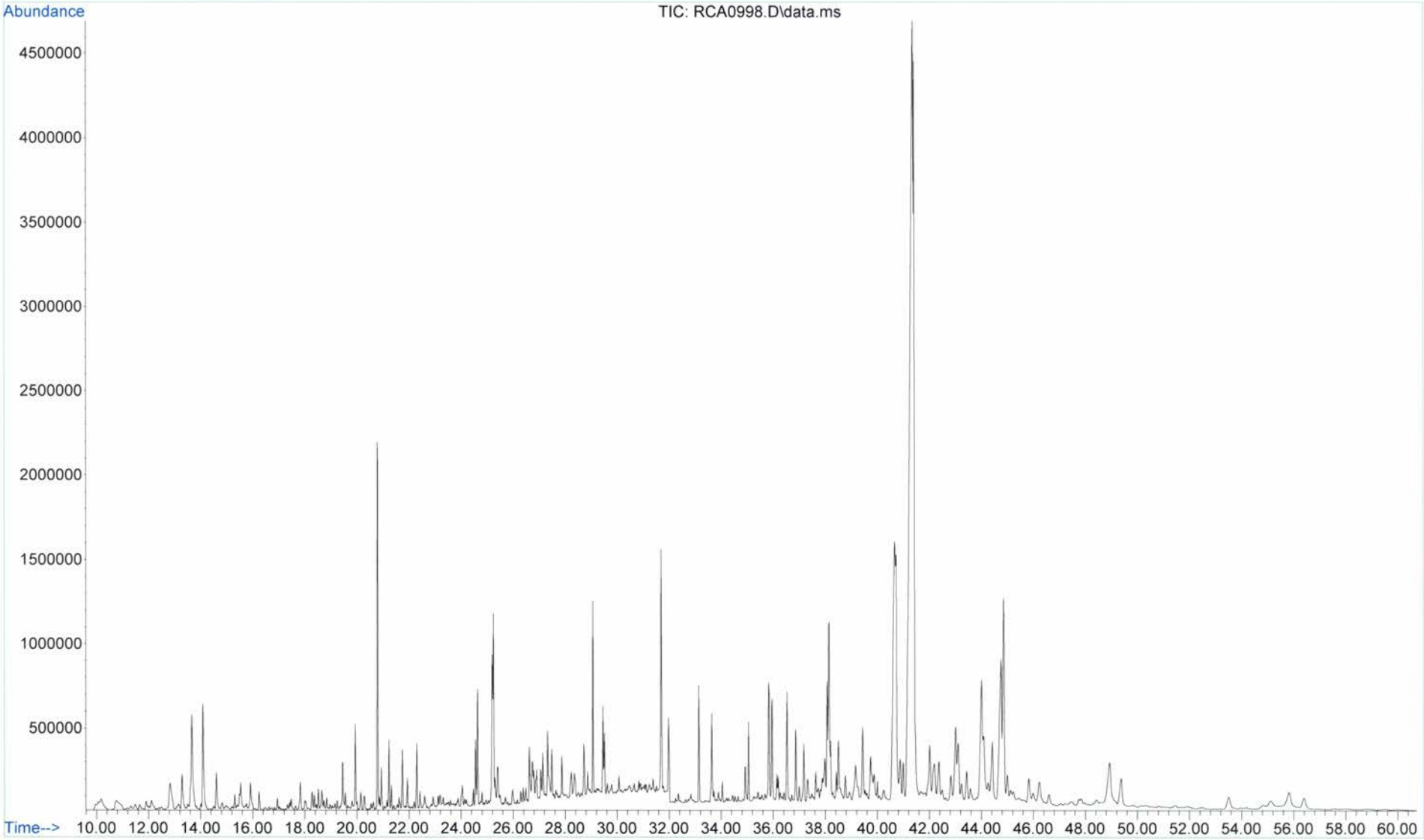
```
File        :C:\GCMS7\MS70111\RCA0993.D
Operator    : ECM(YMIAO)
Acquired    : 28 Jun 2014    9:56     using AcqMethod PAH-2014.M
Instrument  :   GCMS 7
Sample Name: MOA14PAH005
Misc Info   :
Vial Number: 20
```



```
File        :C:\GCMS7\MS70111\RCA0997.D
Operator    : ECM(YMIAO)
Acquired    : 28 Jun 2014  13:25     using AcqMethod PAH-2014.M
Instrument  :   GCMS 7
Sample Name: MOA14PAH006
Misc Info   :
Vial Number: 23
```



```
File        :C:\GCMS7\MS70111\RCA0998.D
Operator    : ECM(YMIAO)
Acquired    : 28 Jun 2014  14:34     using AcqMethod PAH-2014.M
Instrument  :   GCMS 7
Sample Name: MOA14PAH007
Misc Info   :
Vial Number: 24
```



PAH Mass Discrimination Ratio

B&B Laboratories
Project J14120
Report 14-3272

Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
Mass Discrimination Sheet

Client Project #AK14-1005

File Name	Sample Name	Benzo(g,h,i)perylene Concentration (ng/mL)	Phenanthrene Concentration (ng/mL)	Benzo(g,h,i)perylene/ Phenanthrene ratio	Q
MS70111B.D	PAH-WKC1-020-033	18.7	18.3	1.02	
MS70111C.D	PAH-WKC2-100-033	106	113	0.94	
MS70111D.D	PAH-WKC3-250-033	263	279	0.94	
MS70111E.D	PAH-WKC4-500-033	505	525	0.96	
MS70111F.D	PAH-WKC5-1000-033	1007	1017	0.99	
MS70111G.D	PAH-WKC6-5000-033	4443	4026	1.10	
MS70111I.D	PAH-WKICV-250-007	235	240	0.98	
MS70111J.D	PAH-WKCCV-250-041	265	279	0.95	
MS70111L.D	PAH-WKCCV-250-041	252	268	0.94	
MS70111M.D	PAH-WKCCV-250-041	257	250	1.03	

Qualifiers (Q): Ratio of Benzo(g,h,i)perylene to Phenanthrene needs to be ≥ 0.70

PAH Internal Standard Area Data

B&B Laboratories
Project J14120
Report 14-3272

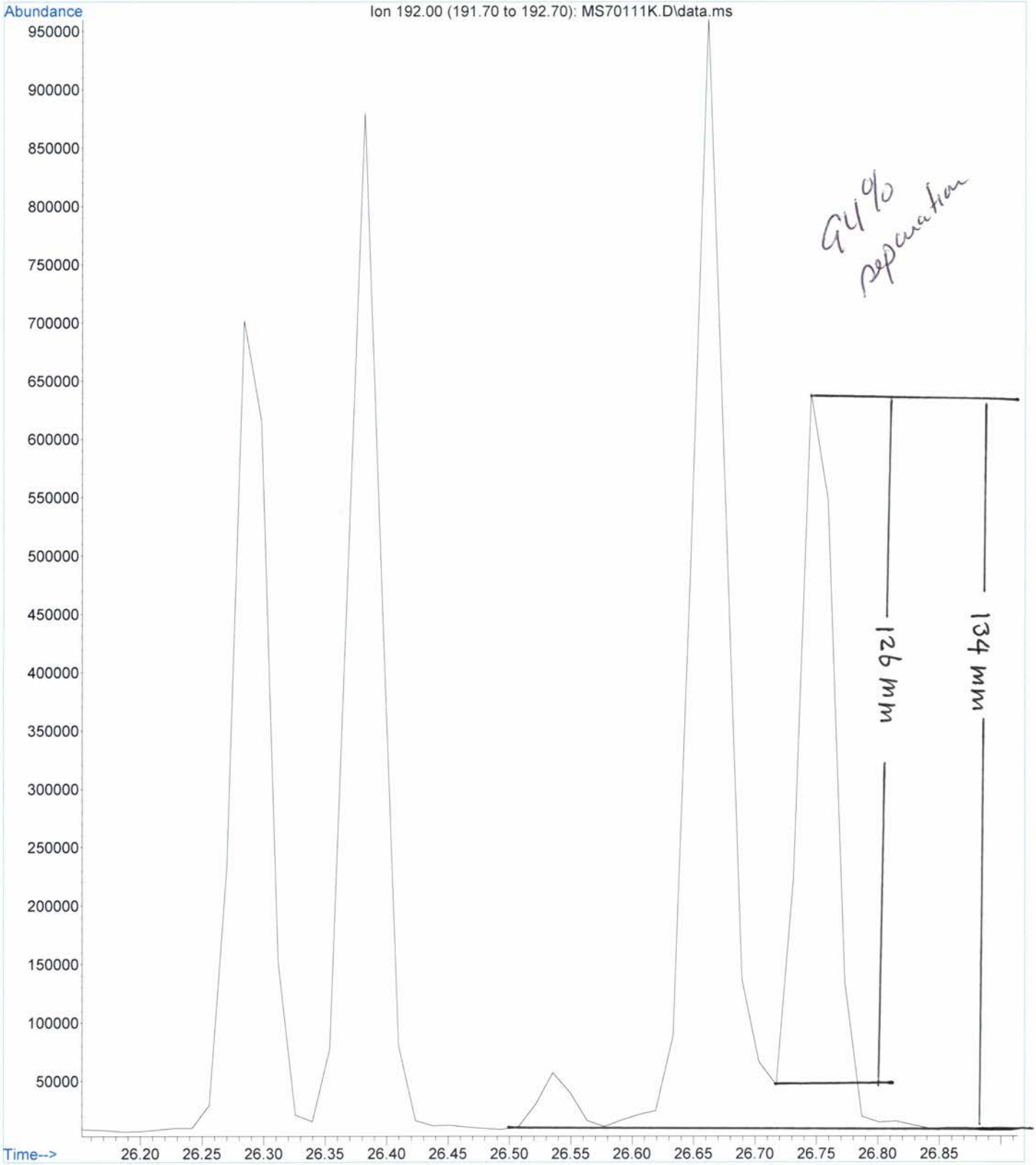
Kinnetic Labs - Asplund WPCF
Polycyclic Aromatic Hydrocarbon Data
The Area of the Internal Standards in the Associated Calibration Standard

Client Project #AK14-1005

File Name	Sample Name	Internal Standard 1 Fluorene-d10				Internal Standard 2 Pyrene-d10				Internal Standard 3 Benzo(a)pyrene-d12			
		Response (Area)	50% (Area)	200% (Area)	Q	Response (Area)	50% (Area)	200% (Area)	Q	Response (Area)	50% (Area)	200% (Area)	Q
MS70111D.D	**PAH-WKC3-250-033**	**386362**	**193181**	**772724**		**716802**	**358401**	**1433604**		**701426**	**350713**	**1402852**	
MS70111I.D	PAH-WKICV-250-007	313376				568713				530968			
MS70111J.D	**PAH-WKCCV-250-041**	**286032**	**143016**	**572064**		**506794**	**253397**	**1013588**		**489130**	**244565**	**978260**	
ENV3298A.D	Method Blank	319510				618841				599854			
ENV3298B.D	Blank Spike	309196				587676				582790			
ENV3298C.D	Blank Spike Dupl.	309766				579055				556346			
RCA0989.D	MOA14PAH001	305230				572603				568776			
RCA0990.D	MOA14PAH002	299029				571907				548859			
RCA0991.D	MOA14PAH003	309853				583395				532517			
MS70111L.D	**PAH-WKCCV-250-041**	**328546**	**164273**	**657092**		**607643**	**303822**	**1215286**		**582652**	**291326**	**1165304**	
RCA0992.D	MOA14PAH004	317657				590052				508001			
RCA0993.D	MOA14PAH005	312269				584897				491061			
RCA0994.D	MS (MOA14PAH005)	330562				628473				563574			
RCA0995.D	MSD (MOA14PAH005)	308454				574783				513145			
RCA0997.D	MOA14PAH006	273511				513796				441028			
RCA0998.D	MOA14PAH007	376766				705960				660698			
MS70111M.D	**PAH-WKCCV-250-041**	**327062**	**163531**	**654124**		**637045**	**318523**	**1274090**		**650301**	**325151**	**1300602**	

SRM-2779 Reference Oil
PAH
Resolution Check

```
File        :C:\GCMS7\MS70111\MS70111K.D
Operator    : ECM(YMIAO)
Acquired    : 27 Jun 2014  11:32 pm using AcqMethod PAH-2014.M
Instrument :   GCMS 7
Sample Name: PAH-WKSRM2779-4.0-004
Misc Info  :
Vial Number: 11
```



Supporting Documents

Shipping, Sample Receiving, and Project Initiation Documents

B&B LABORATORIES RECEIVING/INTEGRITY REPORT

Job: J14120 Date Received: 6/17/14 SDG#: 14061702

Sender: Kinnetic labs- Asplund WPCF
Kinnetics: Mark Savoie

1. Number of Shipping Containers: 1

Comments: large blue cooler

2. Airbill Present? Yes/No Shipping Company: Fed EX

Airbill Number: 7703 1585 8817

Comments: PON

3. Custody Seals on Container?
No Yes Intact Not Intact

Comments: N/A

4. Chain of Custody Records?
No Yes

Comments N/A

5. General Sample Conditions:
Frozen Cool Unrefrigerated
Dry Ice Blue Ice Ice

Temperature/Comments: 4.2°C/no temp blank (T5

6. List of Broken Containers:

None

7. Number of Samples Expected: 1 cooler Number of Samples Received: 10 waters

8. Problems/Discrepancies:

received 4 bottles for one sample, should we analyze each bottle?

9. Resolutions:

per Mark Savoie, additional bottles are for MS/MSD (see email)

10. Checked in by: amanda Brewster Date: 6/17/14

large blue cooler

Ice type: Gel ice
Cooler temp: 4.2°C
T5
COC: Intact

Sdg 14061702
Cooler 1 of 1

From: (907) 276-6178
KINNETIC LABORATORIES, INC
KINNETIC LABORATORIES, INC
704 WEST 2nd AVENUE

ANCHORAGE, AK 99501

Origin ID: CYMA

FedEx Express

J14101402070326

Ship Date: 16JUN14
ActWgt: 57.0 LB
CAD: 3116229/INET3490

Delivery Address Bar Code

SHIP TO: (979) 693-3446

BILL SENDER

Amanda Brewster
B&B Laboratories
14931B South Dowling Road

COLLEGE STATION, TX 77845

Ref # MOA 516.02
Invoice #
PO #
Dept #

TRK# 0201 7703 1585 8817

TUE - 17 JUN 10:30A
PRIORITY OVERNIGHT
ASR
77845
TX-US
IAH

XH CLLA

522G5/9BC4/F220

KINNETIC LABORATORIES INCORPORATED
704 West 2nd Avenue
Anchorage, AK 99501
(907) 276-6178

Attn: Amanda Brewster
B&B Laboratories
14391B South Dowling Road
College Station, Texas 77845
Phone: (979) 693-3446

Custody Seal

Date 5/16/14 Project SLC
Signature [signature] Container# 1 of 1

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**
Amanda Brewster- Sample Custodian TDI-BI 14931B S. Dowling Rd, College Station, TX 77845 (979) 693-3446 phone (979) 693-6389 fax Contact: Dr. Thomas McDonald	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion Date: 45 days.	P.O. #: AK14-1005	KLI Proj. #:516.02

ANALYSIS TYPE: Extraction of water for hydrocarbon analysis; determination of PAH and their alkylated homologues.

MATRIX: Water	**Preservative:** 6°C; Station F1-1 sample contains L-Ascorbic Acid	**Type of Container:** 1L amber nm glass

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14PAH001	F1-1S	1 ✓	6/11/12 1335	Intact	
MOA14PAH002	F1-2S	1 ✓	6/11 1405	Intact	
MOA14PAH003	F1-3S	1 ✓	6/11 1420	Intact	
MOA14PAH004	C1-1S	1 ✓	6/12 1413	Intact	Time on bottle says 1415
MOA14PAH005	C1-2S	4 ✓	6/12 1435	Intact	
MOA14PAH006	C1-3S	1 ✓	6/12 1503	Intact	Time on bottle says 1505

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
Manar Saw	6/16 1103	Fed Ex	Kurt Kibler	6/19 10:45

SAMPLED BY (NAME/SIGNATURE): Manar Saw

C:\Projects\MOA\MOA14\COCs\RecWater

Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**
Amanda Brewster- Sample Custodian TDI-BI 14391B S. Dowling Rd, College Station, TX 77845 (979) 693-3446 phone (979) 693-6389 fax Contact: Dr. Thomas McDonald	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion Date: 30 days.	P.O. #: AK14-1005	KLI Proj. #:516.02

ANALYSIS TYPE: Extraction of water for hydrocarbon analysis; determination of PAH and their alkylated homologues.

MATRIX: Water	**Preservative:** 6°C; Effluent sample contain L-Ascorbic Acid	**Type of Container:** 1L amber nm glass

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
MOA14PAH007	Effluent	1	6/11/14 1300	Intact	

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
PLW 6/12/14	0950	hand	[illegible]	6/12 0950
[illegible] 6/16	1300 6/16	Fed Ex	Kurt Kibler	6/17/14 10:45

SAMPLED BY (NAME/SIGNATURE): [illegible]

C:\Projects\MOA\MOA14\COCs\RecWater

Report 14-3272

B&B LABORATORIES SAMPLE INITIATION FORM-ENV

Job #: J14120

SDG: 14061702

Client: Kinnetic Labs - Asplund WPCF

Initiation Date: 6/18/14

Number of Samples: 9

Matrix: waters

Due Date: 45 days: 8/02/14

Comments: RCA0994 MS
RCA0995 MSD

Analyses

- [x] PAHs
- [ ] OCs/PCBs
- [x] Aliphatics/TPH
- [x] EOM
- [ ] Dry Wt.
- [ ] %Lipid
- [ ] TOC/TIC
- [ ] _____
- [x] Short Columns
- [ ] Long Columns
- [ ] _____
- [ ] _____

Requested QA/QC (per batch of _____ Client Samples)

- [x] Blank
- [ ] SRM/LCS _____
- [x] Blank Spike
- [x] Blank Spike Duplicate
- [x] Matrix Spike _____
- [x] Matrix Spike Duplicate _____
- [ ] Duplicate _____

SEE BACK FOR SPECIFIC STANDARDS TO USE

Surrogate(s): PAH, All Volume(s): 100ul

Spike Standard(s): PAH, All Volume(s): 100ul

Internal Standard(s): PAH, All Volume(s): 100ul

Final Extract Volume (ml): 1.0 Final Solvent: DCM

Comments:

Sample Custodian Signature: amanda brewster Date: 6/18/14

Laboratory Manager Signature: [signature] Date: 6/18/14

Sample Initiaiton - general Rev 1.doc
Rev 1

cc: COC Book
Extraction Lab

Log #	Job #	CLIENT NAME	FILENAME	CLIENT ID	COL. DATE	RECVD	Analysis	MATRIX	COMMENTS	B&B SDG	Cooler #	Sent by:	Container	Project #
66417	J14120	Kinnetic Labs - Asplund WPCF	RCA0989	MOA14PAH001	06/11/14	06/17/14	PAH	WATER		14061702	Cooler 1	Kinnetics: Mark Savoie	1L amber glass BR bottle	AK14-1005
66418	J14120	Kinnetic Labs - Asplund WPCF	RCA0990	MOA14PAH002	06/11/14	06/17/14	PAH	WATER		14061702	Cooler 1	Kinnetics: Mark Savoie	1L amber glass BR bottle	AK14-1005
66419	J14120	Kinnetic Labs - Asplund WPCF	RCA0991	MOA14PAH003	06/11/14	06/17/14	PAH	WATER		14061702	Cooler 1	Kinnetics: Mark Savoie	1L amber glass BR bottle	AK14-1005
66420	J14120	Kinnetic Labs - Asplund WPCF	RCA0992	MOA14PAH004	06/12/14	06/17/14	PAH	WATER		14061702	Cooler 1	Kinnetics: Mark Savoie	1L amber glass BR bottle	AK14-1005
66421	J14120	Kinnetic Labs - Asplund WPCF	RCA0993	MOA14PAH005	06/12/14	06/17/14	PAH	WATER	1 of 4	14061702	Cooler 1	Kinnetics: Mark Savoie	1L amber glass BR bottle	AK14-1005
66422	J14120	Kinnetic Labs - Asplund WPCF	RCA0994	MOA14PAH005	06/12/14	06/17/14	PAH	WATER	2 of 4, MS	14061702	Cooler 1	Kinnetics: Mark Savoie	1L amber glass BR bottle	AK14-1005
66423	J14120	Kinnetic Labs - Asplund WPCF	RCA0995	MOA14PAH005	06/12/14	06/17/14	PAH	WATER	3 of 4, MSD	14061702	Cooler 1	Kinnetics: Mark Savoie	1L amber glass BR bottle	AK14-1005
66424	J14120	Kinnetic Labs - Asplund WPCF	RCA0996	MOA14PAH005	06/12/14	06/17/14	ARCHIVE	WATER	4 of 4	14061702	Cooler 1	Kinnetics: Mark Savoie	1L amber glass BR bottle	AK14-1005
66425	J14120	Kinnetic Labs - Asplund WPCF	RCA0997	MOA14PAH006	06/12/14	06/17/14	PAH	WATER		14061702	Cooler 1	Kinnetics: Mark Savoie	1L amber glass BR bottle	AK14-1005
66426	J14120	Kinnetic Labs - Asplund WPCF	RCA0998	MOA14PAH007	06/11/14	06/17/14	PAH	WATER		14061702	Cooler 1	Kinnetics: Mark Savoie	1L amber glass BR bottle	AK14-1005

Kinnetics

Amand Brewster

From:	trackingupdates@fedex.com
Sent:	Monday, June 16, 2014 2:27 PM
To:	amandabrewster@tdi-bi.com
Subject:	FedEx Shipment Notification

Coming 6/17/14

This tracking update has been requested by:

Company Name:	KINNETIC LABORATORIES, INC
Name:	KINNETIC LABORATORIES, INC
E-mail:	msavoie@kinneticlabs.com

KINNETIC LABORATORIES, INC of KINNETIC LABORATORIES, INC sent Amanda Brewster of B&B Laboratories 1 FedEx Priority Overnight package(s).

