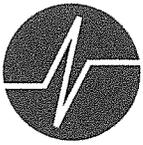


APPENDIX K
GROUNDWATER REMEDY SYSTEM ANALYTICAL DATA
AND VALIDATION REPORT



Analytical Resources, Incorporated
Analytical Chemists and Consultants

18 February 2014

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RECEIVED
FEB 22 2014

BY:.....

RE: Client Project: Idaho Pole
ARI Job No.: XY01

Dear Heidi:

Please find enclosed the original Chain-of-Custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received four water samples on February 4, 2014. The sample was analyzed for PAHs and PCP as requested.

The percent differences (%Ds) for two compounds and the surrogate, 2,4,6-tribromophenol, were high for the CCAL that bracketed the PAH+PCP analyses of samples SP-6 and SP-7. All positive results have been flagged with a Q qualifier to denote the high %Ds.

There were no further anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.


Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File XY01

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: XY01	Turn-around Requested: Normal	Page: 1 of 1
ARI Client Company: Hydrometries	Phone:	Date: 1/31/14 Ice Present? Yes
Client Contact: Heidi Kauder		No. of Coolers: 1 Cooler Temps:

Client Project Name: Idaho Pole	Analysis Requested	Notes/Comments
Client Project #: 		
Samplers: Rebecca Fabich		

Sample ID	Date	Time	Matrix	No. Containers	PCP 8040	PAH 8280	SIM 8880						
SP-2	1/31/14	1800	H ₂ O	4	X	X							
SP-6		1745		2			X						
SP-7		1730		2			X						
5-A		1715		2	X								

Comments/Special Instructions	Relinquished by: (Signature) Rebecca Fabich	Received by: (Signature) [Signature]	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Rebecca Fabich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 2/3/14 1100	Date & Time: 2/4/14 1030	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

XY01:00002



Cooler Receipt Form

ARI Client: Hydrometrics

Project Name: Idaho pole

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: XY01

Tracking No: 800892369830 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)
Time: 1030 27

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: AV Date: 2/4/14 Time: 1030

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA

Was Sample Split by ARI : NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: TS Date: 2/4/14 Time: 1110

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm" (< 2 mm)
			Peabubbles → "pb" (2 to < 4 mm)
			Large → "lg" (4 to < 6 mm)
			Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: XY01
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SP-2	XY01A	14-1897	Water	01/31/14 18:00	02/04/14 10:30
2. SP-6	XY01B	14-1898	Water	01/31/14 17:45	02/04/14 10:30
3. SP-7	XY01C	14-1899	Water	01/31/14 17:30	02/04/14 10:30
4. 5-A	XY01D	14-1900	Water	01/31/14 17:15	02/04/14 10:30



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



Analytical Resources,
Incorporated
Analytical Chemists and
Consultants

- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Extraction Method: SW3520C

Page 1 of 1

Sample ID: SP-2

SAMPLE

Lab Sample ID: XY01A

LIMS ID: 14-1897

Matrix: Water

Data Release Authorized: *RB*

Reported: 02/13/14

QC Report No: XY01-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: 01/31/14

Date Received: 02/04/14

Date Extracted: 02/05/14

Date Analyzed: 02/10/14 18:46

Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	0.35
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	0.29
129-00-0	Pyrene	0.10	0.22
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 54.0%
d14-Dibenzo(a,h)anthracene 72.7%

ORGANICS ANALYSIS DATA SHEET
PNA's by SW8270D-SIM GC/MS
Extraction Method: SW3520C
 Page 1 of 1

Sample ID: MB-020514
METHOD BLANK

Lab Sample ID: MB-020514
 LIMS ID: 14-1897
 Matrix: Water
 Data Release Authorized: *BB*
 Reported: 02/13/14

QC Report No: XY01-Hydrometrics Inc.
 Project: Idaho Pole
 Event: NA
 Date Sampled: NA
 Date Received: NA

Date Extracted: 02/05/14
 Date Analyzed: 02/10/14 15:48
 Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 47.7%
 d14-Dibenzo(a,h)anthracene 69.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-020514

LAB CONTROL SAMPLE

Lab Sample ID: LCS-020514

LIMS ID: 14-1897

Matrix: Water

Data Release Authorized: *B*

Reported: 02/13/14

QC Report No: XY01-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 02/05/14

Date Analyzed LCS: 02/10/14 16:16

Instrument/Analyst LCS: NT8/JZ

Sample Amount LCS: 500 mL

Final Extract Volume LCS: 0.50 mL

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	1.40	3.00	46.7%
Acenaphthylene	1.14	3.00	38.0%
Acenaphthene	1.41	3.00	47.0%
Fluorene	1.44	3.00	48.0%
Phenanthrene	1.60	3.00	53.3%
Anthracene	1.52	3.00	50.7%
Fluoranthene	1.74	3.00	58.0%
Pyrene	1.66	3.00	55.3%
Benzo(a)anthracene	1.70	3.00	56.7%
Chrysene	1.78	3.00	59.3%
Benzo(b)fluoranthene	1.74	3.00	58.0%
Benzo(k)fluoranthene	1.87	3.00	62.3%
Benzo(a)pyrene	1.64	3.00	54.7%
Indeno(1,2,3-cd)pyrene	1.84	3.00	61.3%
Dibenz(a,h)anthracene	1.72	3.00	57.3%
Benzo(g,h,i)perylene	1.92	3.00	64.0%
Total Benzofluoranthenes	5.43	9.00	60.3%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	52.7%
d14-Dibenzo(a,h)anthracene	60.3%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: XY01-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-020514	47.7%	69.0%	0
LCS-020514	52.7%	60.3%	0
SP-2	54.0%	72.7%	0

LCS/MB LIMITS QC LIMITS

(MNP) = d10-2-Methylnaphthalene (37-120) (31-120)
(DBA) = d14-Dibenzo(a,h)anthracene (16-132) (10-125)

Prep Method: SW3520C
Log Number Range: 14-1897 to 14-1897

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: MB-020514

Extraction Method: SW3520C

METHOD BLANK

Page 1 of 1

Lab Sample ID: MB-020514

QC Report No: XY01-Hydrometrics Inc.

LIMS ID: 14-1898

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *mmw*

Date Sampled: NA

Reported: 02/17/14

Date Received: NA

Date Extracted: 02/05/14

Sample Amount: 500 mL

Date Analyzed: 02/15/14 10:35

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo (a) anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo (b) fluoranthene	0.10	< 0.20 U
207-08-9	Benzo (k) fluoranthene	0.10	< 0.20 U
50-32-8	Benzo (a) pyrene	0.10	< 0.10 U
193-39-5	Indeno (1, 2, 3-cd) pyrene	0.10	< 0.10 U
53-70-3	Dibenz (a, h) anthracene	0.10	< 0.10 U
191-24-2	Benzo (g, h, i) perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	39.3%
d14-Dibenzo (a, h) anthracene	55.0%
2, 4, 6-Tribromophenol	44.1% Q

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-6

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: XY01B

QC Report No: XY01-Hydrometrics Inc.