This shipment is scheduled to be sent on 06/16/2014.

Reference information includes:

Reference:	MOA 516.02
Special handling/Services:	Adult Signature Required Deliver Weekday
Status:	Shipment information sent to FedEx
Tracking number:	770315858817

To track the latest status of your shipment, click on the tracking number above, or visit us at fedex.com.

To learn more about FedEx Express, please visit our website at fedex.com.

This tracking update has been sent to you by FedEx on the behalf of the Requestor noted above. FedEx does not validate the authenticity of the requestor and does not validate, guarantee or warrant the authenticity of the request, the requestor's message, or the accuracy of this tracking update. For tracking results and fedex.com's terms of use, go to fedex.com.

Thank you for your business.

Amand Brewster

From: Mark Savoie <msavoie@kinneticlabs.net> on behalf of Mark Savoie <msavoie@kinneticlabs.com>
Sent: Wednesday, June 18, 2014 12:17 AM
To: 'Amand Brewster'
Subject: RE: Samples Received 6/17/14

Hi Amanda –

We sent extra volume on MOA14PAH005 so that you would have sufficient volume to run a MS/MSD. You can keep the cooler and blue ice as it probably isn't worth the shipping costs to return. I'll have to get you the signed agreement on Friday as I'm in the field for the next two days. You can call the project Asplund WPCF.

Thanks,

Mark Savoie

From: Amand Brewster [mailto:amandabrewster@tdi-bi.com]
Sent: Tuesday, June 17, 2014 12:30 PM
To: msavoie@kinneticlabs.com
Subject: RE: Samples Received 6/17/14

Also, would you like for us to return your cooler/blue ice?
If so could I please have a Fed Ex account number to use for the shipment?

From: Amand Brewster [mailto:amandabrewster@tdi-bi.com]
Sent: Tuesday, June 17, 2014 3:26 PM
To: 'msavoie@kinneticlabs.com'
Cc: 'Juan Ramirez (juanramirez@tdi-bi.com)'; 'Donell Frank'; 'tommcdonald@tdi-bi.com' (tommcdonald@tdi-bi.com)
Subject: Samples Received 6/17/14

Hi Mark,

We received your samples today in good condition. The internal temperature of the cooler was 4.2ºC.
A PDF of the COC is attached for your records.

A few things...

-Could you please send me an agreement for services for these samples?

-What would you like to call this project?

-Do you want us to analyze all four bottles for sample MOA14PAH005?

Regards,
Amanda

From: juanramirez@tdi-bi.com [mailto:juanramirez@tdi-bi.com]
Sent: Tuesday, June 17, 2014 11:45 AM
To: msavoie@kinneticlabs.com; tommcdonald@tdi-bi.com
Cc: amandabrewster@tdi-bi.com; Donell Frank
Subject: RE: Municpality of Anchorage - PAH analyses

Hello Mark,

We received the water samples for PAHs - $230.00 per client submitted sample. I'm assuming sample MOA14PAH005 with 4 bottles will be used as our matrix spike, matrix spike duplicate.

Let me know different, Amanda Brewster will send you a final notification once she finishes checking the samples into custody.

Thanks,

Juan

Juan Ramirez
Environmental Lab Manager
TDI-BI/B&B Labs
14391B South Dowling Rd.
College Station, TX 77845
Office - (979) 693-3446
Fax - (979) 693-6389
Cell – (979) 777-0793

Web Site: http://tdi-bi.com/

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From: juanramirez@tdi-bi.com [mailto:juanramirez@tdi-bi.com]
Sent: Tuesday, May 27, 2014 3:35 PM
To: 'msavoie@kinneticlabs.com'; 'tommcdonald@tdi-bi.com'
Cc: 'amandabrewster@tdi-bi.com'; Donell Frank
Subject: RE: Municpality of Anchorage - PAH analyses

Hello Mark,

We can accommodate you. I'll get back to you on pricing. Same reporting requirements as last time?

Juan

Juan Ramirez
Environmental Lab Manager
TDI-BI/B&B Labs
14391B South Dowling Rd.
College Station, TX 77845

Office - (979) 693-3446
Fax - (979) 693-6389
Cell – (979) 777-0793

Web Site: http://tdi-bi.com/

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From: Mark Savoie [mailto:msavoie@kinneticlabs.net] **On Behalf Of** Mark Savoie
Sent: Tuesday, May 27, 2014 3:27 PM
To: tommcdonald@tdi-bi.com; juanramirez@tdi-bi.com
Cc: amandabrewster@tdi-bi.com
Subject: Municpality of Anchorage - PAH analyses

Tommy/Juan –

We are planning on sending you seven water samples to be analyzed for PAHs the second week in June. This is the same project that you have run for us the last couple of years. Samples should arrive at your laboratory on June 13th. Please let me know ASAP if you are not able to accommodate us as we will need to make other arrangements. Also, could you please confirm analysis cost? Thanks, we look forward to hearing back from you.

Mark Savoie

Kinnetic Laboratories, Inc.
704 West 2nd Avenue
Anchorage, AK 99501
(907) 276-6178 phone
(907) 278-6881 fax

Amand Brewster

From: Mark Savoie <msavoie@kinneticlabs.net> on behalf of Mark Savoie <msavoie@kinneticlabs.com>
Sent: Friday, June 20, 2014 3:36 PM
To: 'Amand Brewster'
Subject: RE: samples coming in tomorrow
Attachments: TDI Sample Agreement.PDF

Amanda –

The signed agreement is attached. Thanks, and have a great weekend.

Mark

From: Amand Brewster [mailto:amandabrewster@tdi-bi.com]
Sent: Monday, June 16, 2014 12:22 PM
To: msavoie@kinneticlabs.com
Subject: samples coming in tomorrow

Hi Mark,

Could you please complete an agreement for services for the samples that are coming in tomorrow?

Regards,
Amanda

Please note our new address!
B&B Laboratories
14391B South Dowling Road
College Station, Texas 77845
Phone: (979) 693-3446
Email: amandabrewster@tdi-bi.com

Please consider the environment before printing this email!

Privileged and Confidential Communication – Attorney Work Product:

This electronic mail communication and any documents attached hereto may contain confidential and privileged material for the sole use of the intended recipient(s) named above. If you are not the intended recipient (or authorized to receive for the recipient) of this message any review, use, distribution, or disclosure by you or others is strictly prohibited. Please contact the sender by reply email and delete and/or destroy the accompanying message.

B&B
B&B Laboratories, Inc.

Agreement for Services

TDI Brooks

Lab Contact: Juan Ramirez, Laboratory Manager
14391B South Dowling Road
College Station TX 77845
Phone: (979) 693-3446

Agreement #: 0048NOA

Contact Information	Kinnetic Labs., Inc.
Project Manager:	Mark Savoie
Phone:	(907) 276-6178
Street Address City, State Zip:	704 west 2nd Avenue Anchorage, AK 99501
Fax:	(907) 278-6881
Email:	msavoie@kinneticlabs.com

Description of Work	
Project Name:	MDA - Asplund WPCF
Project Number:	516.02
Requested Turn-Around (working days)	45 days
Submission Date:	6/17/14
Purchase Order #:	AK14-1005

Payment Terms: Net 30 from date of invoice

All overdue payments are subject to an additional interest and service charge of one and one-half percent (1.5%) per month, from the due date until the date payment is received.

Billing corrections must be requested within 30 days of the invoice date.

Billing Information	
Attention to:	Mark Savoie
Company:	Kinnetic Labs., Inc.
Street Address City, State, Zip:	704 west 2nd Ave Anchorage AK 99501
Phone:	(907) 276-6178
Email:	msavoie@kinneticlabs.com

Sample Storage and Disposal:

B&B Laboratories shall dispose of Client's samples 45 days after analytical report is issued, unless instructed to hold samples for an alternate period of time, or, request is made for samples to be returned to the Client. Longer storage periods may be requested (as space allows) for an additional charge.

If sample disposal is requested, it will be at cost to the client
Or, samples may be returned to client, at client's cost.

Mark Savoie — 6/20/14

Signature — Date/Time

**Signature indicates agreement with these terms and conditions*

Laboratory Bench Sheet Logs

B&B LABORATORIES ENVIRONMENTAL EXTRACTION LOG

MATRIX
- ☐ OTHER
- ☒ WATER
- ☐ SEDIMENT
- ☐ TISSUE

Job #: J14120 SDG #: 14061702

Client: Kinnetic Labs - Asplund WPCF

Analysis: ☒ PAH ☐ PESTS ☐ PCB ☐ ALI

Other:

Extraction Solvent: DCM

Final Solvent: DCM Final Volume: 1.0 mL

Lipids Y / (N)
Dry Wt. Y / (N)
Copper Y / (N)
EOM (Y) / N
Columns (Y) / N
Long / (Short)

Surrogate: 100 µL
PAH: PAH-WKSU-2500-006
Bottle 1 of 3
Pest/PCB: —
Bottle ___ of ___
Aliphatic: ~~PAH-WKSK-1000-029~~ 6/23/14 SAT
Bottle 1 of 2
Other: —
Bottle ___ of ___

Spike: 100 µL
PAH: PAH-WKSK-1000-029
Bottle 1 of 2
Pest/PCB: —
Bottle ___ of ___
Aliphatic: —
Bottle ___ of ___
Other: —
Bottle ___ of ___

GC Int Std: 100 µL
PAH: PAH-WKIS-2500-005
Bottle 3 of 3
Pest/PCB: —
Bottle ___ of ___
Aliphatic: —
Bottle ___ of ___
Other: —
Bottle ___ of ___

Turbo Vap
Bath T (C):
Pressure (>20psi):
Check Water Level:
Turbo Vap Date:

General Comments:

Report 14-3272

DCM added on 6/17/14 SAT

	Added	Witness
Surrogate:	6/24/14 CAS	6/24/14 SAT
Spike:	6/24/14 CAS	6/24/14 SAT
Internal:	6/26/14 CAS	6/26/14 SAT

	Sample Name	Client ID	Wet Wt. (g or L)	Dry Wt. %	Dry Wt. (g)	Extraction Comments	Internal Chain of Custody	
1	ENV3298A	Method Blank	1.00				Extraction Prep	
2	ENV3298B	Blank Spike	1.00				Date: 6/24/14	Date: 6/24/14
3	ENV3298C	Blank Spike Dup	1.00				Initials: CAS	Initials: CAS
4	RCA0989	MOA14PAH001	0.93				Extraction	
5	RCA0990	MOA14PAH002	1.03				Date: 6/24/14	Date: 6/24/14
6	RCA0991	MOA14PAH003	0.97				Initials: CAS	Initials: CAS
7	RCA0992	MOA14PAH004	1.05				Concentration	
8	RCA0993	MOA14PAH005	1.05			Original for MS/MSD	Date: 6/24/14	Date: 6/25/14
9	RCA0994	MOA14PAH005	1.05			Matrix Spike	Initials: CAS	Initials: CAS
10	RCA0995	MOA14PAH005	1.05			Matrix Spike Duplicate	Short Columns	
11	RCA0997	MOA14PAH006	1.06				Date: 6/25/14	Date: 6/25/14
12	RCA0998	MOA14PAH007	1.04				Initials: SAT	Initials: SAT

ENV 3298

B&B LABORATORIES ENVIRONMENTAL EXTRACTION LOG

	Sample Name	Client ID	Wet Wt. (g or L)	Dry Wt. %	Dry Wt. (g)	Extraction Comments
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						

Internal Chain of Custody

Concentration Short Columns	
Date: 6-26-14	Date: 6-26-14
Initials: EW	Initials: EW
Columns SA1	
Date:	Date:
Initials:	Initials:
Concentration SA1	
Date:	Date:
Initials:	Initials:
Columns SA2	
Date:	Date:
Initials:	Initials:
Concentration SA2	
Date:	Date:
Initials:	Initials:
Transfer for HPLC	
Date:	Date:
Initials:	Initials:
HPLC	
Date:	Date:
Initials:	Initials:
Post-HPLC Concentration	
Date:	Date:
Initials:	Initials:
Final Extract Transfer	
Date: 6/26/14	Initials: CBS

Dry Weight Page

—

Lipid/EOM Page

EOM 1135

Clean-up/Separation/Other Columns

—

Lot Numbers

DCM: 52314
Hexane: —
Hydromatrix: 31070-AW
Water: DJ598-C
Silica: BCBK5070V
Alumina: VA26E2EMS
Sodium Sulfate: 3143C513
Pentane: —
Copper: —
Hydrochloric Acid: 53284
SPE Columns: —
Other: —

Sample Storage Box #

#442

HPLC Storage Box #

—

QC Review

Date	Initials
6/26/14	[illegible]

Equipment Used

☐ ASE1 ☐ ASE3 ☐ HPLC1
☐ ASE2 ☐ PLE ☐ HPLC2

Copied to Folders

6/26/14 AK

B&B LABORATORIES EOM LOGBOOK

MATRIX: OTHER / SEDIMENT / WATER

Job #: J14120 SDG #: 14061702

Client: Kinnetic Labs - Asplund WPCF

General comments:

Lab Manager Date/Int: 6/25/14 ~~SA~~

Transferred by Date/Int: 6/25/14 CK
From ENV Pg: ENV3298
From DRY Pg: —

Date/Int: 6/25/14 CK

Bal. Cal. ✓

Date/Int: 6/25/14 CK

	Sample Name	Client ID	Smpl Wt/Vol (g/L) Wet Wt. Dry Wt.	Dry Wt. (%)	Final Extract Vol (mL)	Initial Filter Wt (mg)	Filter & Sample Wt (mg)	Wt. of 100 µl EOM Wt. (mg)	EOM µg/g (Wet Wt. Basis)	EOM µg/g (Dry Wt. Basis)	Comments
1	ENV3298A	Method Blank	1.00		3	~~30.852~~ CK	~~30.856~~ 6/25/14	0.001	30		31.304/31.305
2	ENV3298B	Blank Spike	1.00		3	~~30.987~~ CK	~~30.~~ 6/25/14	0.004	120		31.321/31.325
3	ENV3298C	Blank Spike Duplicate	1.00		3	31.041	31.045	0.004	120		
4	RCA0989	MOA14PAH001	0.93		3	31.035	31.115	0.080	2581		
5	RCA0990	MOA14PAH002	1.03		3	30.889	30.902	0.013	379		
6	RCA0991	MOA14PAH003	0.97		3	30.681	30.687	0.006	186		
7	RCA0992	MOA14PAH004	1.05		3	30.960	30.966	0.006	171		
8	RCA0993	MOA14PAH005	1.05		3	30.805	30.811	0.006	171		
9	RCA0994	MOA14PAH005	1.05		3	31.080	31.085	0.005	143		
10	RCA0995	MOA14PAH005	1.05		3	30.929	30.933	0.004	114		
11	RCA0997	MOA14PAH006	1.06		3	31.183	31.194	0.011	311		
12	RCA0998	MOA14PAH007	1.04		3	30.887	32.171	1.284	37038		bad smell + amber color

EOM 1135

B&B LABORATORIES EOM LOGBOOK

	Sample Name	Client ID	Smpl Wt./Vol (g/L) Wet Wt. Dry Wt.	Dry Wt. (%)	Final Extract Vol (mL)	Initial Filter Wt (mg)	Filter & Sample Wt (mg)	Wt. of 100 µl EOM Wt. (mg)	EOM µg/g (Wet Wt. Basis)	EOM µg/g (Dry Wt. Basis)	Comments
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											

$$\text{EOM} = \frac{(\text{EOM Wt. (mg)})\ (\text{Final Extract Vol. (ml)})}{(\text{Smpl Wt/Vol. (g/L)})\ (0.10\ \text{ml})} \times 1000$$

$$\%\text{RPD} = \frac{(\text{EOM}_1 - \text{EOM}_2)}{(\text{EOM}_1 + \text{EOM}_2) \times 0.5} \times 100\%$$

	Initial Filter Wt (mg)	Filter & Sample Wt (mg)	Wt. of 100 µl Lipid Wt. (mg)
Solvent Blank	29.746	29.746	0.000
EOM Standard: EOM-WKLC-10-005	29.628	39.885	10.257

The Relative Percent Difference (RPD) between duplicates must be ≤ 25%.

Date/Int:	RPD
Sample:	
Duplicate:	

EOM 1135

APPENDIX C

Receiving Water Quality Monitoring

C4 Trace Metals

Eurofins Calscience, Inc.

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WORK ORDER NUMBER: 14-06-1150

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Kinnetic Laboratories, Inc.

Client Project Name: 516.02

Attention: Gary Lawley
704 W. 2nd Ave.
Anchorage, AK 99501-2103

Approved for release on 07/02/2014 by:
Danielle Gonsman
Project Manager

ResultLink

Email your PM

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 14-06-1150

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Work Order Narrative

Work Order: 14-06-1150 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 06/14/14. They were assigned to Work Order 14-06-1150.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

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Sample Summary

Client:	Kinnetic Laboratories, Inc. 704 W. 2nd Ave. Anchorage, AK 99501-2103	Work Order:	14-06-1150
		Project Name:	516.02
		PO Number:	
		Date/Time Received:	06/14/14 10:00
		Number of Containers:	28
Attn:	Gary Lawley		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
MOA14MTL001	14-06-1150-1	06/11/14 13:35	2	Sea Water
MOA14MTL002	14-06-1150-2	06/11/14 14:05	2	Sea Water
MOA14MTL003	14-06-1150-3	06/11/14 14:20	2	Sea Water
MOA14MTL004	14-06-1150-4	06/12/14 14:15	2	Sea Water
MOA14MTL005	14-06-1150-5	06/12/14 14:35	2	Sea Water
MOA14MTL006	14-06-1150-6	06/12/14 15:05	2	Sea Water
MOA14HG001	14-06-1150-7	06/11/14 13:35	2	Sea Water
MOA14HG002	14-06-1150-8	06/11/14 14:05	2	Sea Water
MOA14HG003	14-06-1150-9	06/11/14 14:20	2	Sea Water
MOA14HG004	14-06-1150-10	06/12/14 14:15	2	Sea Water
MOA14HG005	14-06-1150-11	06/12/14 14:35	2	Sea Water
MOA14HG006	14-06-1150-12	06/12/14 15:05	2	Sea Water
MOA14MTL007	14-06-1150-13	06/11/14 13:00	2	Sea Water
MOA14HG00007	14-06-1150-14	06/11/14 13:00	2	Sea Water

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 1631E Total
		Method:	EPA 1631E
		Units:	ug/L
Project: 516.02			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MOA14HG001	**14-06-1150-7-A**	**06/11/14 13:35**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0240	0.000500	0.000146	1.00	B

MOA14HG002	**14-06-1150-8-A**	**06/11/14 14:05**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0209	0.000500	0.000146	1.00	B

MOA14HG003	**14-06-1150-9-A**	**06/11/14 14:20**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0167	0.000500	0.000146	1.00	B

MOA14HG004	**14-06-1150-10-A**	**06/12/14 14:15**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00672	0.000500	0.000146	1.00	B

MOA14HG005	**14-06-1150-11-A**	**06/12/14 14:35**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0122	0.000500	0.000146	1.00	B

MOA14HG00007	**14-06-1150-14-A**	**06/11/14 13:00**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0199	0.000500	0.000146	1.00	B

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 1631E Total
		Method:	EPA 1631E
		Units:	ug/L
Project: 516.02			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-224-55**	**N/A**	**Aqueous**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.000234	0.000500	0.000146	1.00	J

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	Filtered
		Method:	EPA 1631E
		Units:	ug/L
Project: 516.02			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MOA14HG001	**14-06-1150-7-B**	**06/11/14 13:35**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00196	0.000500	0.000146	1.00	

MOA14HG002	**14-06-1150-8-B**	**06/11/14 14:05**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00157	0.000500	0.000146	1.00	

MOA14HG003	**14-06-1150-9-B**	**06/11/14 14:20**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00108	0.000500	0.000146	1.00	

MOA14HG004	**14-06-1150-10-B**	**06/12/14 14:15**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00126	0.000500	0.000146	1.00	

MOA14HG005	**14-06-1150-11-B**	**06/12/14 14:35**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.000824	0.000500	0.000146	1.00	

MOA14HG00007	**14-06-1150-14-B**	**06/11/14 13:00**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.00705	0.000500	0.000146	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	Filtered
		Method:	EPA 1631E
		Units:	ug/L
Project: 516.02			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-226-37**	**N/A**	**Aqueous**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.000500	0.000146	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 3005A Total
		Method:	EPA 1640
		Units:	ug/L
Project: 516.02			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MOA14MTL001	**14-06-1150-1-A**	**06/11/14 13:35**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 20:11**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	5.73	0.0300	0.0122	1.00	
Cadmium	0.651	1.50	0.284	50.0	B,J
Chromium	ND	25.0	8.20	50.0	
Copper	26.9	1.50	0.449	50.0	B
Lead	3.24	1.50	0.674	50.0	
Nickel	11.9	2.50	0.303	50.0	B
Silver	ND	2.50	0.411	50.0	
Zinc	70.2	25.0	3.68	50.0	B

MOA14MTL002	**14-06-1150-2-A**	**06/11/14 14:05**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 22:31**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	8.86	0.0300	0.0122	1.00	

MOA14MTL002	**14-06-1150-2-A**	**06/11/14 14:05**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 21:23**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.653	1.50	0.284	50.0	B,J
Chromium	9.11	25.0	8.20	50.0	J
Copper	34.9	1.50	0.449	50.0	B
Lead	4.87	1.50	0.674	50.0	
Nickel	18.0	2.50	0.303	50.0	B
Silver	ND	2.50	0.411	50.0	
Zinc	71.1	25.0	3.68	50.0	B

MOA14MTL003	**14-06-1150-3-A**	**06/11/14 14:20**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 22:35**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	6.35	0.0300	0.0122	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 3005A Total
		Method:	EPA 1640
		Units:	ug/L
Project: 516.02			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MOA14MTL003	**14-06-1150-3-A**	**06/11/14 14:20**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 21:30**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.627	1.50	0.284	50.0	B,J
Chromium	ND	25.0	8.20	50.0	
Copper	23.3	1.50	0.449	50.0	B
Lead	3.65	1.50	0.674	50.0	
Nickel	12.1	2.50	0.303	50.0	B
Silver	ND	2.50	0.411	50.0	
Zinc	47.9	25.0	3.68	50.0	B

MOA14MTL004	**14-06-1150-4-A**	**06/12/14 14:15**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 22:40**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	3.40	0.0300	0.0122	1.00	

MOA14MTL004	**14-06-1150-4-A**	**06/12/14 14:15**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 21:38**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.618	1.50	0.284	50.0	B,J
Chromium	ND	25.0	8.20	50.0	
Copper	11.3	1.50	0.449	50.0	B
Lead	1.82	1.50	0.674	50.0	
Nickel	6.65	2.50	0.303	50.0	B
Silver	ND	2.50	0.411	50.0	
Zinc	37.3	25.0	3.68	50.0	B

MOA14MTL005	**14-06-1150-5-A**	**06/12/14 14:35**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 22:45**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	4.12	0.0300	0.0122	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 3005A Total
		Method:	EPA 1640
		Units:	ug/L
Project: 516.02			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MOA14MTL005	**14-06-1150-5-A**	**06/12/14 14:35**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 21:46**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.617	1.50	0.284	50.0	B,J
Chromium	ND	25.0	8.20	50.0	
Copper	14.4	1.50	0.449	50.0	B
Lead	1.95	1.50	0.674	50.0	
Nickel	7.88	2.50	0.303	50.0	B
Silver	ND	2.50	0.411	50.0	
Zinc	39.6	25.0	3.68	50.0	B

MOA14MTL006	**14-06-1150-6-A**	**06/12/14 15:05**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 23:10**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	14.6	0.0300	0.0122	1.00	

MOA14MTL006	**14-06-1150-6-A**	**06/12/14 15:05**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 21:54**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.705	1.50	0.284	50.0	B,J
Chromium	19.2	25.0	8.20	50.0	J
Copper	58.8	1.50	0.449	50.0	B
Lead	8.84	1.50	0.674	50.0	
Nickel	31.6	2.50	0.303	50.0	B
Silver	ND	2.50	0.411	50.0	
Zinc	96.0	25.0	3.68	50.0	B

MOA14MTL007	**14-06-1150-13-A**	**06/11/14 13:00**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 23:15**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	2.23	0.0300	0.0122	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 3005A Total
		Method:	EPA 1640
		Units:	ug/L
Project: 516.02			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MOA14MTL007	**14-06-1150-13-A**	**06/11/14 13:00**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 22:02**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.648	1.50	0.284	50.0	B,J
Chromium	ND	25.0	8.20	50.0	
Copper	30.7	1.50	0.449	50.0	B
Lead	1.41	1.50	0.674	50.0	J
Nickel	5.66	2.50	0.303	50.0	B
Silver	ND	2.50	0.411	50.0	
Zinc	101	25.0	3.68	50.0	B

Method Blank	**099-13-067-426**	**N/A**	**Aqueous**	**ICP/MS 05**	**06/18/14**	**06/24/14 17:36**	**140618L01**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	0.0300	0.0122	1.00	
Cadmium	0.0107	0.0300	0.00567	1.00	J
Chromium	ND	0.500	0.164	1.00	
Copper	0.0208	0.0300	0.00898	1.00	J
Lead	ND	0.0300	0.0135	1.00	
Nickel	0.0203	0.0500	0.00607	1.00	J
Silver	ND	0.0500	0.00822	1.00	
Zinc	0.0910	0.500	0.0736	1.00	J

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 3005A Filt.
		Method:	EPA 1640
		Units:	ug/L
Project: 516.02			Page 1 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MOA14MTL001	**14-06-1150-1-B**	**06/11/14 13:35**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 21:41**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	1.70	0.0300	0.0122	1.00	

MOA14MTL001	**14-06-1150-1-B**	**06/11/14 13:35**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 18:35**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.196	0.300	0.0567	10.0	B,J
Chromium	ND	5.00	1.64	10.0	
Copper	5.44	0.300	0.0898	10.0	B
Lead	ND	0.300	0.135	10.0	
Nickel	1.89	0.500	0.0607	10.0	B
Silver	ND	0.500	0.0822	10.0	
Zinc	14.5	5.00	0.736	10.0	B

MOA14MTL002	**14-06-1150-2-B**	**06/11/14 14:05**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 21:46**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	1.52	0.0300	0.0122	1.00	

MOA14MTL002	**14-06-1150-2-B**	**06/11/14 14:05**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 18:43**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.190	0.300	0.0567	10.0	B,J
Chromium	ND	5.00	1.64	10.0	
Copper	1.12	0.300	0.0898	10.0	B
Lead	ND	0.300	0.135	10.0	
Nickel	1.10	0.500	0.0607	10.0	B
Silver	ND	0.500	0.0822	10.0	
Zinc	3.95	5.00	0.736	10.0	B,J

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 3005A Filt.
		Method:	EPA 1640
		Units:	ug/L
Project: 516.02			Page 2 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MOA14MTL003	**14-06-1150-3-B**	**06/11/14 14:20**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 21:51**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	1.51	0.0300	0.0122	1.00	

MOA14MTL003	**14-06-1150-3-B**	**06/11/14 14:20**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 18:51**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.194	0.300	0.0567	10.0	B,J
Chromium	ND	5.00	1.64	10.0	
Copper	1.11	0.300	0.0898	10.0	B
Lead	ND	0.300	0.135	10.0	
Nickel	1.12	0.500	0.0607	10.0	B
Silver	ND	0.500	0.0822	10.0	
Zinc	4.20	5.00	0.736	10.0	B,J

MOA14MTL004	**14-06-1150-4-B**	**06/12/14 14:15**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 22:11**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	1.55	0.0300	0.0122	1.00	

MOA14MTL004	**14-06-1150-4-B**	**06/12/14 14:15**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 18:59**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.272	0.300	0.0567	10.0	B,J
Chromium	ND	5.00	1.64	10.0	
Copper	2.32	0.300	0.0898	10.0	B
Lead	ND	0.300	0.135	10.0	
Nickel	1.25	0.500	0.0607	10.0	B
Silver	ND	0.500	0.0822	10.0	
Zinc	12.8	5.00	0.736	10.0	B

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 3005A Filt.
		Method:	EPA 1640
		Units:	ug/L
Project: 516.02			Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MOA14MTL005	**14-06-1150-5-B**	**06/12/14 14:35**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 22:16**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	1.57	0.0300	0.0122	1.00	

MOA14MTL005	**14-06-1150-5-B**	**06/12/14 14:35**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 19:39**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.193	0.300	0.0567	10.0	B,J
Chromium	ND	5.00	1.64	10.0	
Copper	1.44	0.300	0.0898	10.0	B
Lead	0.407	0.300	0.135	10.0	
Nickel	1.14	0.500	0.0607	10.0	B
Silver	ND	0.500	0.0822	10.0	
Zinc	4.49	5.00	0.736	10.0	B,J

MOA14MTL006	**14-06-1150-6-B**	**06/12/14 15:05**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 22:21**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	1.65	0.0300	0.0122	1.00	

MOA14MTL006	**14-06-1150-6-B**	**06/12/14 15:05**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 19:47**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.191	0.300	0.0567	10.0	B,J
Chromium	ND	5.00	1.64	10.0	
Copper	1.12	0.300	0.0898	10.0	B
Lead	ND	0.300	0.135	10.0	
Nickel	1.18	0.500	0.0607	10.0	B
Silver	ND	0.500	0.0822	10.0	
Zinc	4.07	5.00	0.736	10.0	B,J

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 3005A Filt.
		Method:	EPA 1640
		Units:	ug/L
Project: 516.02			Page 4 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MOA14MTL007	**14-06-1150-13-B**	**06/11/14 13:00**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/18/14 22:26**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	1.89	0.0300	0.0122	1.00	

MOA14MTL007	**14-06-1150-13-B**	**06/11/14 13:00**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 19:55**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Cadmium	0.122	0.300	0.0567	10.0	B,J
Chromium	ND	5.00	1.64	10.0	
Copper	9.95	0.300	0.0898	10.0	B
Lead	0.339	0.300	0.135	10.0	
Nickel	3.94	0.500	0.0607	10.0	B
Silver	ND	0.500	0.0822	10.0	
Zinc	45.8	5.00	0.736	10.0	B

Method Blank	**099-15-823-85**	**N/A**	**Aqueous**	**ICP/MS 05**	**06/18/14**	**06/24/14 17:28**	**140618L01F**

Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	0.0300	0.0122	1.00	
Cadmium	0.0106	0.0300	0.00567	1.00	J
Chromium	ND	0.500	0.164	1.00	
Copper	0.0208	0.0300	0.00898	1.00	J
Lead	ND	0.0300	0.0135	1.00	
Nickel	0.0204	0.0500	0.00607	1.00	J
Silver	0.0268	0.0500	0.00822	1.00	J
Zinc	0.0898	0.500	0.0736	1.00	J

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 1631E Total
		Method:	EPA 1631E
Project: 516.02			Page 1 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MOA14HG004	**Sample**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625S01**
MOA14HG004	**Matrix Spike**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625S01**
MOA14HG004	**Matrix Spike Duplicate**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.006722	0.02000	0.02873	110	0.02823	108	71-125	2	0-24	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 1631E Total
		Method:	EPA 1631E
Project: 516.02			Page 2 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-06-1438-1	**Sample**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625S01A**
14-06-1438-1	**Matrix Spike**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625S01A**
14-06-1438-1	**Matrix Spike Duplicate**	**Sea Water**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625S01A**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.002787	0.02000	0.02234	98	0.02219	97	71-125	1	0-24	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 3005A Total
		Method:	EPA 1640
Project: 516.02			Page 3 of 3

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MOA14MTL001	**Sample**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 20:11**	**140618S01A**
MOA14MTL001	**Matrix Spike**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 20:19**	**140618S01A**
MOA14MTL001	**Matrix Spike Duplicate**	**Sea Water**	**ICP/MS 05**	**06/18/14**	**06/30/14 20:27**	**140618S01A**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	5.725	0.5000	6.405	4X	6.295	4X	50-150	4X	0-20	Q
Cadmium	ND	0.5000	1.118	224	1.138	228	50-150	2	0-20	3
Chromium	ND	5.000	10.78	216	11.42	228	50-150	6	0-20	3
Copper	26.95	0.5000	27.98	4X	28.20	4X	50-150	4X	0-20	Q
Lead	3.237	0.5000	3.582	4X	4.069	4X	50-150	4X	0-20	Q
Nickel	11.91	0.5000	13.68	4X	14.28	4X	50-150	4X	0-20	Q
Silver	ND	0.2500	0.2320	93	0.2267	91	50-150	2	0-20	
Zinc	70.15	5.000	118.9	4X	116.7	4X	50-150	4X	0-20	Q

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 1631E Total
		Method:	EPA 1631E
Project: 516.02			Page 1 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-224-55	**LCS**	**Aqueous**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01**
099-15-224-55	**LCSD**	**Aqueous**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.02000	0.02003	100	0.02029	101	71-125	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	Filtered
		Method:	EPA 1631E
Project: 516.02			Page 2 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-226-37	**LCS**	**Aqueous**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01F**
099-15-226-37	**LCSD**	**Aqueous**	**Hg/AF 1**	**06/25/14**	**06/25/14 00:00**	**140625L01F**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.02000	0.02003	100	0.02029	101	71-125	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 3005A Total
		Method:	EPA 1640
Project: 516.02			Page 3 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-067-426	**LCS**	**Aqueous**	**ICP/MS 05**	**06/18/14**	**06/24/14 17:44**	**140618L01**
099-13-067-426	**LCSD**	**Aqueous**	**ICP/MS 05**	**06/18/14**	**06/24/14 17:52**	**140618L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	0.5000	0.5119	102	0.5157	103	70-130	1	0-20	
Cadmium	0.5000	0.4826	97	0.4758	95	70-130	1	0-20	
Chromium	5.000	5.322	106	5.194	104	70-130	2	0-20	
Copper	0.5000	0.4843	97	0.4504	90	70-130	7	0-20	
Lead	0.5000	0.5256	105	0.5188	104	70-130	1	0-20	
Nickel	0.5000	0.4944	99	0.4491	90	70-130	10	0-20	
Silver	0.2500	0.2334	93	0.2026	81	70-130	14	0-20	
Zinc	5.000	4.656	93	4.982	100	70-130	7	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

Kinnetic Laboratories, Inc.		Date Received:	06/14/14
704 W. 2nd Ave.		Work Order:	14-06-1150
Anchorage, AK 99501-2103		Preparation:	EPA 3005A Filt.
		Method:	EPA 1640
Project: 516.02			Page 4 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-823-85	**LCS**	**Aqueous**	**ICP/MS 05**	**06/18/14**	**06/24/14 17:44**	**140618L01F**
099-15-823-85	**LCSD**	**Aqueous**	**ICP/MS 05**	**06/18/14**	**06/24/14 17:52**	**140618L01F**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	0.5000	0.5119	102	0.5157	103	70-130	1	0-20	
Cadmium	0.5000	0.4826	97	0.4758	95	70-130	1	0-20	
Chromium	5.000	5.322	106	5.194	104	70-130	2	0-20	
Copper	0.5000	0.4843	97	0.4504	90	70-130	7	0-20	
Lead	0.5000	0.5256	105	0.5188	104	70-130	1	0-20	
Nickel	0.5000	0.4944	99	0.4491	90	70-130	10	0-20	
Silver	0.2500	0.2334	93	0.2026	81	70-130	14	0-20	
Zinc	5.000	4.656	93	4.982	100	70-130	7	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Glossary of Terms and Qualifiers

Work Order: 14-06-1150 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	**FROM:**
Calscience Environmental Laboratories, Inc. Danielle Gonsman 7440 Lincoln Way Garden Grove, CA 92841-1427 Phone: 714-895-5494 x232 Fax: 714-894-7501	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion Date: 30 days.	P.O. #: AK14-1004	KLI Proj. #:516.02
14-06-1150 ½		

ANALYSIS TYPE: Total dissolved and total recoverable metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc. Metals (1640) and Mercury (1631). Report to MDL with J Flags.

MATRIX: Sea Water	**Preservative:** None, 6°C	**Type of Container:** 250ml HDPE/glass

	SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
1 ✓	MOA14MTL001	F1-1S	2	6/11/14 1335		
2 ✓	MOA14MTL002	F1-2S	2	6/11/14 1405		
3 ✓	MOA14MTL003	F1-3S	2	6/11/14 1420		
4	MOA14MTL004	C1-1S	2	6/12/14 1415		
5	MOA14MTL005	C1-2S	2	6/12/14 1435		
6	MOA14MTL006	C1-3S	2	6/12/14 1505		
7 ✓	MOA14HG001	F1-1S	2	6/11/14 1335		
8 ✓	MOA14HG002	F1-2S	2	6/11/14 1405		
9 ✓	MOA14HG003	F1-3S	2	6/11/14 1420		
10	MOA14HG004	C1-1S	2	6/12/14 1415		
11	MOA14HG005	C1-2S	2	6/12/14 1435		
12	MOA14HG006	C1-3S	2	6/12/14 1505		

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
[signature]	6/13 1300	Fed.Ex		
			[signature]	6/14/14 1000

SAMPLED BY (NAME/SIGNATURE): [signature]

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Kinnetic Laboratories, Inc. Chain of Custody Record

LABORATORY:	FROM:
Calscience Environmental Laboratories, Inc. Danielle Gonsman 7440 Lincoln Way Garden Grove, CA 92841-1427 Phone: 714-895-5494 x232 Fax: 714-894-7501	Kinnetic Laboratories, Inc. 704 West 2nd Avenue Anchorage, AK 99501 Attn: Gary Lawley (907) 276.6178 phone (907) 278-6881 fax

Required Completion Date: 30 days.	P.O. #: AK14-1004	KLI Proj. #:516.02

ANALYSIS TYPE: Total dissolved and total recoverable metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, silver, and zinc. Metals (1640) and Mercury (1631). Report to MDL with J Flags.

MATRIX: Sea Water	**Preservative:** None, 6°C	**Type of Container:** 250ml HDPE/glass

SAMPLE IDENTIFICATION	SAMPLE LOCATION	NO. OF CONTAINERS	SAMPLE DATE & TIME	CONDITION UPON RECEIPT	COMMENTS
13 ✓ MOA14MTL007	Effluent	2	6/11/14 1300		
14 ✓ MOA14HG007	Effluent	2	" 1300		

DATA REPORTS **MUST** INCLUDE THE FOLLOWING: SAMPLE ID NUMBER, ANALYTICAL METHOD, DETECTION LIMIT, DATE OF EXTRACTION, DATE OF ANALYSIS, ANALYTICAL RESULTS, AND SIGNATURE OF QA REVIEWER.