LIMS ID: 14-1898

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *MW*

Date Sampled: 01/31/14

Reported: 02/17/14

Date Received: 02/04/14

Date Extracted: 02/05/14

Sample Amount: 500 mL

Date Analyzed: 02/15/14 11:24

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	49.7%
d14-Dibenzo(a,h)anthracene	83.0%
2,4,6-Tribromophenol	52.8% Q

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-7

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: XY01C

QC Report No: XY01-Hydrometrics Inc.

LIMS ID: 14-1899

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *MMW*

Date Sampled: 01/31/14

Reported: 02/17/14

Date Received: 02/04/14

Date Extracted: 02/05/14

Sample Amount: 500 mL

Date Analyzed: 02/15/14 11:48

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo (a) anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo (b) fluoranthene	0.10	< 0.20 U
207-08-9	Benzo (k) fluoranthene	0.10	< 0.20 U
50-32-8	Benzo (a) pyrene	0.10	< 0.10 U
193-39-5	Indeno (1,2,3-cd) pyrene	0.10	< 0.10 U
53-70-3	Dibenz (a,h) anthracene	0.10	< 0.10 U
191-24-2	Benzo (g,h,i) perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	42.7%
d14-Dibenzo (a,h) anthracene	65.3%
2,4,6-Tribromophenol	47.5% Q

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: XY01-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-020514	39.3%	55.0%	44.1%Q	0
LCS-020514	48.3%	80.0%	52.9%Q	0
SP-6	49.7%	83.0%	52.8%Q	0
SP-7	42.7%	65.3%	47.5%Q	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(35-102)	(33-104)
(DBA) = d14-Dibenzo(a,h)anthracene	(37-122)	(22-133)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)

Prep Method: SW3520C
Log Number Range: 14-1898 to 14-1899

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: LCS-020514

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-020514

QC Report No: XY01-Hydrometrics Inc.

LIMS ID: 14-1898

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 02/19/14

Date Received: NA

Date Extracted LCS/LCSD: 02/05/14

Sample Amount LCS: 500 mL

Date Analyzed LCS: 02/15/14 10:59

Final Extract Volume LCS: 0.50 mL

Instrument/Analyst LCS: NT11/VTS

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	1.47	3.00	49.0%
Acenaphthylene	1.35	3.00	45.0%
Acenaphthene	1.54	3.00	51.3%
Fluorene	1.55	3.00	51.7%
Phenanthrene	1.86	3.00	62.0%
Anthracene	1.81	3.00	60.3%
Fluoranthene	1.86	3.00	62.0%
Pyrene	2.05	3.00	68.3%
Benzo(a)anthracene	2.07	3.00	69.0%
Chrysene	2.10	3.00	70.0%
Benzo(b)fluoranthene	2.62	3.00	87.3%
Benzo(k)fluoranthene	2.62	3.00	87.3%
Benzo(a)pyrene	1.69	3.00	56.3%
Indeno(1,2,3-cd)pyrene	2.24 Q	3.00	74.7%
Dibenz(a,h)anthracene	2.20	3.00	73.3%
Benzo(g,h,i)perylene	2.31	3.00	77.0%
Pentachlorophenol	1.56 Q	3.00	52.0%
Total Benzofluoranthenes	5.25	9.00	58.3%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	48.3%
d14-Dibenzo(a,h)anthracene	80.0%
2,4,6-Tribromophenol	52.9% Q

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 15-FEB-2014 10:03
 Lab File ID: cc0215.d Init. Cal. Date(s): 07-DEC-2013 07-DEC-2013
 Analysis Type: Init. Cal. Times: 11:29 13:32
 Lab Sample ID: SIM 2.5 Quant Type: ISTD
 Method: /chem3/nt11.i/20140215.b/pnapcp.m

COMPOUND	RRF / AMOUNT	RF2	MIN	MAX	CURVE TYPE
			RRF %D / %DRIFT	%D / %DRIFT	
2 Naphthalene	0.93599	0.95648	0.010 2.18890	20.00000	Averaged
\$ 3 2-Methylnaphthalene-d10	0.67553	0.61723	0.010 -8.63079	20.00000	Averaged
4 2-Methylnaphthalene	0.70683	0.70347	0.010 -0.47452	20.00000	Averaged
5 1-Methylnaphthalene	0.67022	0.66976	0.010 -0.06955	20.00000	Averaged
7 Acenaphthylene	1.46696	1.21610	0.010 -17.10041	20.00000	Averaged
9 Acenaphthene	0.99256	1.01814	0.010 2.57682	20.00000	Averaged
10 Dibenzofuran	1.46799	1.49951	0.010 2.14736	20.00000	Averaged
11 Fluorene	1.21680	1.20735	0.010 -0.77646	20.00000	Averaged
\$ 13 2,4,6-Tribromophenol (ester)	0.04049	0.02374	0.010 -41.35346	20.00000	Averaged <-
14 Pentachlorophenol (ester)	0.13304	0.09955	0.010 -25.17353	20.00000	Averaged <-
16 Phenanthrene	1.04721	1.04620	0.010 -0.09569	20.00000	Averaged
17 Anthracene	0.91473	0.96867	0.010 5.89721	20.00000	Averaged
\$ 56 Fluoranthene-d10	1.02491	1.00992	0.010 -1.46301	20.00000	Averaged
19 Fluoranthene	1.09954	1.07783	0.010 -1.97443	20.00000	Averaged
20 Pyrene	1.20358	1.32446	0.010 10.04314	20.00000	Averaged
22 Benzo(a)anthracene	1.11003	1.18456	0.010 6.71479	20.00000	Averaged
24 Chrysene	1.06604	1.10944	0.010 4.07116	20.00000	Averaged
55 Total Benzofluoranthenes	1.25352	1.10716	0.010 -11.67551	20.00000	Averaged
30 Benzo(a)pyrene	1.02538	1.03636	0.010 1.07073	20.00000	Averaged
33 Indeno(1,2,3-cd)pyrene	1.06256	1.28075	0.010 20.53428	20.00000	Averaged <-
\$ 32 Dibenz(a,h)anthracene-d14	0.78447	0.90349	0.010 15.17152	20.00000	Averaged
34 Dibenz(a,h)anthracene	0.90810	1.03491	0.010 13.96489	20.00000	Averaged
35 Benzo(g,h,i)perylene	0.97104	1.04533	0.010 7.65110	20.00000	Averaged

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MB-020514
METHOD BLANK

Lab Sample ID: MB-020514
LIMS ID: 14-1897
Matrix: Water
Data Release Authorized: *MW*
Reported: 02/18/14