COMMENTS: *Please report all QC data, including method blanks, matrix spike/spike duplicates, duplicates, etc. Please return all completed original COCs to KLI Anchorage.*

RELINQUISHED BY:	DATE AND TIME	TRANSPORTED BY:	RECEIVED BY:	DATE AND TIME
RWS 6/12/14	0950	hand	AAly	6/12 0950
AAly	6/13 1300	Fed ex		
			[illegible]	6/14/14 1000

SAMPLED BY (NAME/SIGNATURE): _____

C:\Projects\MOA\MOA14\COCs\RecWater

Return to Contents

From: (907) 276-6178
KINNETIC LABORATORIES, INC
KINNETIC LABORATORIES, INC
1102 WEST 7TH AVENUE

ANCHORAGE, AK 99501

Origin ID: CYMA

FedEx Express

J14101402070326

Ship Date: 13JUN14
ActWgt: 24.0 LB
CAD: 3116229/INET3490

1150

Delivery Address Bar Code

Ref # 516
Invoice #
PO #
Dept #

SHIP TO: (714) 895-5494 BILL SENDER

Danielle Gonsman
Calscience Environmental Labs Inc
7440 Lincoln Way

Garden Grove, CA 92841

2 of 2

MPS# 7703 0089 3415
0263
Mstr# 7703 0089 3140 0201

SATURDAY 12:00P
PRIORITY OVERNIGHT
ASR
92841
CA-US
SNA

X0 APVA

522G5/9BC4/F220

From: (907) 276-6178
KINNETIC LABORATORIES, INC
KINNETIC LABORATORIES, INC
1102 WEST 7TH AVENUE

ANCHORAGE, AK 99501

Origin ID: CYMA

FedEx Express

J14101402070326

Ship Date: 13JUN14
ActWgt: 28.0 LB
CAD: 3116229/INET3490

1150

Delivery Address Bar Code

Ref # 516
Invoice #
PO #
Dept #

SHIP TO: (714) 895-5494 BILL SENDER

Danielle Gonsman
Calscience Environmental Labs Inc
7440 Lincoln Way

Garden Grove, CA 92841

1 of 2

TRK# 7703 0089 3140
0201
MASTER

SATURDAY 12:00P
PRIORITY OVERNIGHT
ASR
92841
CA-US
SNA

X0 APVA

522G5/9BC4/F220

PM

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WORK ORDER #: 14-06-1150

SAMPLE RECEIPT FORM

Cooler 1 of 2

CLIENT: Kinnetic

DATE: 06/14/14

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.6 °C - 0.3 °C (CF) = 2.3 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Checked by: 802

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Checked by: 802

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 778

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☑ 802 6/14/14
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☐	☑	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☑250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☑250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 778

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** 802

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** 802

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WORK ORDER #: 14-06-1150

SAMPLE RECEIPT FORM

Cooler 2 of 2

CLIENT: Kinnetic

DATE: 06/14/14

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.8 °C - 0.3 °C (CF) = 2.5 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Checked by: 802

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Checked by: 802

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 726

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfides ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☐VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☑250CGB ☐250CGBs ☐1PB ☐1PBna ☐500PB ☑250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 726

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 802

Preservative: h: HCL n: HNO_3 na_2: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** 802

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eurofins | Calscience

WORK ORDER #: 14-06-1150

SAMPLE ANOMALY FORM

SAMPLES - CONTAINERS & LABELS: **Comments:**

- ☐ **Sample(s) NOT RECEIVED but listed on COC**
- ☐ **Sample(s) received but NOT LISTED on COC**
- ☐ **Holding time expired** – list sample ID(s) and test
- ☐ **Insufficient quantities for analysis** – list test
- ☐ **Improper container(s) used** – list test
- ☐ **Improper preservative used** – list test
- ☐ **No preservative noted on COC or label** – list test & notify lab
- ☐ **Sample labels illegible** – note test/container type
- ☐ **Sample label(s) do not match COC** – Note in comments — H2) received empty
  - ☐ **Sample ID**
  - ☐ **Date and/or Time Collected**
  - ☐ **Project Information**
  - ☐ **# of Container(s)**
  - ☐ **Analysis**
- ☐ **Sample container(s) compromised** – Note in comments
  - ☐ **Water present in sample container**
  - ☐ **Broken**
- ☐ **Sample container(s) not labeled**
- ☐ **Air sample container(s) compromised** – Note in comments
  - ☐ **Flat**
  - ☐ **Very low in volume**
  - ☐ **Leaking (Not transferred - duplicate bag submitted)**
  - ☐ **Leaking (transferred into Calscience Tedlar® Bag*)**
  - ☐ **Leaking (transferred into Client's Tedlar® Bag*)**
- ☑ **Other:** empty

HEADSPACE – Containers with Bubble > 6mm or ¼ inch:

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis

Comments:

*Transferred at Client's request.

Initial / Date: 778 06/14/14

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APPENDIX C

Receiving Water Quality Monitoring

C5 Intertidal Bacteria & Receiving Water Bacteria

Anchorage Water & Wastewater Utility, Asplund Laboratory

ANCHORAGE WATER AND WASTEWATER UTILITY

WATER QUALITY SECTION

Analytical Report

Date collected	Labworks ID	Sample ID	Sample Location	Parameter	Result	Unit	Analyst
6/11/14	AB00334	MOA14FEC057	Pt. Woronzof WWTF - F.Effluent	Fecal Coliform, MPN	79	FC/100 mL	S. TRASK
6/11/14	AB00335	MOA14FEC058	Pt. Woronzof WWTF - F.Effluent	Fecal Coliform, MPN	79	FC/100 mL	S. TRASK
6/11/14	AB00336	MOA14FEC059	Chester Creek	Fecal Coliform, MPN	33	FC/100 mL	S. TRASK
6/11/14	AB00337	MOA14FEC060	Chester Creek	Fecal Coliform, MPN	33	FC/100 mL	S. TRASK
6/11/14	AB00338	MOA14FEC061	Ship Creek rep 1	Fecal Coliform, MPN	49	FC/100 mL	S. TRASK
6/11/14	AB00339	MOA14FEC062	ship Creek rep 2	Fecal Coliform, MPN	17	FC/100 mL	S. TRASK
6/11/14	AB00340	MOA14FEC063	Fish Creek rep 1	Fecal Coliform, MPN	790	FC/100 mL	S. TRASK
6/11/14	AB00341	MOA14FEC064	Fish Creek rep 2	Fecal Coliform, MPN	790	FC/100 mL	S. TRASK
6/11/14	AB00342	MOA14FEC001	E1-1S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00343	MOA14FEC002	E1-2S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00344	MOA14FEC003	E1-3S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00345	MOA14FEC004	E1-4S	Fecal Coliform, MPN	2.0	FC/100 mL	P. SMITH

Reported by: _____ Date: 08/21/2014

Paul W. Smith, Water Quality Analyst

ANCHORAGE WATER AND WASTEWATER UTILITY

WATER QUALITY SECTION

Analytical Report

Date collected	Labworks ID	Sample ID	Sample Location	Parameter	Result	Unit	Analyst
6/11/14	AB00346	MOA14FEC005	E2-1S	Fecal Coliform, MPN	2.0	FC/100 mL	P. SMITH
6/11/14	AB00347	MOA14FEC006	E2-2S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00348	MOA14FEC007	E2-3S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00349	MOA14FEC008	E2-4S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00350	MOA14FEC009	E3-1S	Fecal Coliform, MPN	2.0	FC/100 mL	P. SMITH
6/11/14	AB00351	MOA14FEC010_i	E3-2S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00352	MOA14FEC010_i	E3-2S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00353	MOA14FEC010_i	E3-2S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00354	MOA14FEC011	E3-3S	Fecal Coliform, MPN	2.0	FC/100 mL	P. SMITH
6/11/14	AB00355	MOA14FEC012	E3-4S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00356	MOA14FEC013	F1-1S	Fecal Coliform, MPN	17	FC/100 mL	A. JOHNSON
6/11/14	AB00357	MOA14FEC014	F1-2S	Fecal Coliform, MPN	4.5	FC/100 mL	A. JOHNSON

Reported by: _____ Date: 08/21/2014

Paul W. Smith, Water Quality Analyst

ANCHORAGE WATER AND WASTEWATER UTILITY

WATER QUALITY SECTION

Analytical Report

Date collected	Labworks ID	Sample ID	Sample Location	Parameter	Result	Unit	Analyst
6/11/14	AB00358	MOA14FEC015	F1-3S	Fecal Coliform, MPN	<1.8	FC/100 mL	A. JOHNSON
6/11/14	AB00359	MOA14FEC016	F1-4S	Fecal Coliform, MPN	<1.8	FC/100 mL	A. JOHNSON
6/11/14	AB00360	MOA14FEC017	F2-1S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00361	MOA14FEC018	F2-2S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00362	MOA14FEC019	F2-3S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00363	MOA14FEC020	F2-4S	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00364	MOA14FEC021	F3-1S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/11/14	AB00365	MOA14FEC022_i	F3-2S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/11/14	AB00366	MOA14FEC022_i	F3-2S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/11/14	AB00367	MOA14FEC022_i	F3-2S	Fecal Coliform, MPN	2.0	FC/100 mL	S. TRASK
6/11/14	AB00368	MOA14FEC023	F3-3S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/11/14	AB00369	MOA14FEC024	F3-4S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK

Reported by: _____ Date: 08/21/2014

Paul W. Smith, Water Quality Analyst

ANCHORAGE WATER AND WASTEWATER UTILITY

WATER QUALITY SECTION

Analytical Report

Date collected	Labworks ID	Sample ID	Sample Location	Parameter	Result	Unit	Analyst
6/11/14	AB00370	MOA14FEC041	IT-1 Rep1	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/11/14	AB00371	MOA14FEC042	IT-1 Rep2	Fecal Coliform, MPN	1.8	FC/100 mL	A. JOHNSON
6/11/14	AB00372	MOA14FEC043	IT-2 Rep1	Fecal Coliform, MPN	<1.8	FC/100 mL	A. JOHNSON
6/11/14	AB00373	MOA14FEC044	IT-2 Rep2	Fecal Coliform, MPN	<1.8	FC/100 mL	A. JOHNSON
6/11/14	AB00374	MOA14FEC045	IT-3 Rep1	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00375	MOA14FEC046	IT-3 Rep2	Fecal Coliform, MPN	1.8	FC/100 mL	P. SMITH
6/11/14	AB00376	MOA14FEC047	IT-4 Rep1	Fecal Coliform, MPN	4.5	FC/100 mL	S. TRASK
6/11/14	AB00377	MOA14FEC048	IT-4 Rep2	Fecal Coliform, MPN	4.5	FC/100 mL	S. TRASK
6/11/14	AB00378	MOA14FEC049	IT-5 Rep1	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/11/14	AB00379	MOA14FEC050	IT-5 Rep2	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/11/14	AB00380	MOA14FEC051	IT-6 Rep1	Fecal Coliform, MPN	<1.8	FC/100 mL	A. JOHNSON
6/11/14	AB00381	MOA14FEC052	IT-6 Rep2	Fecal Coliform, MPN	<1.8	FC/100 mL	A. JOHNSON

Reported by: _____ Date: 08/21/2014

Paul W. Smith, Water Quality Analyst

ANCHORAGE WATER AND WASTEWATER UTILITY

WATER QUALITY SECTION

Analytical Report

Date collected	Labworks ID	Sample ID	Sample Location	Parameter	Result	Unit	Analyst
6/11/14	AB00382	MOA14FEC053	IT-7 Rep1	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00383	MOA14FEC054	IT-7 Rep2	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00384	MOA14FEC055	IT-C Rep1	Fecal Coliform, MPN	<1.8	FC/100 mL	P. SMITH
6/11/14	AB00385	MOA14FEC056	IT-C Rep2	Fecal Coliform, MPN	2.0	FC/100 mL	P. SMITH
6/12/14	AB00386	MOA14FEC025	C1-1S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/12/14	AB00387	MOA14FEC026	C1-2S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/12/14	AB00388	MOA14FEC027	C1-3S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/12/14	AB00389	MOA14FEC028	C1-4S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/12/14	AB00390	MOA14FEC029	C2-1S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/12/14	AB00391	MOA14FEC030_i	C2-2S(A)	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/12/14	AB00392	MOA14FEC031_i	C2-2S(B)	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/12/14	AB00393	MOA14FEC032_i	C2-2S(C)	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK

Reported by: _____ Date: 08/21/2014

Paul W. Smith, Water Quality Analyst

ANCHORAGE WATER AND WASTEWATER UTILITY

WATER QUALITY SECTION

Analytical Report

Date collected	Labworks ID	Sample ID	Sample Location	Parameter	Result	Unit	Analyst
6/12/14	AB00394	MOA14FEC033	C2-3S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/12/14	AB00395	MOA14FEC034	C2-4S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/12/14	AB00396	MOA14FEC035_i	C3-1S(A)	Fecal Coliform, MPN	2.0	FC/100 mL	S. TRASK
6/12/14	AB00397	MOA14FEC036_i	C3-1S(B)	Fecal Coliform, MPN	2.0	FC/100 mL	S. TRASK
6/12/14	AB00398	MOA14FEC037_i	C3-1S(C)	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/12/14	AB00399	MOA14FEC038	C3-2S	Fecal Coliform, MPN	4.0	FC/100 mL	S. TRASK
6/12/14	AB00400	MOA14FEC039	C3-3S	Fecal Coliform, MPN	<1.8	FC/100 mL	S. TRASK
6/12/14	AB00401	MOA14FEC040	C3-4S	Fecal Coliform, MPN	2.0	FC/100 mL	S. TRASK

Reported by: _____ Date: 08/21/2014

Paul W. Smith, Water Quality Analyst

APPENDIX C

Receiving Water Quality Monitoring

C6 Total Residual Chlorine and Turbidity

Kinnetic Laboratories, Inc.

KINNETIC LABORATORIES, INC.
TOTAL RESIDUAL CHLORINE - LABORATORY REPORT

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU

PROJECT: 2014 ASPLUND WPCF RECEIVING WATER QUALITY

SAMPID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	Residual Chlorine (µg/L)
MOA14TRC001	E1-1S	6/11/14	6:53	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC002	E1-2S	6/11/14	6:58	6/11/14	< 5 minutes	ND (<10 µg/L) / ND (<10 µg/L)
MOA14TRC003	E1-3S	6/11/14	7:08	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC004	E1-4S	6/11/14	7:26	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC005	E2-1S	6/11/14	8:05	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC006	E2-2S	6/11/14	8:22	6/11/14	< 5 minutes	ND (<10 µg/L) / ND (<10 µg/L)
MOA14TRC007	E2-3S	6/11/14	8:33	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC008	E2-4S	6/11/14	8:45	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC009	E3-1S	6/11/14	10:23	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC010	E3-2S	6/11/14	10:28	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC011	E3-3S	6/11/14	10:42	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC012	E3-4S	6/11/14	10:58	6/11/14	< 5 minutes	ND (<10 µg/L) / ND (<10 µg/L)
MOA14TRC013	F1-1S	6/11/14	13:35	6/11/14	< 5 minutes	ND (<10 µg/L) / ND (<10 µg/L)
MOA14TRC014	F1-2S	6/11/14	14:05	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC015	F1-3S	6/11/14	14:24	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC016	F1-4S	6/11/14	14:37	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC017	F2-1S	6/11/14	15:08	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC018	F2-2S	6/11/14	15:14	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC019	F2-3S	6/11/14	15:26	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC020	F2-4S	6/11/14	15:55	6/11/14	< 5 minutes	ND (<10 µg/L) / ND (<10 µg/L)
MOA14TRC021	F3-1S	6/11/14	16:23	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC022	F3-2S	6/11/14	16:28	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC023	F3-3S	6/11/14	16:40	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC024	F3-4S	6/11/14	16:50	6/11/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC025	C1-1S	6/12/14	14:18	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC026	C1-2S	6/12/14	14:40	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC027	C1-3S	6/12/14	15:06	6/12/14	< 5 minutes	ND (<10 µg/L) / ND (<10 µg/L)
MOA14TRC028	C1-4S	6/12/14	15:27	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC029	C2-1S	6/12/14	15:59	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC030	C2-2S A	6/12/14	16:11	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC031	C2-2S B	6/12/14	16:13	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC032	C2-2S C	6/12/14	16:14	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC033	C2-3S	6/12/14	16:29	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC034	C2-4S	6/12/14	16:35	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC035	C3-1S A	6/12/14	17:52	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC036	C3-1S B	6/12/14	17:54	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC037	C3-1S C	6/12/14	17:54	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC038	C3-2S	6/12/14	18:03	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC039	C3-3S	6/12/14	18:16	6/12/14	< 5 minutes	ND (<10 µg/L)
MOA14TRC040	C3-4S	6/12/14	18:25	6/12/14	< 5 minutes	ND (<10 µg/L)

ANALYZED BY:_____M. Savoie_____DATE:__6/12/14_____ REVIEWED BY:____GGL_____

KINNETIC LABORATORIES, INC.
TURBIDITY DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2013 JOHN M. ASPLUND WPCF RECEIVING WATER QUALITY

CALIBRATION STANDARDS:

	Standard	Meter Reading	Date	Time
Turbidity	20	19.0	6/10/13	18:48
Turbidity	57.5	56.4	6/10/13	18:53
Turbidity				

SAMPID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	TURBIDITY (NTU)
MOA13TUR001	E1-1S	6/10/13	8:43	6/10/13	18:56	216
MOA13TUR002	E1-1M	6/10/13	8:43	6/10/13	18:58	439
MOA13TUR003	E1-1B	6/10/13	8:43	6/10/13	18:59	441
MOA13TUR004	E1-2S	6/10/13	9:06	6/10/13	19:02	127/134
MOA13TUR005	E1-2M	6/10/13	9:06	6/10/13	19:05	215
MOA13TUR006	E1-2B	6/10/13	9:06	6/10/13	19:06	273
MOA13TUR007	E1-3S	6/10/13	9:40	6/10/13	19:08	109
MOA13TUR008	E1-3M	6/10/13	9:40	6/10/13	19:09	263
MOA13TUR009	E1-3B	6/10/13	9:40	6/10/13	19:10	393
MOA13TUR010	E1-4S	6/10/13	10:16	6/10/13	19:12	112
MOA13TUR011	E1-4M	6/10/13	10:16	6/10/13	19:13	400
MOA13TUR012	E1-4B	6/10/13	10:16	6/10/13	19:14	435/453
MOA13TUR013	E2-1S	6/10/13	10:42	6/11/13	10:02	462
MOA13TUR014	E2-1M	6/10/13	10:42	6/11/13	10:04	477
MOA13TUR015	E2-1B	6/10/13	10:42	6/11/13	10:06	520
MOA13TUR016	E2-2S	6/10/13	10:48	6/11/13	10:09	508
MOA13TUR017	E2-2M	6/10/13	10:48	6/11/13	10:10	516
MOA13TUR018	E2-2B	6/10/13	10:48	6/11/13	10:11	537
MOA13TUR019	E2-3S	6/10/13	10:54	6/11/13	10:13	420
MOA13TUR020	E2-3M	6/10/13	10:54	6/11/13	10:15	560
MOA13TUR021	E2-3B	6/10/13	10:54	6/11/13	10:16	573
MOA13TUR022	E2-4S	6/10/13	11:05	6/11/13	10:18	516
MOA13TUR023	E2-4M	6/10/13	11:05	6/11/13	10:20	537
MOA13TUR024	E2-4B	6/10/13	11:05	6/11/13	10:21	584
MOA13TUR025	E3-1S	6/10/13	13:25	6/11/13	10:23	598
MOA13TUR026	E3-1M	6/10/13	13:25	6/11/13	10:25	675
MOA13TUR027	E3-1B	6/10/13	13:25	6/11/13	10:27	675
MOA13TUR028	E3-2S	6/10/13	13:35	6/11/13	10:30	582
MOA13TUR029	E3-2M	6/10/13	13:35	6/11/13	10:32	717
MOA13TUR030	E3-2B	6/10/13	13:35	6/11/13	10:33	762
MOA13TUR031	E3-3S	6/10/13	13:46	6/11/13	10:35	399
MOA13TUR032	E3-3M	6/10/13	13:46	6/11/13	10:37	757/796
MOA13TUR033	E3-3B	6/10/13	13:46	6/11/13	10:40	792
MOA13TUR034	E3-4S	6/10/13	14:05	6/11/13	10:44	265
MOA13TUR035	E3-4M	6/10/13	14:05	6/11/13	10:45	772
MOA13TUR036	E3-4B	6/10/13	14:05	6/11/13	10:47	878

REVIEWED BY: _____ DATE: 6/13/14 SIGNATURE: _____

KINNETIC LABORATORIES, INC.
TURBIDITY DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2013 JOHN M. ASPLUND WPCF RECEIVING WATER QUALITY

CALIBRATION STANDARDS:

	Standard	Meter Reading	Date	Time
Turbidity	20	19.0	6/10/13	18:48
Turbidity	57.5	56.4	6/10/13	18:53
Turbidity				

SAMPID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	TURBIDITY (NTU)
MOA13TUR037	F1-1S	6/10/13	15:50	6/11/13	10:49	200
MOA13TUR038	F1-1M	6/10/13	15:50	6/11/13	10:51	307
MOA13TUR039	F1-1B	6/10/13	15:50	6/11/13	10:53	331
MOA13TUR040	F1-2S	6/10/13	16:35	6/11/13	10:55	206
MOA13TUR041	F1-2M	6/10/13	16:35	6/11/13	10:56	252
MOA13TUR042	F1-2B	6/10/13	16:35	6/11/13	10:58	291
MOA13TUR043	F1-3S	6/10/13	16:48	6/11/13	11:00	210
MOA13TUR044	F1-3M	6/10/13	16:48	6/11/13	11:02	294
MOA13TUR045	F1-3B	6/10/13	16:48	6/11/13	11:03	265
MOA13TUR046	F1-4S	6/10/13	17:12	6/11/13	11:06	62/65
MOA13TUR047	F1-4M	6/10/13	17:12	6/11/13	11:08	164
MOA13TUR048	F1-4B	6/10/13	17:12	6/11/13	11:10	255
MOA13TUR049	F2-1S	6/10/13	17:36	6/11/13	11:12	759
MOA13TUR050	F2-1M	6/10/13	17:36	6/11/13	11:13	781
MOA13TUR051	F2-1B	6/10/13	17:36	6/11/13	11:15	858
MOA13TUR052	F2-2S	6/10/13	17:43	6/11/13	11:20	713
MOA13TUR053	F2-2M	6/10/13	17:43	6/11/13	11:21	814
MOA13TUR054	F2-2B	6/10/13	17:43	6/11/13	11:23	915
MOA13TUR055	F2-3S	6/10/13	17:55	6/11/13	11:25	535
MOA13TUR056	F2-3M	6/10/13	17:55	6/11/13	11:26	921
MOA13TUR057	F2-3B	6/10/13	17:55	6/11/13	11:28	880
MOA13TUR058	F2-4S	6/10/13	18:44	6/11/13	11:40	197
MOA13TUR059	F2-4M	6/10/13	18:44	6/11/13	11:41	998
MOA13TUR060	F2-4B	6/10/13	18:44	6/11/13	11:42	1988
MOA13TUR061	F3-1S	6/10/13	19:13	6/11/13	11:50	519
MOA13TUR062	F3-1M	6/10/13	19:13	6/11/13	11:51	498
MOA13TUR063	F3-1B	6/10/13	19:13	6/11/13	11:53	483
MOA13TUR064	F3-2S	6/10/13	19:19	6/11/13	11:54	488
MOA13TUR065	F3-2M	6/10/13	19:19	6/11/13	11:55	516
MOA13TUR066	F3-2B	6/10/13	19:19	6/11/13	11:56	523/535
MOA13TUR067	F3-3S	6/10/13	19:26	6/11/13	11:59	463
MOA13TUR068	F3-3M	6/10/13	19:26	6/11/13	12:01	590
MOA13TUR069	F3-3B	6/10/13	19:26	6/11/13	12:02	628
MOA13TUR070	F3-4S	6/10/13	19:36	6/11/13	12:03	324
MOA13TUR071	F3-4M	6/10/13	19:36	6/11/13	12:04	614
MOA13TUR072	F3-4B	6/10/13	19:36	6/11/13	12:06	644

REVIEWED BY: _____ DATE: 6/13/4 SIGNATURE: _____

KINNETIC LABORATORIES, INC.
TURBIDITY DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU
PROJECT: SUMMER 2013 JOHN M. ASPLUND WPCF RECEIVING WATER QUALITY

CALIBRATION STANDARDS:

	Standard	Meter Reading	Date	Time
Turbidity	20	19.0	6/10/13	18:48
Turbidity	57.5	56.4	6/10/13	18:53
Turbidity				

SAMPID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	TURBIDITY (NTU)
MOA13TUR073	C1-1S	6/11/13	16:42	6/12/13	11:42	162/157
MOA13TUR074	C1-1M	6/11/13	16:42	6/12/13	11:45	285
MOA13TUR075	C1-1B	6/11/13	16:42	6/12/13	11:46	818
MOA13TUR076	C1-2S	6/11/13	16:54	6/12/13	11:48	187
MOA13TUR077	C1-2M	6/11/13	16:54	6/12/13	11:50	603/606
MOA13TUR078	C1-2B	6/11/13	16:54	6/12/13	11:51	1066
MOA13TUR079	C1-3S	6/11/13	17:20	6/12/13	11:56	473
MOA13TUR080	C1-3M	6/11/13	17:20	6/12/13	11:58	551
MOA13TUR081	C1-3B	6/11/13	17:20	6/12/13	12:05	521
MOA13TUR082	C1-4S	6/11/13	18:00	6/12/13	12:10	675
MOA13TUR083	C1-4M	6/11/13	18:00	6/12/13	12:11	912
MOA13TUR084	C1-4B	6/11/13	18:00	6/12/13	12:13	929
MOA13TUR085	C2-1S	6/11/13	18:34	6/12/13	12:15	304
MOA13TUR086	C2-1M	6/11/13	18:34	6/12/13	12:16	432/422
MOA13TUR087	C2-1B	6/11/13	18:34	6/12/13	12:21	560
MOA13TUR088	C2-2S	6/11/13	18:42	6/12/13	12:23	344
MOA13TUR089	C2-2M	6/11/13	18:42	6/12/13	12:24	548
MOA13TUR090	C2-2B	6/11/13	18:42	6/12/13	12:26	992
MOA13TUR091	C2-3S A	6/11/13	19:00	6/12/13	12:40	348
MOA13TUR092	C2-3S B	6/11/13	19:00	6/12/13	12:42	322
MOA13TUR093	C2-3S C	6/11/13	19:00	6/12/13	12:44	328
MOA13TUR094	C2-3M	6/11/13	19:00	6/12/13	12:46	650
MOA13TUR095	C2-3B	6/11/13	19:00	6/12/13	12:47	877
MOA13TUR096	C2-4S	6/11/13	19:14	6/12/13	13:14	555/528
MOA13TUR097	C2-4M	6/11/13	19:14	6/12/13	13:16	1080
MOA13TUR098	C2-4B	6/11/13	19:14	6/12/13	13:20	1156
MOA13TUR099	C3-1S A	6/11/13	19:55	6/12/13	13:23	511
MOA13TUR100	C3-1S B	6/11/13	19:55	6/12/13	13:24	538
MOA13TUR101	C3-1S C	6/11/13	19:55	6/12/13	13:26	517
MOA13TUR102	C3-1M	6/11/13	19:55	6/12/13	13:27	676
MOA13TUR103	C3-1B	6/11/13	19:55	6/12/13	13:28	779
MOA13TUR104	C3-2S	6/11/13	20:05	6/12/13	13:30	378
MOA13TUR105	C3-2M	6/11/13	20:05	6/12/13	13:32	700
MOA13TUR106	C3-2B	6/11/13	20:05	6/12/13	13:35	745
MOA13TUR107	C3-3S	6/11/13	20:15	6/12/13	13:37	487
MOA13TUR108	C3-3M	6/11/13	20:15	6/12/13	13:39	679/680
MOA13TUR109	C3-3B	6/11/13	20:15	6/12/13	13:41	818
MOA13TUR110	C3-4S	6/11/13	20:25	6/12/13	13:43	391
MOA13TUR111	C3-4M	6/11/13	20:25	6/12/13	13:44	788
MOA13TUR112	C3-4B	6/11/13	20:25	6/12/13	13:45	778

REVIEWED BY: G LAWLER DATE: 6/13/14 SIGNATURE: [signature]

KINNETIC LABORATORIES, INC.
TURBIDITY DATA LOG

CLIENT: MUNICIPALITY OF ANCHORAGE AWWU

PROJECT: SUMMER 2014 JOHN M. ASPLUND WPCF RECEIVING WATER QUALITY

CALIBRATION STANDARDS:

	Standard	Meter Reading	Date	Time
Turbidity	100	99.7	6/11/14	14:30
Turbidity	800	797.0	6/11/14	14:48
Turbidity	100	99.5	6/12/14	9:23
Turbidity	800	798.0	6/12/14	9:28
Turbidity	100	100.0	6/13/14	10:44
Turbidity	800	803.00	6/13/14	10:41

SAMPID	STATION	SAMPLE DATE	SAMPLE TIME	ANALYSIS DATE	ANALYSIS TIME	TURBIDITY (NTU)
MOA14TUR111	C3-4M	6/12/14	18:25	6/13/14	14:15	743
MOA14TUR112	C3-4B	6/12/14	18:25	6/13/14	14:16	812

REVIEWED BY:_____ DATE:_____ SIGNATURE:_____

APPENDIX C

Receiving Water Quality Monitoring

C7 Hydrographic Data Profiles

Kinnetic Laboratories, Inc.

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C1-1 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.76	1.68	13.25	9.77	73	9.65
1.0	12.88	1.70	13.33	9.77	60	9.69
1.5	12.91	1.70	13.34	9.76	54	9.69
2.0	12.88	1.70	13.34	9.77	53	9.69
2.5	12.79	1.70	13.35	9.77	58	9.71
3.0	12.69	1.69	13.35	9.79	65	9.73
3.5	12.56	1.70	13.43	9.78	87	9.81
4.0	12.50	1.71	13.54	9.74	100	9.91
4.5	12.43	1.71	13.61	9.78	110	9.97
5.0	12.27	1.70	13.56	9.80	129	9.96
5.5	12.13	1.68	13.47	9.78	189	9.91
6.0	12.06	1.67	13.38	9.79	263	9.85
6.5	12.03	1.66	13.33	9.78	311	9.82
7.0	12.02	1.66	13.30	9.78	323	9.80
7.5	12.02	1.66	13.28	9.79	328	9.78
8.0	12.02	1.65	13.26	9.79	332	9.76
8.5	12.02	1.65	13.24	9.79	342	9.75
9.0	12.02	1.65	13.23	9.78	347	9.74
9.5	12.02	1.65	13.22	9.78	352	9.73
10.0	12.01	1.65	13.21	9.79	356	9.73
10.5	12.01	1.65	13.19	9.80	365	9.71
11.0	12.01	1.65	13.20	9.80	371	9.72
11.5	12.00	1.65	13.20	9.80	383	9.72
12.0	12.00	1.65	13.20	9.80	380	9.72
12.5	12.01	1.65	13.19	9.81	377	9.71
13.0	12.01	1.65	13.19	9.81	376	9.71

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C1-2 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.83	1.70	13.35	9.77	56	9.71
1.0	12.50	1.70	13.49	9.83	106	9.87
1.5	12.12	1.67	13.38	9.80	274	9.84
2.0	12.04	1.66	13.27	9.77	354	9.77
2.5	12.03	1.65	13.24	9.77	377	9.74

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C1-3 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.45	1.69	13.37	9.76	286	9.79
1.0	12.45	1.68	13.34	9.76	306	9.76
1.5	12.46	1.68	13.28	9.76	332	9.71

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C1-4 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.54	1.67	13.23	9.78	258	9.66
1.0	12.51	1.67	13.24	9.77	296	9.68
1.5	12.51	1.67	13.25	9.77	307	9.68
2.0	12.51	1.67	13.24	9.78	314	9.68

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C2-1 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.33	1.68	13.33	9.75	253	9.77
1.0	12.33	1.68	13.33	9.74	252	9.77
1.5	12.33	1.68	13.33	9.74	247	9.77
2.0	12.33	1.67	13.32	9.74	246	9.77
2.5	12.33	1.67	13.32	9.75	250	9.77
3.0	12.33	1.67	13.32	9.75	258	9.77
3.5	12.33	1.67	13.32	9.75	265	9.77
4.0	12.33	1.68	13.33	9.76	272	9.77
4.5	12.33	1.68	13.33	9.76	274	9.77
5.0	12.32	1.68	13.35	9.75	285	9.79
5.5	12.31	1.68	13.35	9.76	313	9.79
6.0	12.31	1.68	13.35	9.74	331	9.79
6.5	12.31	1.68	13.35	9.75	334	9.79
7.0	12.30	1.68	13.35	9.75	334	9.79
7.5	12.30	1.68	13.36	9.76	336	9.80
8.0	12.29	1.68	13.36	9.76	337	9.80
8.5	12.29	1.68	13.37	9.75	337	9.81
9.0	12.30	1.68	13.36	9.75	337	9.80
9.5	12.30	1.68	13.35	9.75	331	9.79
10.0	12.30	1.68	13.35	9.75	333	9.79
10.5	12.30	1.68	13.36	9.76	341	9.80
11.0	12.30	1.68	13.36	9.74	353	9.80
11.5	12.30	1.68	13.35	9.73	350	9.79
12.0	12.30	1.68	13.35	9.75	350	9.79
12.5	12.31	1.68	13.35	9.75	346	9.79
13.0	12.30	1.68	13.35	9.75	339	9.79

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C2-2a **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.31	1.67	13.31	9.75	256	9.76
1.0	12.30	1.67	13.32	9.73	271	9.77
1.5	12.29	1.67	13.33	9.73	289	9.78
2.0	12.29	1.68	13.35	9.73	302	9.79
2.5	12.28	1.68	13.37	9.73	309	9.81
3.0	12.28	1.68	13.38	9.69	324	9.81
3.5	12.28	1.68	13.39	9.71	323	9.83
4.0	12.27	1.68	13.40	9.73	331	9.83
4.5	12.26	1.68	13.40	9.75	338	9.84
5.0	12.26	1.68	13.40	9.75	342	9.83
5.5	12.26	1.68	13.39	9.75	346	9.83

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C2-2b **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.31	1.67	13.32	9.74	245	9.77
1.0	12.29	1.68	13.36	9.73	288	9.80
1.5	12.28	1.68	13.38	9.74	308	9.82
2.0	12.27	1.68	13.39	9.73	316	9.83
2.5	12.27	1.68	13.40	9.74	321	9.83
3.0	12.27	1.68	13.40	9.75	322	9.84
3.5	12.26	1.68	13.41	9.75	333	9.84
4.0	12.26	1.68	13.41	9.74	337	9.85
4.5	12.25	1.68	13.42	9.74	344	9.85
5.0	12.25	1.68	13.41	9.73	346	9.85
5.5	12.25	1.68	13.41	9.73	344	9.84

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C2-2c **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.29	1.68	13.37	9.74	254	9.81
1.0	12.27	1.68	13.40	9.73	300	9.84
1.5	12.26	1.68	13.41	9.74	316	9.85
2.0	12.26	1.68	13.42	9.74	328	9.85
2.5	12.25	1.68	13.43	9.74	338	9.86
3.0	12.25	1.68	13.43	9.74	338	9.86
3.5	12.25	1.68	13.43	9.75	339	9.86
4.0	12.25	1.68	13.43	9.75	341	9.86
4.5	12.24	1.68	13.43	9.75	346	9.86
5.0	12.24	1.68	13.42	9.75	371	9.86
5.5	12.24	1.68	13.41	9.74	375	9.84

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C2-3 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.28	1.68	13.42	9.75	235	9.85
1.0	12.22	1.69	13.47	9.74	263	9.90
1.5	12.19	1.69	13.51	9.75	285	9.93
2.0	12.17	1.69	13.52	9.75	293	9.94
2.5	12.16	1.69	13.52	9.75	300	9.95
3.0	12.15	1.69	13.53	9.75	309	9.95
3.5	12.15	1.69	13.53	9.76	318	9.95
4.0	12.14	1.69	13.53	9.76	326	9.95
4.5	12.13	1.69	13.53	9.75	333	9.96
5.0	12.13	1.69	13.54	9.76	337	9.96
5.5	12.12	1.69	13.54	9.75	343	9.96
6.0	12.12	1.69	13.54	9.74	347	9.97
6.5	12.11	1.69	13.55	9.75	354	9.97
7.0	12.11	1.69	13.55	9.75	355	9.97
7.5	12.11	1.69	13.55	9.74	355	9.97
8.0	12.11	1.69	13.56	9.74	357	9.98
8.5	12.10	1.69	13.55	9.74	357	9.98
9.0	12.10	1.69	13.55	9.75	358	9.97
9.5	12.10	1.69	13.55	9.75	359	9.98
10.0	12.09	1.69	13.56	9.74	361	9.98
10.5	12.08	1.69	13.56	9.75	365	9.99
11.0	12.08	1.69	13.57	9.76	372	9.99
11.5	12.08	1.69	13.58	9.74	387	10.00
12.0	12.08	1.69	13.58	9.73	407	10.00
12.5	12.08	1.69	13.59	9.74	417	10.01
13.0	12.08	1.69	13.59	9.75	428	10.01
13.5	12.08	1.70	13.59	9.75	441	10.01
14.0	12.08	1.70	13.59	9.75	452	10.01
14.5	12.08	1.70	13.59	9.73	448	10.01
15.0	12.08	1.70	13.59	9.74	451	10.01
15.5	12.08	1.70	13.59	9.74	446	10.01
16.0	12.08	1.70	13.59	9.74	460	10.01
16.5	12.08	1.70	13.60	9.76	465	10.01
17.0	12.08	1.70	13.60	9.73	468	10.01
17.5	12.08	1.70	13.59	9.73	475	10.01
18.0	12.08	1.70	13.59	9.72	477	10.01
18.5	12.08	1.70	13.59	9.73	471	10.01
19.0	12.08	1.70	13.59	9.73	476	10.01
19.5	12.08	1.70	13.59	9.73	487	10.01
20.0	12.08	1.70	13.59	9.76	487	10.01

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C2-4 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.17	1.70	13.59	9.75	209	9.99
1.0	12.14	1.70	13.63	9.74	274	10.03
1.5	12.13	1.70	13.63	9.75	280	10.03
2.0	12.12	1.70	13.60	9.75	287	10.01
2.5	12.11	1.69	13.56	9.76	298	9.98
3.0	12.10	1.69	13.51	9.74	311	9.95
3.5	12.10	1.68	13.45	9.75	326	9.90
4.0	12.10	1.68	13.42	9.76	345	9.87
4.5	12.10	1.67	13.40	9.76	357	9.86
5.0	12.10	1.67	13.38	9.75	362	9.84
5.5	12.10	1.67	13.34	9.76	363	9.81
6.0	12.10	1.66	13.28	9.76	367	9.77
6.5	12.10	1.65	13.23	9.77	382	9.73
7.0	12.10	1.65	13.22	9.76	396	9.72
7.5	12.10	1.65	13.23	9.75	397	9.73
8.0	12.10	1.65	13.23	9.77	399	9.73
8.5	12.10	1.65	13.23	9.77	399	9.73
9.0	12.10	1.65	13.22	9.77	400	9.72
9.5	12.10	1.65	13.20	9.77	395	9.70
10.0	12.10	1.65	13.17	9.76	396	9.68
10.5	12.10	1.65	13.15	9.77	409	9.67
11.0	12.10	1.65	13.15	9.77	414	9.67
11.5	12.10	1.65	13.16	9.76	410	9.67
12.0	12.10	1.65	13.16	9.77	417	9.67
12.5	12.10	1.64	13.13	9.77	423	9.65
13.0	12.10	1.64	13.10	9.78	426	9.63
13.5	12.10	1.64	13.08	9.77	428	9.61
14.0	12.10	1.64	13.06	9.78	435	9.60
14.5	12.11	1.63	13.05	9.78	436	9.59
15.0	12.10	1.63	13.05	9.77	441	9.59
15.5	12.11	1.63	13.05	9.78	440	9.59
16.0	12.11	1.63	13.06	9.78	438	9.59
16.5	12.11	1.63	13.05	9.78	441	9.59
17.0	12.11	1.63	13.04	9.78	446	9.58
17.5	12.11	1.63	13.04	9.78	448	9.58
18.0	12.11	1.63	13.04	9.78	449	9.58
18.5	12.11	1.63	13.03	9.78	445	9.58
19.0	12.11	1.63	13.02	9.78	450	9.57
19.5	12.11	1.63	13.01	9.78	455	9.56
20.0	12.11	1.63	13.01	9.79	458	9.56
20.5	12.11	1.63	13.01	9.79	461	9.56
21.0	12.11	1.63	13.01	9.79	459	9.56
21.5	12.11	1.63	13.00	9.77	459	9.55
22.0	12.11	1.63	12.98	9.79	464	9.53
22.5	12.11	1.63	12.97	9.77	462	9.53
23.0	12.11	1.62	12.97	9.78	455	9.52
23.5	12.11	1.62	12.96	9.77	466	9.52
24.0	12.11	1.62	12.94	9.77	477	9.50
24.5	12.11	1.62	12.90	9.75	488	9.47
25.0	12.11	1.61	12.86	9.77	520	9.44