QC Report No: XY01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: NA
Date Received: NA

Date Extracted: 02/05/14
Date Analyzed: 02/13/14 13:14
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	88.4%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: XY01A
LIMS ID: 14-1897
Matrix: Water
Data Release Authorized: *MW*
Reported: 02/18/14

QC Report No: XY01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 01/31/14
Date Received: 02/04/14

Date Extracted: 02/05/14
Date Analyzed: 02/13/14 14:27
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	4.1
Reported in µg/L (ppb)			
Chlorophenol Surrogate Recovery			
	2,4,6-Tribromophenol	102%	

SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: XY01-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-020514	88.4%	0
LCS-020514	88.2%	0
SP-2	102%	0
5-A	62.4%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-1897 to 14-1900

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Page 1 of 1

Sample ID: LCS-020514
LAB CONTROL

Lab Sample ID: LCS-020514
LIMS ID: 14-1897
Matrix: Water
Data Release Authorized: *mmw*
Reported: 02/18/14

QC Report No: XY01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 01/31/14
Date Received: 02/04/14

Date Extracted: 02/05/14
Date Analyzed: 02/13/14 13:52
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

Analyte	Lab Control	Spike Added	Recovery
Pentachlorophenol	1.99	2.50	79.6%

Chlorophenols Surrogate Recovery

2,4,6-Tribromophenol 88.2%

Results reported in µg/L



Analytical Resources, Incorporated
Analytical Chemists and Consultants

13 March 2014

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RE: Client Project: Idaho Pole
ARI Job No.: YA91

Dear Heidi:

Please find enclosed the original Chain-of-Custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received two water samples on February 28, 2014. The samples were analyzed for PAHs and PCP as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink that reads "Mark D. Harris".

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File YA91

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested: <u>Normal</u>	Page: <u>1</u> of <u>1</u>
ARI Client Company: <u>Hydrometco</u>	Phone:	Date: <u>2/27/14</u> Ice Present? <u>Yes</u>
Client Contact: <u>Heidi Kasur</u>	No. of Coolers: <u>1</u>	Cooler Temps:

Client Project Name: <u>Idaho Po6</u>	Analysis Requested	Notes/Comments
Client Project #:		
Samplers: <u>Rebecca Fabich</u>		

Sample ID	Date	Time	Matrix	No Containers	POP 8040	PAN 8070	SIS 8070							
SP-2	2/27/14	1100	H ₂ O	4	X	X								
SP-7	↓	1035	↓	2			X							

Comments/Special Instructions	Relinquished by (Signature): <u>Rebecca Fabich</u>	Received by (Signature): <u>[Signature]</u>	Relinquished by (Signature):	Received by (Signature):
	Printed Name: <u>Rebecca Fabich</u>	Printed Name: <u>A. Volgardsen</u>	Printed Name:	Printed Name:
	Company: <u>Idaho Po6</u>	Company: <u>ARI</u>	Company:	Company:
	Date & Time: <u>2/27/14 1200</u>	Date & Time: <u>2/28/14 940</u>	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

78941: 000002



Cooler Receipt Form

ARI Client: Hydrometrics

Project Name: Tidaho for

COC No(s): _____ (NA)

Delivered by: (Fed-Ex) UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: YAG1

Tracking No: 800892369830 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)
Time 940 2.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90817953

Cooler Accepted by: AV Date 2/28/14 Time 940

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: TS Date: 2-28-14 Time: 1021

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

<p>Small Air Bubbles - 2mm</p>	<p>Peabubbles 2-4 mm</p>	<p>LARGE Air Bubbles > 4 mm</p>	Small → "sm" (< 2 mm)
			Peabubbles → "pb" (2 to < 4 mm)
			Large → "lg" (4 to < 6 mm)
			Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: YA91
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SP-2	YA91A	14-3342	Water	02/27/14 11:00	02/28/14 09:40
2. SP-7	YA91B	14-3343	Water	02/27/14 10:35	02/28/14 09:40



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



**Analytical Resources,
Incorporated**
Analytical Chemists and
Consultants

- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of “fines” required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
 Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: YA91A
 LIMS ID: 14-3342
 Matrix: Water
 Data Release Authorized: *B*
 Reported: 03/10/14

QC Report No: YA91-Hydrometrics Inc.
 Project: Idaho Pole
 Event: NA
 Date Sampled: 02/27/14
 Date Received: 02/28/14

Date Extracted: 03/05/14
 Date Analyzed: 03/07/14 16:07
 Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	0.14
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	0.11
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 46.7%
 d14-Dibenzo(a,h)anthracene 65.3%

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Extraction Method: SW3520C

Page 1 of 1

Sample ID: MB-030514

METHOD BLANK

Lab Sample ID: MB-030514

LIMS ID: 14-3342

Matrix: Water

Data Release Authorized: *AB*

Reported: 03/10/14

QC Report No: YA91-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted: 03/05/14

Date Analyzed: 03/07/14 14:44

Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 59.7%
d14-Dibenzo(a,h)anthracene 68.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-030514

LAB CONTROL SAMPLE

Lab Sample ID: LCS-030514

LIMS ID: 14-3342

Matrix: Water

Data Release Authorized: 

Reported: 03/10/14

QC Report No: YA91-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 03/05/14

Date Analyzed LCS: 03/07/14 15:12

Instrument/Analyst LCS: NT8/JZ

Sample Amount LCS: 500 mL

Final Extract Volume LCS: 0.50 mL

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	1.33	3.00	44.3%
Acenaphthylene	1.17	3.00	39.0%
Acenaphthene	1.42	3.00	47.3%
Fluorene	1.56	3.00	52.0%
Phenanthrene	1.59	3.00	53.0%
Anthracene	1.32	3.00	44.0%
Fluoranthene	1.75	3.00	58.3%
Pyrene	1.52	3.00	50.7%
Benzo(a)anthracene	1.62	3.00	54.0%
Chrysene	1.74	3.00	58.0%
Benzo(b)fluoranthene	2.19	3.00	73.0%
Benzo(k)fluoranthene	2.09	3.00	69.7%
Benzo(a)pyrene	1.58	3.00	52.7%
Indeno(1,2,3-cd)pyrene	1.98	3.00	66.0%
Dibenz(a,h)anthracene	2.02	3.00	67.3%
Benzo(g,h,i)perylene	1.97	3.00	65.7%
Total Benzofluoranthenes	6.17	9.00	68.6%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	47.7%
d14-Dibenzo(a,h)anthracene	68.3%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YA91-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-030514	59.7%	68.7%	0
LCS-030514	47.7%	68.3%	0
SP-2	46.7%	65.3%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(37-120)	(31-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(16-132)	(10-125)

Prep Method: SW3520C
Log Number Range: 14-3342 to 14-3342

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-7

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: YA91B

QC Report No: YA91-Hydrometrics Inc.

LIMS ID: 14-3343

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *B*

Date Sampled: 02/27/14

Reported: 03/13/14

Date Received: 02/28/14

Date Extracted: 03/05/14

Sample Amount: 500 mL

Date Analyzed: 03/12/14 15:47

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	72.0%
d14-Dibenzo(a,h)anthracene	92.0%
2,4,6-Tribromophenol	70.7% Q

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: MB-030514

Extraction Method: SW3520C

METHOD BLANK

Page 1 of 1

Lab Sample ID: MB-030514

QC Report No: YA91-Hydrometrics Inc.

LIMS ID: 14-3343

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 03/13/14

Date Received: NA

Date Extracted: 03/05/14

Sample Amount: 500 mL

Date Analyzed: 03/12/14 14:09

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	64.3%
d14-Dibenzo(a,h)anthracene	83.0%
2,4,6-Tribromophenol	61.7% Q

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: LCS-030514

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-030514

QC Report No: YA91-Hydrometrics Inc.

LIMS ID: 14-3343

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: 

Date Sampled: NA

Reported: 03/13/14

Date Received: NA

Date Extracted LCS/LCSD: 03/05/14

Sample Amount LCS: 500 mL

Date Analyzed LCS: 03/12/14 14:33

Final Extract Volume LCS: 0.50 mL

Instrument/Analyst LCS: NT11/VTS

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	1.77	3.00	59.0%
Acenaphthylene	2.00	3.00	66.7%
Acenaphthene	2.06	3.00	68.7%
Fluorene	2.24	3.00	74.7%
Phenanthrene	2.47	3.00	82.3%
Anthracene	2.25	3.00	75.0%
Fluoranthene	2.64	3.00	88.0%
Pyrene	2.80	3.00	93.3%
Benzo(a)anthracene	2.76	3.00	92.0%
Chrysene	2.71	3.00	90.3%
Benzo(b)fluoranthene	3.98	3.00	133%
Benzo(k)fluoranthene	3.98	3.00	133%
Benzo(a)pyrene	2.62	3.00	87.3%
Indeno(1,2,3-cd)pyrene	2.73	3.00	91.0%
Dibenz(a,h)anthracene	2.97	3.00	99.0%
Benzo(g,h,i)perylene	2.89	3.00	96.3%
Pentachlorophenol	2.50	3.00	83.3%
Total Benzofluoranthenes	7.97	9.00	88.6%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	65.7%
d14-Dibenzo(a,h)anthracene	94.3%
2,4,6-Tribromophenol	65.0% Q

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YA91-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-030514	64.3%	83.0%	61.7%Q	0
LCS-030514	65.7%	94.3%	65.0%Q	0
SP-7	72.0%	92.0%	70.7%Q	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(35-102)	(33-104)
(DBA) = d14-Dibenzo(a,h)anthracene	(37-122)	(22-133)
(TBP) = 2,4,6-Tribromophenol	(43-140)	(30-160)

Prep Method: SW3520C
Log Number Range: 14-3343 to 14-3343

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MB-030514
METHOD BLANK

Lab Sample ID: MB-030514
LIMS ID: 14-3342
Matrix: Water
Data Release Authorized: *MW*
Reported: 03/11/14

QC Report No: YA91-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: NA
Date Received: NA

Date Extracted: 03/05/14
Date Analyzed: 03/10/14 12:07
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	79.2%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: YA91A
LIMS ID: 14-3342
Matrix: Water
Data Release Authorized: *MW*
Reported: 03/11/14

QC Report No: YA91-Hydrometrics Inc.
Project: Idaho Pole
Date Sampled: 02/27/14
Date Received: 02/28/14

Date Extracted: 03/05/14
Date Analyzed: 03/10/14 13:58
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	1.9

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	85.6%
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SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YA91-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-030514	79.2%	0
LCS-030514	94.2%	0
SP-2	85.6%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-3342 to 14-3342



ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Page 1 of 1

Sample ID: LCS-030514
LAB CONTROL

Lab Sample ID: LCS-030514
LIMS ID: 14-3342
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 03/11/14

QC Report No: YA91-Hydrometrics Inc.
Project: Idaho Pole
Date Sampled: 02/27/14
Date Received: 02/28/14

Date Extracted: 03/05/14
Date Analyzed: 03/10/14 12:45
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

Analyte	Lab Control	Spike Added	Recovery
Pentachlorophenol	1.67	2.50	66.8%

Chlorophenols Surrogate Recovery

2,4,6-Tribromophenol	94.2%
----------------------	-------

Results reported in µg/L



Analytical Resources, Incorporated

Analytical Chemists and Consultants

15 April 2014

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RE: Client Project: Idaho Pole
ARI Job No.: YF09

Dear Heidi:

Please find enclosed the original Chain-of-Custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received seven water samples on April 1, 2014. The samples were analyzed for PAHs and PCP as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink that reads "Mark D. Harris".

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File YF09

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: YECG	Turn-around Requested: Normal	Page: 1 of 1
ARI Client Company: Hydrometric	Phone:	Date: 3/31/14 Ice Present? yes
Client Contact: Heidi Kauer	No. of Coolers:	Cooler Temps:

Client Project Name: Idaho Pole	Analysis Requested						Notes/Comments
Client Project #:	Samplers: Rebecca Fabich						

Sample ID	Date	Time	Matrix	No Containers	PCP 8040	PAH 8870	SIM 8870							
SP-2	3/31/14	1310	H2O	4	X	X								
BE-2		1325		2	X									
BE-3		1340		2	X									
BE-4		1355		2	X									
BE-5		1410		2	X									
SP-6		1255		2				X						
SP-7		1240		2				X						

Comments/Special Instructions	Relinquished by (Signature): Rebecca Fabich	Received by (Signature):	Relinquished by (Signature):	Received by (Signature):
	Printed Name: Rebecca Fabich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 3/31/14 1430	Date & Time: 4/1/14 1030	Date & Time:	Date & Time:

20000:5011

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: Hydrometrics
COC No(s): _____ NA
Assigned ARI Job No: YF01

Project Name: Idaho Pole
Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
Tracking No. 800892369841 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.)? YES NO
 Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)
 Time 1030 1.8
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 122412224

Cooler Accepted by: AV Date 4/1/14 Time 1030

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI NA
 Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

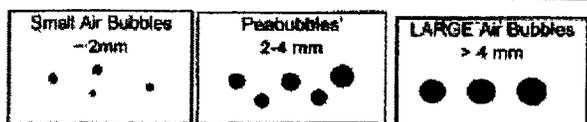
Samples Logged by: TS Date: 4-1-14 Time: 1055