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C3-1 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.12	1.83	14.76	9.62	293	10.90
1.0	12.12	1.83	14.76	9.64	283	10.91
1.5	12.11	1.83	14.75	9.63	279	10.90
2.0	12.11	1.83	14.74	9.61	316	10.89
2.5	12.10	1.83	14.74	9.60	339	10.89
3.0	12.11	1.83	14.74	9.60	347	10.89
3.5	12.11	1.83	14.75	9.61	340	10.90
4.0	12.11	1.83	14.74	9.62	342	10.90
4.5	12.11	1.83	14.74	9.60	349	10.89
5.0	12.10	1.83	14.73	9.60	360	10.89
5.5	12.10	1.83	14.74	9.60	372	10.89
6.0	12.10	1.83	14.74	9.60	383	10.89
6.5	12.10	1.83	14.74	9.59	394	10.89
7.0	12.10	1.83	14.74	9.60	404	10.89
7.5	12.10	1.83	14.74	9.60	411	10.89
8.0	12.10	1.83	14.74	9.59	415	10.89
8.5	12.10	1.83	14.74	9.60	413	10.89
9.0	12.10	1.83	14.74	9.59	420	10.89
9.5	12.10	1.83	14.74	9.59	423	10.89
10.0	12.10	1.83	14.73	9.59	435	10.88
10.5	12.10	1.83	14.72	9.58	441	10.88
11.0	12.10	1.82	14.72	9.58	450	10.88
11.5	12.10	1.82	14.71	9.57	459	10.87
12.0	12.10	1.82	14.70	9.57	465	10.86
12.5	12.09	1.82	14.70	9.57	455	10.87
13.0	12.10	1.82	14.72	9.56	434	10.88
13.5	12.10	1.83	14.72	9.57	426	10.88
14.0	12.10	1.82	14.71	9.56	437	10.87
14.5	12.10	1.82	14.69	9.55	456	10.85
15.0	12.10	1.82	14.68	9.54	457	10.84
15.5	12.09	1.82	14.65	9.54	463	10.83
16.0	12.08	1.82	14.65	9.51	468	10.83

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C3-2 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.09	1.83	14.80	9.62	312	10.94
1.0	12.10	1.83	14.79	9.62	306	10.93
1.5	12.10	1.83	14.79	9.62	312	10.93
2.0	12.10	1.83	14.78	9.62	312	10.93
2.5	12.10	1.83	14.78	9.62	317	10.92
3.0	12.10	1.83	14.78	9.62	328	10.92
3.5	12.10	1.83	14.77	9.62	332	10.92
4.0	12.10	1.83	14.78	9.62	343	10.92
4.5	12.10	1.83	14.78	9.62	339	10.92
5.0	12.09	1.83	14.78	9.61	342	10.92
5.5	12.09	1.83	14.78	9.61	344	10.92
6.0	12.09	1.83	14.78	9.62	345	10.93
6.5	12.09	1.83	14.78	9.61	360	10.93
7.0	12.08	1.83	14.78	9.61	374	10.93
7.5	12.08	1.83	14.78	9.60	394	10.93
8.0	12.08	1.83	14.77	9.60	403	10.92
8.5	12.08	1.83	14.76	9.61	417	10.91
9.0	12.08	1.83	14.75	9.59	440	10.90
9.5	12.08	1.83	14.74	9.59	455	10.90
10.0	12.08	1.82	14.71	9.59	479	10.88
10.5	12.07	1.82	14.67	9.60	525	10.84

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C3-3 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.05	1.82	14.66	9.67	226	10.84
1.0	12.04	1.82	14.69	9.67	238	10.87
1.5	12.02	1.82	14.70	9.68	235	10.87
2.0	12.02	1.82	14.70	9.69	249	10.88
2.5	12.02	1.82	14.71	9.66	263	10.88
3.0	12.02	1.82	14.71	9.67	266	10.88
3.5	12.03	1.82	14.72	9.67	267	10.89
4.0	12.03	1.82	14.72	9.68	269	10.89
4.5	12.04	1.82	14.73	9.65	270	10.89
5.0	12.04	1.82	14.74	9.68	270	10.90
5.5	12.05	1.83	14.75	9.67	269	10.91
6.0	12.05	1.83	14.75	9.65	271	10.91
6.5	12.05	1.83	14.75	9.67	275	10.91
7.0	12.05	1.83	14.76	9.67	281	10.91
7.5	12.06	1.83	14.76	9.65	282	10.92
8.0	12.06	1.83	14.76	9.65	285	10.92
8.5	12.06	1.83	14.76	9.66	290	10.92
9.0	12.06	1.83	14.77	9.66	288	10.92
9.5	12.06	1.83	14.77	9.65	287	10.92
10.0	12.06	1.83	14.77	9.65	287	10.92
10.5	12.06	1.83	14.77	9.65	290	10.92
11.0	12.06	1.83	14.77	9.65	291	10.92
11.5	12.06	1.83	14.78	9.66	296	10.93
12.0	12.06	1.83	14.77	9.64	303	10.93
12.5	12.06	1.83	14.77	9.65	309	10.93
13.0	12.06	1.83	14.77	9.64	312	10.93
13.5	12.06	1.83	14.77	9.64	314	10.92
14.0	12.06	1.83	14.77	9.64	309	10.93
14.5	12.07	1.83	14.78	9.65	312	10.93
15.0	12.07	1.83	14.78	9.65	313	10.93
15.5	12.06	1.83	14.78	9.64	318	10.93
16.0	12.06	1.83	14.78	9.64	321	10.93
16.5	12.07	1.83	14.78	9.65	321	10.93
17.0	12.07	1.83	14.78	9.64	321	10.93
17.5	12.07	1.83	14.78	9.63	322	10.93
18.0	12.07	1.83	14.78	9.64	327	10.93
18.5	12.07	1.83	14.78	9.63	342	10.93
19.0	12.07	1.83	14.78	9.63	343	10.93
19.5	12.08	1.83	14.77	9.62	361	10.92
20.0	12.07	1.83	14.78	9.61	369	10.93
20.5	12.07	1.83	14.77	9.62	372	10.92
21.0	12.08	1.83	14.77	9.62	375	10.92
21.5	12.07	1.83	14.77	9.62	379	10.92
22.0	12.07	1.83	14.77	9.62	384	10.92
22.5	12.07	1.83	14.77	9.62	386	10.92
23.0	12.07	1.83	14.77	9.61	391	10.92
23.5	12.06	1.83	14.77	9.60	402	10.92
24.0	12.06	1.83	14.77	9.55	400	10.93
24.5	12.06	1.83	14.77	9.57	400	10.93
25.0	12.06	1.83	14.78	9.55	403	10.93

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C3-3 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
25.5	12.05	1.83	14.79	9.54	393	10.94
26.0	12.05	1.83	14.79	9.54	383	10.94
26.5	12.05	1.83	14.80	9.54	377	10.94
27.0	12.04	1.83	14.79	9.56	382	10.94
27.5	12.04	1.83	14.77	9.53	412	10.92

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C3-4 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.04	1.82	14.69	9.66	295	10.86
1.0	12.03	1.82	14.70	9.66	302	10.87
1.5	12.03	1.82	14.70	9.66	313	10.87
2.0	12.02	1.82	14.70	9.67	310	10.87
2.5	12.03	1.82	14.69	9.67	311	10.87
3.0	12.02	1.82	14.69	9.67	309	10.87
3.5	12.02	1.82	14.69	9.66	307	10.87
4.0	12.02	1.82	14.69	9.65	307	10.87
4.5	12.02	1.82	14.69	9.64	307	10.87
5.0	12.02	1.82	14.69	9.65	306	10.87
5.5	12.02	1.82	14.69	9.66	306	10.87
6.0	12.03	1.82	14.69	9.66	305	10.87
6.5	12.03	1.82	14.69	9.66	306	10.87
7.0	12.03	1.82	14.70	9.65	306	10.87
7.5	12.03	1.82	14.70	9.66	305	10.87
8.0	12.02	1.82	14.70	9.66	306	10.87
8.5	12.02	1.82	14.70	9.66	306	10.87
9.0	12.01	1.82	14.70	9.66	307	10.87
9.5	12.00	1.82	14.69	9.67	307	10.87
10.0	11.98	1.82	14.68	9.68	311	10.86
10.5	11.98	1.81	14.67	9.66	314	10.86
11.0	11.98	1.81	14.67	9.66	316	10.86
11.5	11.98	1.81	14.67	9.67	317	10.86
12.0	11.99	1.82	14.68	9.67	316	10.86
12.5	12.00	1.82	14.68	9.66	314	10.87
13.0	11.99	1.82	14.69	9.66	312	10.87
13.5	11.98	1.82	14.68	9.68	314	10.86
14.0	11.96	1.81	14.67	9.69	315	10.86
14.5	11.96	1.81	14.67	9.68	315	10.86
15.0	11.96	1.81	14.67	9.69	315	10.86
15.5	11.96	1.81	14.67	9.67	316	10.86
16.0	11.97	1.81	14.67	9.67	317	10.86
16.5	11.96	1.81	14.68	9.69	315	10.86
17.0	11.95	1.81	14.67	9.68	316	10.86
17.5	11.94	1.81	14.67	9.69	317	10.86
18.0	11.94	1.81	14.67	9.69	316	10.86
18.5	11.94	1.81	14.66	9.69	316	10.86
19.0	11.94	1.81	14.66	9.68	317	10.86
19.5	11.93	1.81	14.67	9.69	318	10.86
20.0	11.92	1.81	14.67	9.70	319	10.86
20.5	11.92	1.81	14.67	9.69	318	10.87
21.0	11.91	1.81	14.68	9.69	318	10.88
21.5	11.92	1.81	14.68	9.70	319	10.87
22.0	11.93	1.81	14.68	9.69	318	10.87
22.5	11.94	1.81	14.68	9.68	319	10.87
23.0	11.93	1.81	14.67	9.69	322	10.87
23.5	11.93	1.81	14.67	9.69	321	10.87
24.0	11.94	1.81	14.67	9.67	319	10.86
24.5	11.95	1.81	14.65	9.68	319	10.85
25.0	11.95	1.81	14.65	9.69	319	10.85

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: C3-4 **Date: 6/12/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
25.5	11.94	1.81	14.65	9.69	320	10.85
26.0	11.91	1.81	14.68	9.70	321	10.87
26.5	11.90	1.81	14.69	9.70	320	10.89
27.0	11.91	1.81	14.68	9.68	321	10.88
27.5	11.93	1.81	14.67	9.68	321	10.86
28.0	11.93	1.81	14.66	9.69	322	10.86
28.5	11.91	1.81	14.68	9.70	322	10.87
29.0	11.89	1.81	14.70	9.70	322	10.89
29.5	11.88	1.81	14.71	9.69	322	10.90
30.0	11.88	1.81	14.70	9.69	321	10.90
30.5	11.89	1.81	14.70	9.70	323	10.89
31.0	11.88	1.81	14.71	9.70	323	10.90
31.5	11.88	1.81	14.70	9.69	325	10.90
32.0	11.88	1.81	14.71	9.69	325	10.90
32.5	11.88	1.81	14.71	9.70	326	10.90
33.0	11.88	1.81	14.71	9.70	326	10.90
33.5	11.88	1.82	14.72	9.71	326	10.91
34.0	11.88	1.82	14.73	9.69	327	10.92
34.5	11.90	1.82	14.71	9.67	327	10.90
35.0	11.92	1.81	14.67	9.68	325	10.87
35.5	11.92	1.81	14.66	9.70	324	10.86
36.0	11.92	1.81	14.65	9.70	325	10.85
36.5	11.92	1.81	14.66	9.69	326	10.86
37.0	11.91	1.81	14.67	9.69	328	10.87
37.5	11.91	1.81	14.68	9.71	347	10.88
38.0	11.89	1.81	14.70	9.71	379	10.89

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E1-1 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.46	1.86	15.29	9.65	85	11.41
1.0	11.51	1.87	15.34	9.79	131	11.44
1.5	11.51	1.87	15.35	9.79	149	11.45
2.0	11.50	1.87	15.36	9.78	155	11.46
2.5	11.49	1.87	15.39	9.79	174	11.48
3.0	11.48	1.88	15.42	9.81	192	11.51
3.5	11.47	1.88	15.45	9.81	217	11.54
4.0	11.47	1.88	15.48	9.79	235	11.56
4.5	11.48	1.88	15.45	9.76	237	11.53
5.0	11.48	1.88	15.44	9.79	233	11.53
5.5	11.45	1.88	15.51	9.82	237	11.58
6.0	11.42	1.89	15.61	9.84	250	11.66
6.5	11.38	1.90	15.72	9.83	262	11.76
7.0	11.37	1.91	15.75	9.80	263	11.78
7.5	11.38	1.90	15.72	9.81	265	11.76
8.0	11.40	1.90	15.64	9.79	261	11.70
8.5	11.37	1.91	15.73	9.84	259	11.76
9.0	11.32	1.92	15.89	9.84	256	11.90
9.5	11.27	1.93	16.03	9.86	248	12.01
10.0	11.20	1.95	16.25	9.90	240	12.19
10.5	11.12	1.98	16.48	9.91	232	12.38
11.0	11.04	2.00	16.70	9.92	226	12.56

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E1-2 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.38	1.90	15.66	9.61	157	11.71
1.0	11.38	1.90	15.70	9.75	193	11.74
1.5	11.36	1.91	15.74	9.76	194	11.77
2.0	11.35	1.91	15.78	9.78	195	11.80
2.5	11.33	1.92	15.86	9.77	196	11.87
3.0	11.32	1.92	15.90	9.79	195	11.90
3.5	11.31	1.92	15.92	9.79	196	11.92
4.0	11.30	1.93	15.95	9.79	196	11.95
4.5	11.28	1.93	16.00	9.78	197	11.99
5.0	11.26	1.94	16.05	9.79	198	12.03
5.5	11.25	1.94	16.09	9.81	200	12.06
6.0	11.24	1.94	16.12	9.81	199	12.09
6.5	11.22	1.95	16.16	9.84	199	12.12
7.0	11.18	1.95	16.25	9.83	198	12.19
7.5	11.14	1.96	16.33	9.86	198	12.27
8.0	11.11	1.97	16.43	9.86	193	12.34
8.5	11.11	1.97	16.42	9.81	194	12.33
9.0	11.12	1.97	16.40	9.82	196	12.32
9.5	11.09	1.97	16.48	9.85	192	12.38
10.0	11.00	1.99	16.68	9.88	184	12.56
10.5	10.89	2.01	16.91	9.93	171	12.75
11.0	10.80	2.03	17.12	9.93	158	12.92
11.5	10.75	2.04	17.23	9.92	151	13.02
12.0	10.71	2.05	17.30	9.93	151	13.08
12.5	10.69	2.05	17.35	9.93	158	13.12
13.0	10.69	2.05	17.38	9.93	161	13.14
13.5	10.70	2.06	17.41	9.94	163	13.16
14.0	10.70	2.06	17.43	9.93	167	13.18
14.5	10.71	2.06	17.44	9.92	176	13.19
15.0	10.71	2.06	17.45	9.92	186	13.19

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E1-3 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.37	1.89	15.61	9.70	175	11.67
1.0	11.35	1.91	15.79	9.74	190	11.82
1.5	11.32	1.92	15.87	9.81	193	11.88
2.0	11.30	1.92	15.91	9.80	193	11.91
2.5	11.26	1.93	16.00	9.84	190	11.99
3.0	11.23	1.94	16.08	9.82	190	12.05
3.5	11.20	1.94	16.14	9.84	185	12.10
4.0	11.18	1.95	16.18	9.84	181	12.14
4.5	11.14	1.95	16.26	9.86	178	12.21
5.0	11.11	1.96	16.32	9.83	174	12.26
5.5	11.09	1.96	16.34	9.86	173	12.28
6.0	11.06	1.96	16.40	9.87	168	12.33
6.5	11.03	1.97	16.46	9.90	162	12.38
7.0	10.97	1.98	16.56	9.89	153	12.46
7.5	10.94	1.98	16.60	9.89	146	12.50
8.0	10.92	1.98	16.64	9.90	142	12.54
8.5	10.91	1.99	16.67	9.91	139	12.56
9.0	10.89	1.99	16.70	9.90	138	12.59
9.5	10.86	1.99	16.75	9.93	137	12.63
10.0	10.81	2.01	16.88	9.94	138	12.74
10.5	10.79	2.01	16.96	9.93	140	12.80
11.0	10.78	2.02	17.00	9.92	143	12.83
11.5	10.77	2.02	17.02	9.93	144	12.85
12.0	10.76	2.02	17.04	9.94	145	12.87
12.5	10.75	2.02	17.08	9.93	147	12.90
13.0	10.74	2.03	17.13	9.94	151	12.94
13.5	10.72	2.04	17.21	9.95	160	13.00
14.0	10.72	2.04	17.23	9.94	163	13.02
14.5	10.72	2.04	17.24	9.94	163	13.03
15.0	10.72	2.04	17.26	9.94	165	13.04
15.5	10.72	2.04	17.28	9.94	171	13.06

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E1-4 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.30	1.90	15.74	9.76	160	11.78
1.0	11.28	1.92	15.92	9.77	165	11.92
1.5	11.25	1.93	15.97	9.80	170	11.97
2.0	11.20	1.93	16.07	9.81	169	12.05
2.5	11.17	1.94	16.14	9.83	163	12.11
3.0	11.15	1.94	16.18	9.81	162	12.15
3.5	11.12	1.95	16.23	9.83	159	12.19
4.0	11.07	1.96	16.32	9.84	155	12.26
4.5	11.04	1.96	16.40	9.85	149	12.33
5.0	11.02	1.97	16.46	9.85	147	12.38
5.5	10.99	1.97	16.52	9.87	143	12.43
6.0	10.97	1.98	16.56	9.87	139	12.47
6.5	10.96	1.98	16.59	9.86	138	12.49
7.0	10.95	1.98	16.61	9.84	137	12.50
7.5	10.94	1.98	16.61	9.88	138	12.51
8.0	10.93	1.99	16.65	9.88	138	12.54
8.5	10.90	1.99	16.71	9.90	137	12.59
9.0	10.86	2.00	16.81	9.92	138	12.68
9.5	10.82	2.01	16.95	9.92	145	12.79
10.0	10.79	2.02	17.00	9.91	149	12.83
10.5	10.77	2.02	17.05	9.91	150	12.87
11.0	10.77	2.02	17.06	9.90	153	12.88
11.5	10.76	2.02	17.07	9.92	153	12.89
12.0	10.74	2.03	17.12	9.93	154	12.93
12.5	10.70	2.04	17.27	9.95	182	13.05
13.0	10.70	2.05	17.35	9.94	197	13.11
13.5	10.69	2.05	17.34	9.93	198	13.11
14.0	10.69	2.05	17.35	9.92	199	13.12
14.5	10.69	2.05	17.36	9.93	202	13.12
15.0	10.69	2.05	17.36	9.93	204	13.13
15.5	10.69	2.05	17.36	9.93	204	13.13
16.0	10.69	2.05	17.36	9.94	198	13.13

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E2-1 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.36	1.94	16.01	9.73	248	11.98
1.0	11.36	1.93	16.00	9.73	252	11.98
1.5	11.36	1.93	16.00	9.75	251	11.97
2.0	11.36	1.94	16.01	9.74	254	11.98
2.5	11.36	1.94	16.01	9.74	249	11.99
3.0	11.36	1.94	16.01	9.75	252	11.99
3.5	11.35	1.94	16.02	9.74	254	11.99
4.0	11.35	1.94	16.02	9.75	253	11.99
4.5	11.35	1.94	16.02	9.74	256	11.99
5.0	11.36	1.94	16.01	9.75	252	11.99
5.5	11.36	1.94	16.01	9.74	252	11.99
6.0	11.35	1.94	16.02	9.74	253	11.99
6.5	11.35	1.94	16.02	9.74	253	11.99
7.0	11.36	1.94	16.03	9.74	251	12.00
7.5	11.36	1.94	16.03	9.74	250	12.00
8.0	11.35	1.94	16.01	9.75	249	11.99
8.5	11.35	1.94	16.02	9.75	248	11.99
9.0	11.35	1.94	16.02	9.75	248	11.99
9.5	11.35	1.94	16.02	9.75	249	11.99
10.0	11.35	1.94	16.02	9.73	247	11.99