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm" (< 2 mm)
 Peabubbles → "pb" (2 to < 4 mm)
 Large → "lg" (4 to < 6 mm)
 Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: YF09
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SP-2	YF09A	14-6128	Water	03/31/14 13:10	04/01/14 10:30
2. BE-2	YF09B	14-6129	Water	03/31/14 13:25	04/01/14 10:30
3. BE-3	YF09C	14-6130	Water	03/31/14 13:40	04/01/14 10:30
4. BE-4	YF09D	14-6131	Water	03/31/14 13:55	04/01/14 10:30
5. BE-5	YF09E	14-6132	Water	03/31/14 14:10	04/01/14 10:30
6. SP-6	YF09F	14-6133	Water	03/31/14 12:55	04/01/14 10:30
7. SP-7	YF09G	14-6134	Water	03/31/14 12:40	04/01/14 10:30



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



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- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET
PNA's by SW8270D-SIM GC/MS
Extraction Method: SW3520C
 Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: YF09A
 LIMS ID: 14-6128
 Matrix: Water
 Data Release Authorized: 
 Reported: 04/11/14

QC Report No: YF09-Hydrometrics Inc.
 Project: Idaho Pole
 Event: NA
 Date Sampled: 03/31/14
 Date Received: 04/01/14

Date Extracted: 04/02/14
 Date Analyzed: 04/08/14 17:47
 Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	0.31
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	0.22
129-00-0	Pyrene	0.10	0.20
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 66.3%
 d14-Dibenzo(a,h)anthracene 75.3%

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
 Page 1 of 1

Sample ID: MB-040214
METHOD BLANK

Lab Sample ID: MB-040214
 LIMS ID: 14-6128
 Matrix: Water
 Data Release Authorized: *[Signature]*
 Reported: 04/11/14

QC Report No: YF09-Hydrometrics Inc.
 Project: Idaho Pole
 Event: NA
 Date Sampled: NA
 Date Received: NA

Date Extracted: 04/02/14
 Date Analyzed: 04/08/14 15:55
 Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 69.0%
 d14-Dibenzo(a,h)anthracene 56.3%

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-040214

LAB CONTROL SAMPLE

Lab Sample ID: LCS-040214

LIMS ID: 14-6128

Matrix: Water

Data Release Authorized: 

Reported: 04/11/14

QC Report No: YF09-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 04/02/14

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/08/14 16:23

Final Extract Volume LCS: 0.50 mL

LCSD: 04/09/14 15:21

LCSD: 0.50 mL

Instrument/Analyst LCS: NT8/JZ

Dilution Factor LCS: 1.00

LCSD: NT8/JZ

LCSD: 1.00

Analyte	LCS			LCSD			RPD
	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	
Naphthalene	1.59	3.00	53.0%	1.60	3.00	53.3%	0.6%
Acenaphthylene	1.54	3.00	51.3%	1.53	3.00	51.0%	0.7%
Acenaphthene	1.85	3.00	61.7%	1.83	3.00	61.0%	1.1%
Fluorene	1.95	3.00	65.0%	1.90	3.00	63.3%	2.6%
Phenanthrene	2.17	3.00	72.3%	2.15	3.00	71.7%	0.9%
Anthracene	1.99	3.00	66.3%	1.93	3.00	64.3%	3.1%
Fluoranthene	2.46	3.00	82.0%	2.41	3.00	80.3%	2.1%
Pyrene	2.40	3.00	80.0%	2.33	3.00	77.7%	3.0%
Benzo(a)anthracene	2.43	3.00	81.0%	2.33	3.00	77.7%	4.2%
Chrysene	2.53	3.00	84.3%	2.43	3.00	81.0%	4.0%
Benzo(b)fluoranthene	2.67	3.00	89.0%	2.56	3.00	85.3%	4.2%
Benzo(k)fluoranthene	2.76	3.00	92.0%	2.73	3.00	91.0%	1.1%
Benzo(a)pyrene	2.33	3.00	77.7%	2.31	3.00	77.0%	0.9%
Indeno(1,2,3-cd)pyrene	2.61	3.00	87.0%	2.58	3.00	86.0%	1.2%
Dibenz(a,h)anthracene	2.54	3.00	84.7%	2.49	3.00	83.0%	2.0%
Benzo(g,h,i)perylene	2.61	3.00	87.0%	2.56	3.00	85.3%	1.9%
Total Benzofluoranthenes	8.01	9.00	89.0%	7.74	9.00	86.0%	3.4%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	70.7%	71.7%
d14-Dibenzo(a,h)anthracene	83.7%	86.3%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YF09-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-040214	69.0%	56.3%	0
LCS-040214	70.7%	83.7%	0
LCSD-040214	71.7%	86.3%	0
SP-2	66.3%	75.3%	0

LCS/MB LIMITS QC LIMITS

(MNP) = d10-2-Methylnaphthalene (31-120) (31-120)
(DBA) = d14-Dibenzo(a,h)anthracene (10-125) (10-125)

Prep Method: SW3520C
Log Number Range: 14-6128 to 14-6128

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-6

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: YF09F

QC Report No: YF09-Hydrometrics Inc.

LIMS ID: 14-6133

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *[Signature]*

Date Sampled: 03/31/14

Reported: 04/15/14

Date Received: 04/01/14

Date Extracted: 04/02/14

Sample Amount: 500 mL

Date Analyzed: 04/11/14 15:24

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	78.0%
d14-Dibenzo(a,h)anthracene	94.0%
2,4,6-Tribromophenol	83.3%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-7

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: YF09G

QC Report No: YF09-Hydrometrics Inc.

LIMS ID: 14-6134

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *AB*

Date Sampled: 03/31/14

Reported: 04/15/14

Date Received: 04/01/14

Date Extracted: 04/02/14

Sample Amount: 500 mL

Date Analyzed: 04/11/14 15:48

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenzo(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	75.3%
d14-Dibenzo(a,h)anthracene	96.7%
2,4,6-Tribromophenol	86.0%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Extraction Method: SW3520C

Page 1 of 1

Sample ID: MB-040214

METHOD BLANK

Lab Sample ID: MB-040214

LIMS ID: 14-6133

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 04/15/14

QC Report No: YF09-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted: 04/02/14

Date Analyzed: 04/11/14 13:47

Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	75.0%
d14-Dibenzo(a,h)anthracene	89.3%
2,4,6-Tribromophenol	70.0%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: LCS-040214

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-040214

QC Report No: YF09-Hydrometrics Inc.