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E2-2 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.24	1.95	16.19	9.47	199	12.14
1.0	11.29	1.95	16.18	9.75	269	12.12
1.5	11.28	1.95	16.20	9.75	276	12.14
2.0	11.28	1.95	16.21	9.74	275	12.15
2.5	11.27	1.96	16.22	9.74	280	12.16
3.0	11.26	1.96	16.24	9.74	280	12.17
3.5	11.26	1.96	16.25	9.75	278	12.18
4.0	11.26	1.96	16.26	9.74	282	12.19
4.5	11.25	1.96	16.26	9.73	283	12.20
5.0	11.25	1.96	16.26	9.75	278	12.20
5.5	11.25	1.96	16.25	9.74	286	12.19
6.0	11.26	1.96	16.25	9.76	284	12.19
6.5	11.25	1.96	16.26	9.76	281	12.19
7.0	11.24	1.96	16.27	9.75	283	12.20
7.5	11.24	1.96	16.27	9.75	283	12.20
8.0	11.25	1.96	16.26	9.75	288	12.19
8.5	11.25	1.96	16.26	9.76	287	12.19
9.0	11.24	1.96	16.27	9.76	283	12.20
9.5	11.23	1.96	16.30	9.76	280	12.22
10.0	11.22	1.96	16.32	9.76	280	12.24
10.5	11.22	1.96	16.33	9.76	283	12.25
11.0	11.22	1.96	16.33	9.77	279	12.25
11.5	11.22	1.96	16.33	9.76	275	12.25
12.0	11.22	1.96	16.33	9.77	275	12.25
12.5	11.21	1.96	16.33	9.77	274	12.25
13.0	11.21	1.97	16.34	9.76	272	12.26
13.5	11.21	1.97	16.34	9.76	269	12.26
14.0	11.21	1.97	16.34	9.77	267	12.26

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E2-3 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.26	1.86	15.34	9.60	215	11.48
1.0	11.27	1.96	16.24	9.69	252	12.17
1.5	11.27	1.96	16.24	9.71	253	12.18
2.0	11.26	1.96	16.25	9.69	255	12.18
2.5	11.25	1.96	16.26	9.70	256	12.19
3.0	11.24	1.96	16.28	9.71	253	12.21
3.5	11.23	1.96	16.30	9.72	250	12.23
4.0	11.23	1.96	16.30	9.73	252	12.23
4.5	11.23	1.96	16.30	9.72	253	12.22
5.0	11.22	1.96	16.31	9.72	251	12.23
5.5	11.22	1.96	16.32	9.74	248	12.24
6.0	11.21	1.96	16.33	9.73	245	12.25
6.5	11.21	1.97	16.34	9.73	243	12.26
7.0	11.21	1.97	16.34	9.73	245	12.26
7.5	11.21	1.96	16.34	9.74	244	12.26
8.0	11.21	1.97	16.34	9.73	246	12.26
8.5	11.21	1.97	16.34	9.73	249	12.26
9.0	11.21	1.97	16.34	9.74	252	12.26
9.5	11.21	1.97	16.34	9.75	259	12.26
10.0	11.21	1.97	16.34	9.73	263	12.26
10.5	11.21	1.97	16.34	9.74	265	12.26
11.0	11.21	1.97	16.34	9.75	268	12.26

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E2-4 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.17	1.97	16.38	9.77	238	12.30
1.0	11.17	1.97	16.38	9.76	238	12.30
1.5	11.16	1.97	16.39	9.77	238	12.30
2.0	11.17	1.97	16.38	9.77	239	12.30
2.5	11.17	1.97	16.38	9.76	241	12.30
3.0	11.17	1.97	16.38	9.76	241	12.30
3.5	11.17	1.97	16.38	9.76	241	12.30
4.0	11.17	1.97	16.38	9.77	243	12.30
4.5	11.18	1.97	16.38	9.77	245	12.30
5.0	11.18	1.97	16.38	9.78	245	12.30
5.5	11.18	1.97	16.38	9.78	244	12.30
6.0	11.18	1.97	16.38	9.78	244	12.30
6.5	11.18	1.97	16.38	9.79	245	12.30
7.0	11.18	1.97	16.38	9.80	245	12.30
7.5	11.17	1.97	16.38	9.80	245	12.30
8.0	11.17	1.97	16.39	9.80	246	12.30

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E3-1 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.70	1.81	14.79	9.73	291	10.99
1.0	11.70	1.83	14.94	9.70	293	11.10
1.5	11.70	1.83	14.93	9.73	293	11.10
2.0	11.69	1.83	14.94	9.73	297	11.11
2.5	11.69	1.83	14.95	9.72	299	11.11
3.0	11.69	1.83	14.94	9.72	296	11.11
3.5	11.69	1.83	14.93	9.71	295	11.10
4.0	11.69	1.83	14.91	9.72	295	11.09
4.5	11.69	1.83	14.90	9.71	293	11.08
5.0	11.69	1.83	14.89	9.72	292	11.07
5.5	11.69	1.83	14.89	9.71	293	11.07
6.0	11.69	1.83	14.89	9.72	295	11.07
6.5	11.69	1.83	14.89	9.72	297	11.07
7.0	11.69	1.83	14.89	9.71	299	11.07

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E3-2 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.70	1.83	14.88	9.68	299	11.06
1.0	11.70	1.83	14.88	9.68	311	11.06
1.5	11.70	1.83	14.88	9.70	307	11.06
2.0	11.70	1.83	14.88	9.70	303	11.06
2.5	11.70	1.83	14.88	9.70	301	11.06
3.0	11.70	1.83	14.88	9.69	300	11.06
3.5	11.70	1.83	14.89	9.70	301	11.06
4.0	11.70	1.83	14.89	9.69	300	11.07
4.5	11.70	1.83	14.89	9.70	299	11.07
5.0	11.70	1.83	14.89	9.70	300	11.07
5.5	11.69	1.83	14.89	9.71	300	11.07
6.0	11.70	1.83	14.89	9.70	302	11.07
6.5	11.70	1.83	14.89	9.69	306	11.07
7.0	11.70	1.83	14.89	9.70	306	11.07
7.5	11.70	1.83	14.88	9.72	305	11.06
8.0	11.69	1.83	14.89	9.70	304	11.07
8.5	11.69	1.83	14.89	9.70	305	11.07
9.0	11.69	1.83	14.89	9.71	305	11.07

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E3-3 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.72	1.83	14.89	9.68	282	11.07
1.0	11.71	1.83	14.89	9.68	295	11.07
1.5	11.70	1.83	14.89	9.70	302	11.07
2.0	11.70	1.83	14.89	9.69	303	11.07
2.5	11.70	1.83	14.88	9.69	303	11.06
3.0	11.70	1.83	14.88	9.69	301	11.06
3.5	11.70	1.83	14.88	9.69	303	11.06
4.0	11.70	1.83	14.88	9.68	306	11.06
4.5	11.70	1.83	14.89	9.69	305	11.07
5.0	11.70	1.83	14.89	9.69	308	11.07
5.5	11.70	1.83	14.89	9.69	304	11.07
6.0	11.70	1.83	14.89	9.69	304	11.07
6.5	11.69	1.83	14.89	9.70	303	11.07
7.0	11.69	1.83	14.89	9.68	305	11.07
7.5	11.69	1.83	14.89	9.70	306	11.07
8.0	11.70	1.83	14.89	9.71	306	11.07
8.5	11.70	1.83	14.89	9.69	311	11.07

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: E3-4 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	11.73	1.82	14.82	9.73	284	11.01
1.0	11.72	1.83	14.88	9.73	290	11.06
1.5	11.71	1.83	14.88	9.74	297	11.06
2.0	11.70	1.83	14.88	9.73	306	11.06
2.5	11.70	1.83	14.88	9.72	308	11.06
3.0	11.70	1.83	14.88	9.73	308	11.06
3.5	11.70	1.83	14.88	9.72	310	11.06
4.0	11.70	1.83	14.88	9.72	313	11.06
4.5	11.70	1.83	14.88	9.72	313	11.06
5.0	11.70	1.83	14.88	9.74	316	11.06
5.5	11.70	1.83	14.88	9.72	317	11.06
6.0	11.70	1.83	14.88	9.73	314	11.06
6.5	11.70	1.83	14.88	9.73	313	11.06

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F1-1 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.19	1.80	14.50	9.73	125	10.69
1.0	12.15	1.80	14.50	9.74	129	10.70
1.5	12.14	1.80	14.50	9.75	137	10.70

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F1-2 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.19	1.79	14.35	9.68	163	10.58
1.0	12.18	1.79	14.35	9.69	172	10.58
1.5	12.18	1.79	14.35	9.69	171	10.58
2.0	12.18	1.79	14.35	9.69	173	10.58

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F1-3 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.30	1.81	14.50	9.73	131	10.68
1.0	12.28	1.81	14.50	9.73	134	10.68
1.5	12.28	1.81	14.50	9.73	134	10.68

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F1-4 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.50	1.82	14.50	9.68	124	10.64
1.0	12.48	1.82	14.49	9.68	128	10.65
1.5	12.47	1.82	14.50	9.69	128	10.65
2.0	12.47	1.82	14.49	9.70	128	10.65

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F2-1 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.21	1.85	14.91	9.71	344	11.01
1.0	12.20	1.86	14.98	9.72	342	11.06
1.5	12.19	1.86	14.97	9.71	345	11.05
2.0	12.19	1.86	14.97	9.75	343	11.06
2.5	12.18	1.86	14.97	9.72	343	11.06
3.0	12.18	1.86	14.97	9.72	342	11.06
3.5	12.18	1.86	14.98	9.73	338	11.06
4.0	12.18	1.86	14.97	9.71	344	11.06
4.5	12.20	1.86	14.97	9.71	347	11.05

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F2-2 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.24	1.87	15.05	9.71	357	11.11
1.0	12.24	1.87	15.07	9.69	365	11.12
1.5	12.25	1.87	15.08	9.70	364	11.13
2.0	12.27	1.88	15.11	9.71	378	11.15
2.5	12.29	1.88	15.13	9.72	393	11.17
3.0	12.28	1.88	15.13	9.71	389	11.16
3.5	12.28	1.88	15.12	9.71	376	11.16
4.0	12.27	1.88	15.12	9.71	372	11.16
4.5	12.29	1.88	15.14	9.69	379	11.17
5.0	12.30	1.88	15.16	9.72	381	11.19
5.5	12.28	1.88	15.13	9.70	372	11.17
6.0	12.30	1.88	15.15	9.69	380	11.18
6.5	12.30	1.88	15.16	9.71	377	11.19
7.0	12.31	1.88	15.14	9.70	379	11.17
7.5	12.31	1.88	15.15	9.71	376	11.18
8.0	12.32	1.88	15.15	9.69	380	11.17
8.5	12.34	1.89	15.18	9.70	390	11.20
9.0	12.35	1.89	15.19	9.67	394	11.20

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F2-3 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.39	1.85	14.84	9.67	252	10.93
1.0	12.38	1.85	14.84	9.68	267	10.93
1.5	12.35	1.85	14.85	9.68	273	10.94
2.0	12.31	1.85	14.88	9.67	281	10.97
2.5	12.28	1.85	14.89	9.69	288	10.98
3.0	12.23	1.85	14.89	9.69	291	10.99
3.5	12.22	1.85	14.88	9.68	291	10.98
4.0	12.21	1.85	14.90	9.67	302	11.00
4.5	12.22	1.86	14.94	9.67	308	11.03
5.0	12.23	1.86	14.97	9.66	313	11.05
5.5	12.27	1.86	14.97	9.66	318	11.04
6.0	12.29	1.86	14.98	9.68	323	11.05
6.5	12.30	1.87	14.99	9.68	326	11.06
7.0	12.31	1.87	15.00	9.66	332	11.06
7.5	12.30	1.87	15.01	9.66	338	11.07

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F2-4 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.33	1.86	14.93	9.67	242	11.00
1.0	12.31	1.88	15.09	9.66	293	11.14
1.5	12.29	1.88	15.10	9.67	317	11.15
2.0	12.27	1.88	15.10	9.66	330	11.15
2.5	12.26	1.88	15.10	9.67	335	11.14
3.0	12.28	1.88	15.13	9.66	335	11.17
3.5	12.28	1.88	15.17	9.66	338	11.20
4.0	12.27	1.88	15.15	9.67	341	11.18
4.5	12.28	1.88	15.15	9.66	341	11.18
5.0	12.31	1.89	15.18	9.66	343	11.20
5.5	12.32	1.89	15.22	9.66	349	11.23
6.0	12.34	1.89	15.23	9.70	358	11.23
6.5	12.33	1.89	15.23	9.66	367	11.23
7.0	12.34	1.89	15.23	9.66	378	11.24
7.5	12.34	1.90	15.24	9.68	388	11.24

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F3-1 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.06	1.80	14.49	9.72	306	10.71
1.0	12.06	1.80	14.50	9.72	308	10.71
1.5	12.06	1.80	14.51	9.72	307	10.72
2.0	12.06	1.80	14.51	9.72	309	10.73
2.5	12.06	1.80	14.52	9.72	308	10.73
3.0	12.06	1.80	14.51	9.72	307	10.73
3.5	12.06	1.80	14.51	9.72	308	10.72
4.0	12.05	1.80	14.51	9.72	309	10.72
4.5	12.05	1.80	14.51	9.72	311	10.73
5.0	12.05	1.80	14.52	9.72	310	10.73
5.5	12.06	1.80	14.52	9.73	316	10.73
6.0	12.06	1.80	14.52	9.73	316	10.73
6.5	12.05	1.80	14.52	9.73	314	10.73
7.0	12.05	1.80	14.52	9.72	315	10.73
7.5	12.05	1.80	14.53	9.73	313	10.74
8.0	12.05	1.80	14.53	9.73	312	10.74

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F3-2 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.04	1.81	14.60	9.70	296	10.79
1.0	12.04	1.81	14.58	9.70	296	10.78
1.5	12.04	1.80	14.57	9.70	300	10.77
2.0	12.04	1.80	14.56	9.70	304	10.77
2.5	12.03	1.81	14.58	9.71	302	10.78
3.0	12.01	1.81	14.63	9.71	299	10.82
3.5	12.00	1.81	14.65	9.70	295	10.84
4.0	12.01	1.81	14.65	9.72	295	10.84
4.5	12.01	1.81	14.66	9.70	298	10.85
5.0	11.99	1.82	14.69	9.70	294	10.87
5.5	11.99	1.82	14.70	9.70	292	10.88
6.0	11.97	1.82	14.72	9.72	291	10.90
6.5	11.97	1.82	14.74	9.72	292	10.91
7.0	11.97	1.82	14.75	9.71	293	10.92
7.5	11.96	1.82	14.76	9.72	287	10.93
8.0	11.96	1.82	14.76	9.72	291	10.93
8.5	11.97	1.82	14.74	9.71	289	10.91
9.0	11.99	1.82	14.72	9.72	294	10.89
9.5	11.98	1.82	14.72	9.73	297	10.90
10.0	11.97	1.82	14.75	9.71	301	10.92
10.5	11.98	1.82	14.74	9.72	304	10.91
11.0	11.98	1.82	14.73	9.71	297	10.91
11.5	11.99	1.82	14.74	9.71	291	10.91
12.0	11.99	1.82	14.73	9.71	286	10.90
12.5	11.99	1.82	14.73	9.72	286	10.90

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F3-3 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.25	1.77	14.22	9.70	204	10.47
1.0	12.15	1.78	14.33	9.72	214	10.57
1.5	12.10	1.79	14.42	9.73	228	10.64
2.0	12.05	1.80	14.55	9.69	239	10.75
2.5	12.03	1.81	14.59	9.68	249	10.79
3.0	12.01	1.81	14.65	9.68	254	10.84
3.5	11.98	1.82	14.71	9.69	257	10.89
4.0	11.95	1.83	14.80	9.69	260	10.96
4.5	11.92	1.83	14.85	9.72	264	11.01
5.0	11.91	1.84	14.91	9.70	268	11.06
5.5	11.89	1.84	14.96	9.68	267	11.09
6.0	11.88	1.85	15.01	9.69	266	11.14
6.5	11.87	1.85	15.04	9.67	264	11.16
7.0	11.86	1.85	15.07	9.69	264	11.18
7.5	11.83	1.86	15.13	9.70	262	11.23
8.0	11.80	1.87	15.24	9.68	261	11.33
8.5	11.79	1.88	15.30	9.69	257	11.37
9.0	11.77	1.88	15.35	9.68	255	11.42
9.5	11.76	1.88	15.36	9.66	255	11.42
10.0	11.77	1.88	15.36	9.67	257	11.42
10.5	11.76	1.89	15.39	9.68	265	11.45
11.0	11.75	1.89	15.41	9.68	258	11.47
11.5	11.73	1.89	15.45	9.67	262	11.49
12.0	11.74	1.89	15.45	9.67	265	11.49
12.5	11.74	1.89	15.45	9.71	258	11.50
13.0	11.73	1.89	15.46	9.72	258	11.51
13.5	11.73	1.89	15.47	9.74	259	11.51

Asplund WPCF - 2014 Receiving Water Hydrographic Data

Station: F3-4 **Date: 6/11/2014**

Depth (m)	Temp (deg C)	Cond (S/m)	Salinity (psu)	DO (mg/L)	OBS (ntu)	Sigma-t
0.5	12.16	1.80	14.47	9.74	226	10.67
1.0	11.95	1.83	14.83	9.77	238	10.99
1.5	11.83	1.86	15.14	9.78	243	11.24
2.0	11.79	1.88	15.32	9.75	246	11.39
2.5	11.78	1.88	15.36	9.74	246	11.42
3.0	11.76	1.89	15.40	9.75	250	11.45
3.5	11.74	1.89	15.46	9.74	255	11.51
4.0	11.73	1.89	15.48	9.74	254	11.52
4.5	11.73	1.89	15.48	9.73	253	11.52
5.0	11.71	1.90	15.50	9.74	251	11.53
5.5	11.70	1.90	15.52	9.73	252	11.55
6.0	11.68	1.90	15.53	9.73	255	11.57
6.5	11.68	1.90	15.53	9.73	263	11.57
7.0	11.66	1.90	15.53	9.74	276	11.57
7.5	11.66	1.90	15.53	9.74	284	11.57
8.0	11.66	1.90	15.54	9.72	285	11.57
8.5	11.65	1.90	15.54	9.73	284	11.57
9.0	11.66	1.90	15.53	9.72	289	11.57
9.5	11.66	1.90	15.53	9.72	293	11.57
10.0	11.66	1.90	15.53	9.73	291	11.57
10.5	11.66	1.90	15.53	9.72	290	11.57
11.0	11.65	1.90	15.53	9.71	292	11.57
11.5	11.66	1.90	15.53	9.73	293	11.57
12.0	11.66	1.90	15.53	9.72	294	11.57
12.5	11.65	1.90	15.53	9.74	295	11.57
13.0	11.66	1.90	15.54	9.73	291	11.57
13.5	11.65	1.90	15.54	9.74	294	11.58
14.0	11.65	1.90	15.52	9.72	293	11.56
14.5	11.65	1.90	15.53	9.71	292	11.57
15.0	11.67	1.90	15.53	9.71	290	11.57
15.5	11.65	1.89	15.52	9.70	292	11.56

APPENDIX C

Receiving Water Quality Monitoring

C8 Field Data Sheets

Kinnetic Laboratories, Inc.

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 0648	**Page** 1 **of** 36
STATION: E1-1	**TIME:** 6/11/14	
TIDE STAGE: Ebb	**DEPTH:** 12.0 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.348	**DGPS?** Circle (Y) or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W): 150° 01.280		**COORDINATE SYSTEM:** *NAD83*
STATION LOCATION/DESCRIPTION: Outfall		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	01	01		01						7.59
MID					02						7.63
BOTTOM					03						7.60

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 1	**CSTD ON TIME:** 0648

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 2 **of** 36
STATION: E1-2	**TIME:** 0656	
TIDE STAGE: Ebb	**DEPTH:** 15.8 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.297	**DGPS?** Circle (Y) or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
150° 62.040 **STATION LOCATION/DESCRIPTION:** At ZID Boundary		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	02	02		04						7.61
MID					05						7.60
BOTTOM					06						7.59

QC SAMPLES COLLECTED: Bottom turbidity sample slightly late

CSTD Seabird: *Serial# 376*	**CAST NO.:** 2	**CSTD ON TIME:** 0656

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	None		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: 10-15 knot Westerly
1-2ft seas

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 3 **of** 36
STATION: E1-3	**TIME:** 0707	
TIDE STAGE: Ebb	**DEPTH:** 17.9 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.164	**DGPS?** Circle (Y) or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
150° 02.835 **STATION LOCATION/DESCRIPTION:** 1.4 km WSW of outfall		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	03	03		07						7.64
MID					08						7.63
BOTTOM					09						7.63

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 3	**CSTD ON TIME:** 0707

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: 2' waves, 10-15 westerly

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 4 **of** 36
STATION: E1-4	**TIME:** 0723	
TIDE STAGE: Ebb	**DEPTH:** 17.2 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 11.947	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
150° 03.990	**STATION LOCATION/DESCRIPTION:** 2.5 km WSW of outfall	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	04	04		10						7.64
MID					11						7.66
BOTTOM					12						7.65

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 4	**CSTD ON TIME:** 0724

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	Same		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: 10-15 knot westerly
1-2 ft waves

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 5 **of** 36
STATION: E2-1	**TIME:** 0814	
TIDE STAGE: Ebb	**DEPTH:** 10.0 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.340	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W): 150° 01.278		**COORDINATE SYSTEM:** *NAD83*
STATION LOCATION/DESCRIPTION: At outfall		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	05	05		13						7.69
MID					14						7.72
BOTTOM					15						7.71

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 5	**CSTD ON TIME:** 0814

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	None		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: same

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 6 **of** 36
STATION: E2-2	**TIME:** 0821	
TIDE STAGE: Ebb	**DEPTH:** 15.4 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.~~340~~ 232	GL **DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
150° 02.2120	**STATION LOCATION/DESCRIPTION:** WSW of outfall ~ 0.9 km	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	06	06		16						7.70
MID					17						7.70
BOTTOM					18						7.69

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 6	**CSTD ON TIME:** 082

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: <1 ft waves ~ 10 knots westerly

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 7 **of** 36
STATION: E2-3	**TIME:** 0830	
TIDE STAGE: Ebb	**DEPTH:** 12.8 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 11.909	**DGPS?** Circle (Y) or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
150° 03.~~340~~ 430 (GL) **STATION LOCATION/DESCRIPTION:**		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	07	07		19						7.74
MID					20						7.73
BOTTOM					21						7.73

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 7	**CSTD ON TIME:** 0831

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Same

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	DATE: 6/11/14	Page 8 of 36
STATION: E2-4	TIME: 0843	
TIDE STAGE: Ebb	DEPTH: 11.4 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 11.394	DGPS? Circle Y or N	DGPS REFERENCE STN: *WAAS*
LONGITUDE (W):		COORDINATE SYSTEM: *NAD83*
150° 04.270	STATION LOCATION/DESCRIPTION: WSW of outfall	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	08	08		22						7.76
MID					23						7.75
BOTTOM					24						7.74 MAT

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	CAST NO.: 8	CSTD ON TIME: 0843

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	None		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: 1-2' waves, 10-15 SWesterly

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 9 **of** 36
STATION: E3-1	**TIME:** 1019	
TIDE STAGE: Ebb	**DEPTH:** 6.0 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.340	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
150° 01.281	**STATION LOCATION/DESCRIPTION:** At outfall	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	a9	a9	X	25						7.66
MID	X	X	X	X	26	X	X	X	X	X	7.69
BOTTOM	X	X	X	X	27	X	X	X	X	X	7.69

QC SAMPLES COLLECTED: Potential 2 false casts on CTD switch needed to be tighter

CSTD Seabird: *Serial# 376* | **CAST NO.:** ~~10~~ 15 ~~10~~ 29-11 ? | **CSTD ON TIME:** 1020

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION	3 people on beach		
WILDLIFE	none		

WEATHER INFORMATION/COMMENTS: 5-10 westerly, <1 ft wave

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 10 **of** 36
STATION: E3-2	**TIME:** 1028	
TIDE STAGE: Ebb	**DEPTH:** 10.5 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.254	**DGPS?** Circle	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):	(Y) or N	**COORDINATE SYSTEM:** *NAD83*
150° 01.989	**STATION LOCATION/DESCRIPTION:** At ZID boundary	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	10	10		28						7.70
MID					29						7.69
BOTTOM					30						7.69

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 10	**CSTD ON TIME:** 1028

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: same

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 11 **of** 36
STATION: E3-3	**TIME:** 1040	
TIDE STAGE: Ebb	**DEPTH:** 10.2 Feet Meters (Circle unit) Fathoms	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.064	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W): 150° 02.642		**COORDINATE SYSTEM:** *NAD83*
STATION LOCATION/DESCRIPTION: ~ 1.3 km WSW of Outfall		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	11	11		31						7.74
MID					32						7.76
BOTTOM					33						7.75

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 11	**CSTD ON TIME:** 1040

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: 5-10 knots westerly

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 12 **of** 36
STATION: E3-4	**TIME:** 1054	
TIDE STAGE: Ebb	**DEPTH:** 6.9 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 11.718	**DGPS?** Circle (Y) or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W): 150° 03.225		**COORDINATE SYSTEM:** *NAD83*
STATION LOCATION/DESCRIPTION: ~2.2 km SW of outfall near shoal southing 1st 2 tracks		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	12	12		34						7.58
MID					35						7.64
BOTTOM					36						7.67

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 12	**CSTD ON TIME:** 1055

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	None		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: 5-10 knots

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 13 **of** 36
STATION: F1-1	**TIME:** 1335	
TIDE STAGE: Flood	**DEPTH:** 3.0 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.342	**DGPS?** Circle (Y) or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
150° 01.278	**STATION LOCATION/DESCRIPTION:** At Outfall	
sampled from skiff directly over boil		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS & Mercury	CYANIDE	pH
SURFACE	✓	13	13		37	01	01	01	01/01	01	7.44
MID					38						7.56
BOTTOM					39						7.58

QC SAMPLES COLLECTED: Full chemistry station

CSTD Seabird: *Serial# 376*	**CAST NO.:** 13	**CSTD ON TIME:** 1335

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL	↓		
ODOR	chlorine – effluent		
RECREATION	people on beach		
WILDLIFE	none		

WEATHER INFORMATION/COMMENTS: partly cloudy, <5 knot wind

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 14 **of** 36
STATION: F1-2	**TIME:** 1405	
TIDE STAGE: Flood	**DEPTH:** 2.5 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.356	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
150° 00.359 **STATION LOCATION/DESCRIPTION:** At ZID boundary ~750 m		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS Hg	CYANIDE	pH
SURFACE	✓	14	14		40	02/03	02	02	02/02	02	7.53
MID					41						7.54
BOTTOM					42						7.59

QC SAMPLES COLLECTED: Dups on EPA 602 – Full Chemistry

CSTD Seabird: *Serial# 376*	**CAST NO.:** 14	**CSTD ON TIME:** 1406

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL	↓		
ODOR	chlorine / effluent smell		
RECREATION	none		
WILDLIFE	↓		

WEATHER INFORMATION/COMMENTS: same

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 15 **of** 36
STATION: F1-3	**TIME:** 1420	
TIDE STAGE: Flood	**DEPTH:** 2.5 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.245	**DGPS? Circle** Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W): 149° 59.789		**COORDINATE SYSTEM:** *NAD83*
STATION LOCATION/DESCRIPTION: 1.3 Km ESE of outfall		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS Hg	CYANIDE	pH
SURFACE	✓	15	15		43	04	03	03	03/03	03	7.61
MID					44						7.70
BOTTOM					45						7.68

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 15	**CSTD ON TIME:** 1421

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Sunny, light breeze

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 1437	**Page** 16 **of** 36
STATION: F1-4	**TIME:** 6/11/14	
TIDE STAGE: Flood	**DEPTH:** 2.5 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.148	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
149° 59.553 **STATION LOCATION/DESCRIPTION:** ~1.6 km ESE of outfall		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	16	16		46						7.70
MID					47						7.72
BOTTOM					48						7.71

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 16	**CSTD ON TIME:** 1438

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 1505	**Page** 17 **of** 36
STATION: F2-1	**TIME:** 6/11/14	
TIDE STAGE: Flood	**DEPTH:** 5.7 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.342	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
150° 01.280	**STATION LOCATION/DESCRIPTION:** At outfall	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	17	17		49						7.67
MID					50						7.69
BOTTOM					51						7.68

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 17	**CSTD ON TIME:** 1505

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL	↓		
ODOR	chlorine/effluent		
RECREATION	8 people on board		
WILDLIFE	none		

WEATHER INFORMATION/COMMENTS: 5-10 knot westerly

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 18 **of** 36
STATION: F2-2	**TIME:** 1511	
TIDE STAGE:	**DEPTH:** 9.6 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.555	**DGPS? Circle** Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W): 150° 00.687		**COORDINATE SYSTEM:** *NAD83*
STATION LOCATION/DESCRIPTION: At ZID boundary NE of outfall		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	18	18		52						7.70
MID					53						7.71
BOTTOM					54						7.72

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 18	**CSTD ON TIME:** 1511

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 19 **of** 36
STATION: FZ-3	**TIME:** 1522	
TIDE STAGE: Flood	**DEPTH:** 9.4 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.590	**DGPS?** Circle	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):	(Y) or N	**COORDINATE SYSTEM:** *NAD83*
149° 59.596 **STATION LOCATION/DESCRIPTION:** 1.6 km NE of outfall		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	19	19		55						7.66
MID					56						7.69
BOTTOM					57						7.70

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 19	**CSTD ON TIME:** 6/11/14 1522

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: 10-15 knot westerly

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 20 **of** 36
STATION: F2-4	**TIME:** 1550	
TIDE STAGE: Flood	**DEPTH:** 8.8 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.410	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
149° 59.436 **STATION LOCATION/DESCRIPTION:** Drogue track looping back to south		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	20	20		58						7.58
MID					59						7.60
BOTTOM					60						7.61

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 20	**CSTD ON TIME:** 1551

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: NW wind picking up 1-2 ft waves partly sunny

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 21 **of** 36
STATION: F3-1	**TIME:** 1620	
TIDE STAGE: Flood	**DEPTH:** 8.6 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.342	**DGPS?** Circle (Y) or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
150° 01.275	**STATION LOCATION/DESCRIPTION:** At outfall	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	21	21		60						7.71
MID					61						7.72
BOTTOM					62						7.~~76~~ 7.72

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 21	**CSTD ON TIME:** 1620

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION	6 people on beach		
WILDLIFE	none		

WEATHER INFORMATION/COMMENTS: 5-10 knots westerly

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 22 **of** 36
STATION: F3-2	**TIME:** 1626	
TIDE STAGE: Flood	**DEPTH:** 11.8 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.561	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
150° 00.666	**STATION LOCATION/DESCRIPTION:** At Z @ boundary	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE: TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	22	22		63						7.67
MID					64						7.71
BOTTOM					65						7.73

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 22	**CSTD ON TIME:** 1626

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Same

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 23 **of** 36
STATION: F3-3	**TIME:** 1637	
TIDE STAGE: Flood	**DEPTH:** 13.7 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.742	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
149° 59.699	**STATION LOCATION/DESCRIPTION:** 1.5 km ENE of outfall	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	23	23		67						7.70
MID					68						7.72
BOTTOM					69						7.73

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 23	**CSTD ON TIME:** 1638

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Westerly 5-10 Knots
Sunny

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/11/14	**Page** 24 **of** 36
STATION: F3-4	**TIME:** 1647	
TIDE STAGE: Flood	**DEPTH:** 19.8 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 12.977	**DGPS?** Circle	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W): ~~150°~~ 58.915 149 (GL)	(Y) or N	**COORDINATE SYSTEM:** *NAD83*
STATION LOCATION/DESCRIPTION: ~ 2.3 km from outfall - ENE		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	24	24	X	70						7.71
MID	X	X	X	X	71	X	X	X	X	X	7.72
BOTTOM	X	X	X	X	72	X	X	X	X	X	7.73

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 24	**CSTD ON TIME:** 1647

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: same

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HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/12/14	**Page** 25 **of** 36
STATION: C1-1	**TIME:** 1415	
TIDE STAGE: Flood	**DEPTH:** 6.2 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 14.000	**DGPS?** Circle (Y) or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W): 149° 59.154		**COORDINATE SYSTEM:** *NAD83*
STATION LOCATION/DESCRIPTION: At Control Drop Site		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS ~~X/8~~	CYANIDE	pH
SURFACE	✓	25	25		73	05	04	04	04/64	04	7.53
MID					74						7.55
BOTTOM					75						7.57

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 25	**CSTD ON TIME:** 1415

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: 5-10 knot westerly

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HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/12/14	**Page** 26 **of** 36
STATION: C1-2	**TIME:** 1435	
TIDE STAGE: Flood	**DEPTH:** 4.5 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 14.042	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
149° 58.782	**STATION LOCATION/DESCRIPTION:**	~ 350 m NE of drop at control site

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS Hg	CYANIDE	pH
SURFACE	✓	26	26		76	06	05	05/06	05/05	05/06	7.68
MID					77						7.67
BOTTOM					78						7.70

QC SAMPLES COLLECTED: C-Station 602 – MS/MSD / PAH MS/MSD
C-Station VDA009 dups on cyanide + TSS

CSTD Seabird: *Serial# 376*	**CAST NO.:** 26	**CSTD ON TIME:** 1438

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: same

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HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/12/14	**Page** 27 **of** 38
STATION: C1-3	**TIME:** 1505	
TIDE STAGE: Flood	**DEPTH:** 2.1 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 14.540	**DGPS?** Circle	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):	(Y) or N	**COORDINATE SYSTEM:** *NAD83*
149° 57.583 **STATION LOCATION/DESCRIPTION:** 1.7 km from Control Drop		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS Hg	CYANIDE	pH
SURFACE	✓	27	27		79	07	06	07	06/06	07	7.71
MID					80						7.69
BOTTOM					81						7.70

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 27	**CSTD ON TIME:**

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL			
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

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HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/12/14	**Page** 28 **of** 36
STATION: C1-4	**TIME:** 1522	
TIDE STAGE: Flood	**DEPTH:** 2.5 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 15.008	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
149° 56.565 **STATION LOCATION/DESCRIPTION:** 3.0 km from		
continual drop ~200 m offshore		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	28	28		82						7.72
MID					83						7.71
BOTTOM					84						7.71

QC SAMPLES COLLECTED: none

CSTD Seabird: *Serial# 376*	**CAST NO.:** 28	**CSTD ON TIME:** 1523

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: sunny, light breeze

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HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	DATE: 6/12/14	Page 29 of 36
STATION: C2-1	TIME: 1557	
TIDE STAGE: Flood	DEPTH: 10.3 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 60° 14.005	DGPS? Circle Y or N	DGPS REFERENCE STN: *WAAS*
LONGITUDE (W):		COORDINATE SYSTEM: *NAD83*
149° 59.149	STATION LOCATION/DESCRIPTION: At Control Drop	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	29	29		85						7.72
MID					86						7.72
BOTTOM					87						7.72

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	CAST NO.: 29	CSTD ON TIME: 1558

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	logs		
FOAM (other than trace)	none		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: overcast, SW wind 5-10

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HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/12/14	**Page** 30 **of** 36
STATION: C2-2	**TIME:** 1607	
TIDE STAGE: Flood	**DEPTH:** 8.0 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 14.295	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W): 149° 57.857		**COORDINATE SYSTEM:** *NAD83*
STATION LOCATION/DESCRIPTION:		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓✓✓	30/31 32	30/31 32		88						7.73
MID					89						7.71
BOTTOM					90						7.71

QC SAMPLES COLLECTED: Field triplicates for natural variability

CSTD Seabird: *Serial# 376*	**CAST NO.:** 30/31	**CSTD ON TIME:**

32 – triplicate without turning off

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Same

KINNETIC LABORATORIES, INC.
HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/12/14	**Page** 31 **of** 36
STATION: C2-3	**TIME:** 1629	
TIDE STAGE: Flood	**DEPTH:** 16.5 Feet Meters Fathoms (~~Circle~~ unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 14.886	**DGPS? Circle** Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
149° 55.860 **STATION LOCATION/DESCRIPTION:** ~ 3.6 km from Contrast Drop		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	33	33	X	91/92 93						7.73
MID	X	X	X	X	94	X	X	X	X	X	7.71 7.71
BOTTOM	X	X	X	X	95	X	X	X	X	X	7.72

QC SAMPLES COLLECTED: Bottom dropping off during CTD cast ~24m

CSTD Seabird: *Serial# 376*	**CAST NO.:** 33	**CSTD ON TIME:** 1630

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)	↓		
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

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HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/12/14	**Page** 32 **of** 36
STATION: C2-4	**TIME:** 1655	
TIDE STAGE: Flood	**DEPTH:** 27.5 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 16.182	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
149° 53.797 **STATION LOCATION/DESCRIPTION:** Mid Channel ~1.5 km north of Caine Pt		

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	34	34		96						7.55
MID					97						7.56
BOTTOM					98						7.59

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 34	**CSTD ON TIME:** 1655

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS:

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HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/12/14	**Page** 33 **of** 36
STATION: C3-1	**TIME:** 1748	
TIDE STAGE: Flood	**DEPTH:** 14.0 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 14.004	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
149° 59.148	**STATION LOCATION/DESCRIPTION:**	At Control Drop.

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE: TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓✓✓	35 36 37	35 36 37		99 100 101						7.67
MID					102						7.68
BOTTOM					103						7.68

QC SAMPLES COLLECTED: Lab – Blind Triplicates, split in field for color + fecal ✱ (Fecal in large container, split at lab) GL

CSTD Seabird: *Serial# 376* | **CAST NO.:** | **CSTD ON TIME:**

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	loop + branches	in water – river	
FOAM (other than trace)	none		
SHEEN OR OIL	↓		
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Overcast – (5-10 knot SW wind)

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HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/12/14	**Page** 34 **of** 36
STATION: C3-2	**TIME:** 1802	
TIDE STAGE: Flood	**DEPTH:** 12.3 Feet (Meters) Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 14.332	**DGPS?** Circle (Y) or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
149° 57.419	**STATION LOCATION/DESCRIPTION:** 1.7 km to Control Drop	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	38	38		104						7.70
MID					105						7.69
BOTTOM					106						7.69

QC SAMPLES COLLECTED: none

CSTD Seabird: *Serial# 376*	**CAST NO.:** 38	**CSTD ON TIME:** 1803

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: overcast, 5 knot southerly wind.

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HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/12/14	**Page** 35 **of** 36
STATION: C3-3	**TIME:** 1812	
TIDE STAGE: Flood	**DEPTH:** 18.2 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 14.792	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
149° 55.900	**STATION LOCATION/DESCRIPTION:** 3.5 km from drop pt ~1km from bluff	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	39	39		107						7.70
MID					108						7.70
BOTTOM					109						7.70

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 39	**CSTD ON TIME:** 1813

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: Same

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HYDROGRAPHIC FIELD LOG

STUDY: *Asplund WPCF - NPDES 2014*	**DATE:** 6/12/14	**Page** 36 **of** 36
STATION: C3-4	**TIME:** 1825	
TIDE STAGE: Flood	**DEPTH:** 39.7 Feet Meters Fathoms (Circle unit)	

NAVIGATIONAL INFORMATION		
LATITUDE (N): 61° 15.468	**DGPS?** Circle Y or N	**DGPS REFERENCE STN:** *WAAS*
LONGITUDE (W):		**COORDINATE SYSTEM:** *NAD83*
149° 54.612	**STATION LOCATION/DESCRIPTION:** Southeast of Matson Dock - 1/3 channel	

SAMPLE COLLECTION INFORMATION (Record suffix of SAMPID for each sample collected.)

DEPTH	ANALYSIS TYPE										
	TRC	FECAL	COLOR	DO	TURB	EPA 602	PAH	TSS	METALS	CYANIDE	pH
SURFACE	✓	40	40		110						7.71
MID					111						7.72
BOTTOM					112						7.73

QC SAMPLES COLLECTED:

CSTD Seabird: *Serial# 376*	**CAST NO.:** 40	**CSTD ON TIME:** 1825

STANDARD OBSERVATIONS

PARAMETER	TYPE	SOURCE	EXTENT OR NUMBER
FLOATING MATERIAL	none		
FOAM (other than trace)			
SHEEN OR OIL			
ODOR			
RECREATION			
WILDLIFE			

WEATHER INFORMATION/COMMENTS: overcast, light breeze