LIMS ID: 14-6133

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: 

Date Sampled: NA

Reported: 04/15/14

Date Received: NA

Date Extracted LCS/LCSD: 04/02/14

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 04/11/14 14:11

Final Extract Volume LCS: 0.50 mL

LCSD: 04/11/14 14:36

LCSD: 0.50 mL

Instrument/Analyst LCS: NT11/VTS

Dilution Factor LCS: 1.00

LCSD: NT11/VTS

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Naphthalene	1.86	3.00	62.0%	1.96	3.00	65.3%	5.2%
Acenaphthylene	1.97	3.00	65.7%	2.06	3.00	68.7%	4.5%
Acenaphthene	1.93	3.00	64.3%	2.02	3.00	67.3%	4.6%
Fluorene	2.03	3.00	67.7%	2.13	3.00	71.0%	4.8%
Phenanthrene	2.19	3.00	73.0%	2.32	3.00	77.3%	5.8%
Anthracene	2.01	3.00	67.0%	2.13	3.00	71.0%	5.8%
Fluoranthene	2.41	3.00	80.3%	2.47	3.00	82.3%	2.5%
Pyrene	2.51	3.00	83.7%	2.50	3.00	83.3%	0.4%
Benzo(a)anthracene	2.43	3.00	81.0%	2.53	3.00	84.3%	4.0%
Chrysene	2.47	3.00	82.3%	2.58	3.00	86.0%	4.4%
Benzo(b)fluoranthene	3.33	3.00	111%	3.46	3.00	115%	3.8%
Benzo(k)fluoranthene	3.33	3.00	111%	3.46	3.00	115%	3.8%
Benzo(a)pyrene	2.05	3.00	68.3%	2.09	3.00	69.7%	1.9%
Indeno(1,2,3-cd)pyrene	2.28	3.00	76.0%	2.38	3.00	79.3%	4.3%
Dibenz(a,h)anthracene	2.29	3.00	76.3%	2.42	3.00	80.7%	5.5%
Benzo(g,h,i)perylene	2.37	3.00	79.0%	2.49	3.00	83.0%	4.9%
Pentachlorophenol	2.32	3.00	77.3%	2.42	3.00	80.7%	4.2%
Total Benzofluoranthenes	6.66	9.00	74.0%	6.92	9.00	76.9%	3.8%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	77.3%	79.3%
d14-Dibenzo(a,h)anthracene	95.0%	83.3%
2,4,6-Tribromophenol	72.0%	76.0%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YF09-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-040214	75.0%	89.3%	70.0%	0
LCS-040214	77.3%	95.0%	72.0%	0
LCSD-040214	79.3%	83.3%	76.0%	0
SP-6	78.0%	94.0%	83.3%	0
SP-7	75.3%	96.7%	86.0%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(33-120)	(33-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(22-133)	(22-133)
(TBP) = 2,4,6-Tribromophenol	(46-122)	(30-160)

Prep Method: SW3520C
Log Number Range: 14-6133 to 14-6134

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: YF09A
 LIMS ID: 14-6128
 Matrix: Water
 Data Release Authorized: 
 Reported: 04/09/14

QC Report No: YF09-Hydrometrics Inc.
 Project: Idaho Pole
 Date Sampled: 03/31/14
 Date Received: 04/01/14

Date Extracted: 04/03/14
 Date Analyzed: 04/08/14 21:54
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	4.0

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	81.6%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: BE-2
SAMPLE

Lab Sample ID: YF09B
 LIMS ID: 14-6129
 Matrix: Water
 Data Release Authorized: *RB*
 Reported: 04/09/14

QC Report No: YF09-Hydrometrics Inc.
 Project: Idaho Pole
 Date Sampled: 03/31/14
 Date Received: 04/01/14

Date Extracted: 04/03/14
 Date Analyzed: 04/08/14 22:31
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	3.8

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	77.6%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: BE-3
SAMPLE

Lab Sample ID: YF09C
 LIMS ID: 14-6130
 Matrix: Water
 Data Release Authorized: *JB*
 Reported: 04/09/14

QC Report No: YF09-Hydrometrics Inc.
 Project: Idaho Pole
 Date Sampled: 03/31/14
 Date Received: 04/01/14

Date Extracted: 04/03/14
 Date Analyzed: 04/08/14 23:06
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	3.6

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	74.0%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: BE-4
SAMPLE

Lab Sample ID: YF09D
 LIMS ID: 14-6131
 Matrix: Water
 Data Release Authorized: 
 Reported: 04/09/14

QC Report No: YF09-Hydrometrics Inc.
 Project: Idaho Pole

Date Sampled: 03/31/14
 Date Received: 04/01/14

Date Extracted: 04/03/14
 Date Analyzed: 04/08/14 23:44
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	3.4

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	71.2%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: BE-5
SAMPLE

Lab Sample ID: YF09E
 LIMS ID: 14-6132
 Matrix: Water
 Data Release Authorized: *AB*
 Reported: 04/09/14

QC Report No: YF09-Hydrometrics Inc.
 Project: Idaho Pole
 Date Sampled: 03/31/14
 Date Received: 04/01/14

Date Extracted: 04/03/14
 Date Analyzed: 04/09/14 00:19
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	0.57

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	72.0%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
 Page 1 of 1

Sample ID: LCS-040314
LCS/LCSD

Lab Sample ID: LCS-040314
 LIMS ID: 14-6128
 Matrix: Water
 Data Release Authorized: *B*
 Reported: 04/09/14

QC Report No: YF09-Hydrometrics Inc.
 Project: Idaho Pole
 Date Sampled: 03/31/14
 Date Received: 04/01/14

Date Extracted LCS/LCSD: 04/03/14
 Date Analyzed LCS: 04/08/14 20:43
 LCSD: 04/08/14 21:18
 Instrument/Analyst LCS: ECD1/YZ
 LCSD: ECD1/YZ

Sample Amount LCS: 500 mL
 LCSD: 500 mL
 Final Extract Volume LCS: 50 mL
 LCSD: 50 mL
 Dilution Factor LCS: 1.00
 LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Pentachlorophenol	1.54	2.50	61.6%	1.76	2.50	70.4%	13.3%

Chlorophenols Surrogate Recovery

	LCS	LCSD
2,4,6-Tribromophenol	86.2%	91.8%

Results reported in µg/L
 RPD calculated using sample concentrations per SW846.

SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YF09-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
LCS-040314	86.2%	0
LCSD-040314	91.8%	0
SP-2	81.6%	0
BE-2	77.6%	0
BE-3	74.0%	0
BE-4	71.2%	0
BE-5	72.0%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-6128 to 14-6132



Analytical Resources, Incorporated
Analytical Chemists and Consultants

15 April 2014

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RECEIVED
APR 19 2014

BY:.....

RE: Client Project: Idaho Pole
ARI Job No.: YF31

Dear Heidi:

Please find enclosed the original Chain-of-Custody (COC) records and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received seventeen water samples on April 3, 2014. The samples were analyzed for PCP as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File YF31

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number:	Turn-around Requested: Normalized	Page: 2 of 2
ARI Client Company: Hydrometric	Phone:	Date: 4/2/14 Ice Present? yep
Client Contact: Heidi Kaiser		No. of Coolers: 2 Cooler Temps:

Client Project Name: Idaho Pole Sitewide Sampling	Analysis Requested	Notes/Comments
Client Project #:		
Samplers: Rebecca Fabich		

Sample ID	Date	Time	Matrix	No. Containers	PCP	OPD											
11-A	4/2/14	1051	H2O	2	X												
GM-6	↓	1138	↓	2	X												
GM-4	↓	1212	↓	2	X												
26-C	↓	1256	↓	2	X												
26-B	↓	1313	↓	2	X												
26-AF	↓	1333	↓	2	X												
26-A	↓	1333	↓	2	X												

Comments/Special Instructions	Relinquished by: (Signature) Rebecca Fabich	Received by: (Signature) [Signature]	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Rebecca Fabich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 4/2/14 1457	Date & Time: 4/3/14 1035	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

4/2/14 14:57



Cooler Receipt Form

ARI Client: Hydrometrics

Project Name: Idano Pole

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: YF31

Tracking No: 794936349214 NA

800892369863

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time: 1035 3:2 11

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 122412224

Cooler Accepted by: AV Date: 4/3/14 Time: 1035

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA

Was Sample Split by ARI : YES Date/Time: _____ Equipment: _____ Split by: _____

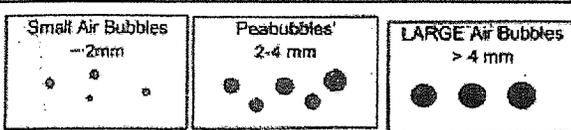
Samples Logged by: AV Date: 4/3/14 Time: 1100

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm" (< 2 mm)

Peabubbles → "pb" (2 to < 4 mm)

Large → "lg" (4 to < 6 mm)

Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: YF31
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole Site Wide Sampling

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. 22	YF31A	14-6238	Water	04/01/14 10:25	04/03/14 10:35
2. 15-A	YF31B	14-6239	Water	04/01/14 11:02	04/03/14 10:35
3. P-4	YF31C	14-6240	Water	04/01/14 11:36	04/03/14 10:35
4. P-2	YF31D	14-6241	Water	04/01/14 12:09	04/03/14 10:35
5. 5-C	YF31E	14-6242	Water	04/01/14 12:34	04/03/14 10:35
6. 5-A	YF31F	14-6243	Water	04/01/14 12:52	04/03/14 10:35
7. P-1	YF31G	14-6244	Water	04/01/14 13:22	04/03/14 10:35
8. P-1D	YF31H	14-6245	Water	04/01/14 13:22	04/03/14 10:35
9. GM-8	YF31I	14-6246	Water	04/02/14 09:26	04/03/14 10:35
10. RES 8	YF31J	14-6247	Water	04/02/14 10:05	04/03/14 10:35
11. 11-A	YF31K	14-6248	Water	04/02/14 10:51	04/03/14 10:35
12. GM-6	YF31L	14-6249	Water	04/02/14 11:38	04/03/14 10:35
13. GM-4	YF31M	14-6250	Water	04/02/14 12:12	04/03/14 10:35
14. 26-C	YF31N	14-6251	Water	04/02/14 12:56	04/03/14 10:35
15. 26-B	YF31O	14-6252	Water	04/02/14 13:13	04/03/14 10:35
16. 26-AF	YF31P	14-6253	Water	04/02/14 13:33	04/03/14 10:35
17. 26-A	YF31Q	14-6254	Water	04/02/14 13:33	04/03/14 10:35



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



Analytical Resources,
Incorporated
Analytical Chemists and
Consultants

- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: GM-4
SAMPLE

Lab Sample ID: YF31M
LIMS ID: 14-6250
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 04/15/14

QC Report No: YF31-Hydrometrics Inc.
Project: Idaho Pole Site Wide Sampling

Date Sampled: 04/02/14
Date Received: 04/03/14

Date Extracted: 04/04/14
Date Analyzed: 04/14/14 23:37
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	2.1

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	57.6%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: MB-040414
METHOD BLANK

Lab Sample ID: MB-040414
 LIMS ID: 14-6238
 Matrix: Water
 Data Release Authorized: *AB*
 Reported: 04/15/14

QC Report No: YF31-Hydrometrics Inc.
 Project: Idaho Pole Site Wide Sampling

Date Sampled: NA
 Date Received: NA

Date Extracted: 04/04/14
 Date Analyzed: 04/14/14 13:54
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	87.2%
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SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YF31-Hydrometrics Inc.
Project: Idaho Pole Site Wide Sampling

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-040414	87.2%	0
LCS-040414	83.4%	0
LCS-040414	87.2%	0
22	95.2%	0
15-A	89.2%	0
P-4	103%	0
P-4 DL	D	0
P-2	83.2%	0
5-C	79.2%	0
5-A	87.6%	0
5-A DL	D	0
P-1	76.8%	0
P-1D	67.2%	0
GM-8	70.4%	0
RES 8	68.8%	0
11-A	68.0%	0
GM-6	63.2%	0
GM-4	57.6%	0
26-C	64.8%	0
26-B	66.0%	0
26-AF	68.4%	0
26-A	60.0%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

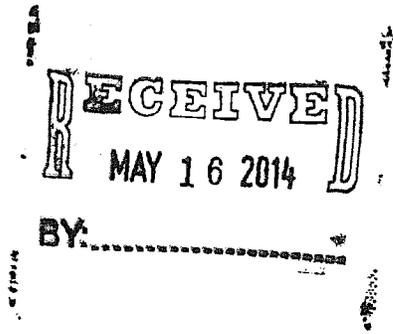
(26-120)

Prep Method: SW3510C
Log Number Range: 14-6238 to 14-6254



Analytical Resources, Incorporated
Analytical Chemists and Consultants

13 May 2014



Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RE: Client Project: Idaho Pole
ARI Job No.: YI53

Dear Heidi:

Please find enclosed the original Chain-of-Custody (COC) records and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received three water samples on April 30, 2014. The samples were analyzed for PAHs and PCP as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.


Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File YI53

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: 753	Turn-around Requested: Normal	Page: 1 of 1
ARI Client Company: Hydrometris	Phone:	Date: 4/28/14 Ice Present? yo
Client Contact: Heidi Kraus		No. of Coolers: 1 Cooler Temps:

Client Project Name: Idaho Pole	Analysis Requested	Notes/Comments
Client Project #: 		
Samplers: Rebecca Fabich		

Sample ID	Date	Time	Matrix	No. Containers	POP	SO4	PAH	OC	MIS	OC							
SP-2	4/28/14	845	H2O	4	X	X											
SP-7	4/28/14	815	H2O	2					X								

Comments/Special Instructions	Relinquished by: (Signature) Rebecca Fabich	Received by: (Signature) Taylor Streete	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Rebecca Fabich	Printed Name: Taylor Streete	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 4/29/14 1200	Date & Time: 4-30-14 1250	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

CSC14



Cooler Receipt Form

ARI Client: Hydrometrix

Project Name: FDGho pole

COC No(s): _____ NA

Delivered by: ~~Fed-Ex~~ UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: Y153

Tracking No: 50892369874 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 6.0
Time: _____

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: TS Date: 4-30-11 Time: 1250

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

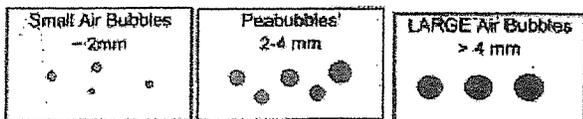
Samples Logged by: TS Date: 4-30-11 Time: 1257

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



- Small → "sm" (< 2 mm)
- Peabubbles → "pb" (2 to < 4 mm)
- Large → "lg" (4 to < 6 mm)
- Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: YI53
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SP-2	YI53A	14-8277	Water	04/28/14 08:45	04/30/14 12:50
2. SP-7	YI53B	14-8278	Water	04/28/14 08:15	04/30/14 12:50
3. NWE MW-4	YI53C	14-8279	Water	04/28/14 11:15	04/30/14 12:50



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



**Analytical Resources,
Incorporated**
Analytical Chemists and
Consultants

- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
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- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
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- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

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- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Extraction Method: SW3520C

Page 1 of 1

Sample ID: SP-2

SAMPLE

Lab Sample ID: YI53A

LIMS ID: 14-8277

Matrix: Water

Data Release Authorized:

Reported: 05/12/14

QC Report No: YI53-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: 04/28/14

Date Received: 04/30/14

Date Extracted: 05/01/14

Date Analyzed: 05/12/14 13:28

Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	0.25
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	0.17
129-00-0	Pyrene	0.10	0.16
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 68.3%
d14-Dibenzo(a,h)anthracene 80.3%

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Extraction Method: SW3520C

Page 1 of 1

Sample ID: MB-050114

METHOD BLANK

Lab Sample ID: MB-050114

LIMS ID: 14-8277

Matrix: Water

Data Release Authorized: *AB*

Reported: 05/12/14

QC Report No: YI53-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted: 05/01/14

Date Analyzed: 05/12/14 12:04

Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 74.7%

d14-Dibenzo(a,h)anthracene 78.0%

ORGANICS ANALYSIS DATA SHEET

PNA's by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-050114

LAB CONTROL SAMPLE

Lab Sample ID: LCS-050114

QC Report No: YI53-Hydrometrics Inc.

LIMS ID: 14-8277

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *AB*

Date Sampled: NA

Reported: 05/12/14

Date Received: NA

Date Extracted LCS/LCSD: 05/01/14

Sample Amount LCS: 500 mL

Date Analyzed LCS: 05/12/14 12:32

Final Extract Volume LCS: 0.50 mL

Instrument/Analyst LCS: NT8/JZ

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	1.56	3.00	52.0%
Acenaphthylene	1.55	3.00	51.7%
Acenaphthene	1.73	3.00	57.7%
Fluorene	1.79	3.00	59.7%
Phenanthrene	1.90	3.00	63.3%
Anthracene	1.75	3.00	58.3%
Fluoranthene	2.10	3.00	70.0%
Pyrene	1.88	3.00	62.7%
Benzo (a) anthracene	1.93	3.00	64.3%
Chrysene	2.02	3.00	67.3%
Benzo (b) fluoranthene	2.13	3.00	71.0%
Benzo (k) fluoranthene	1.99	3.00	66.3%
Benzo (a) pyrene	1.81	3.00	60.3%
Indeno (1,2,3-cd) pyrene	1.95	3.00	65.0%
Dibenz (a,h) anthracene	1.92	3.00	64.0%
Benzo (g,h,i) perylene	1.86	3.00	62.0%
Total Benzofluoranthenes	5.99	9.00	66.6%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	70.7%
d14-Dibenzo(a,h)anthracene	77.0%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YI53-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-050114	74.7%	78.0%	0
LCS-050114	70.7%	77.0%	0
SP-2	68.3%	80.3%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(31-120)	(31-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(10-125)	(10-125)

Prep Method: SW3520C
Log Number Range: 14-8277 to 14-8277

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-7

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: YI53B

QC Report No: YI53-Hydrometrics Inc.

LIMS ID: 14-8278

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: 

Date Sampled: 04/28/14

Reported: 05/13/14

Date Received: 04/30/14

Date Extracted: 05/01/14

Sample Amount: 500 mL

Date Analyzed: 05/10/14 16:41

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	73.7%
d14-Dibenzo(a,h)anthracene	85.0%
2,4,6-Tribromophenol	90.7%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: MB-050114

Extraction Method: SW3520C

METHOD BLANK

Page 1 of 1

Lab Sample ID: MB-050114

QC Report No: YI53-Hydrometrics Inc.

LIMS ID: 14-8278

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: 

Date Sampled: NA

Reported: 05/13/14

Date Received: NA

Date Extracted: 05/01/14

Sample Amount: 500 mL

Date Analyzed: 05/10/14 15:28

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	66.7%
d14-Dibenzo(a,h)anthracene	77.0%
2,4,6-Tribromophenol	68.0%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS
Page 1 of 1

Sample ID: LCS-050114
LAB CONTROL SAMPLE

Lab Sample ID: LCS-050114
LIMS ID: 14-8278
Matrix: Water
Data Release Authorized: *AB*
Reported: 05/13/14

QC Report No: YI53-Hydrometrics Inc.
Project: Idaho Pole
Event: NA
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 05/01/14
Date Analyzed LCS: 05/10/14 15:52
Instrument/Analyst LCS: NT11/VTS

Sample Amount LCS: 500 mL
Final Extract Volume LCS: 0.50 mL
Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	1.88	3.00	62.7%
Acenaphthylene	2.32	3.00	77.3%
Acenaphthene	2.03	3.00	67.7%
Fluorene	2.11	3.00	70.3%
Phenanthrene	2.14	3.00	71.3%
Anthracene	1.94	3.00	64.7%
Fluoranthene	2.20	3.00	73.3%
Pyrene	2.16	3.00	72.0%
Benzo(a)anthracene	1.89 Q	3.00	63.0%
Chrysene	1.93	3.00	64.3%
Benzo(b)fluoranthene	1.80	3.00	60.0%
Benzo(k)fluoranthene	1.80	3.00	60.0%
Benzo(a)pyrene	1.68	3.00	56.0%
Indeno(1,2,3-cd)pyrene	1.78	3.00	59.3%
Dibenz(a,h)anthracene	1.96	3.00	65.3%
Benzo(g,h,i)perylene	1.89	3.00	63.0%
Pentachlorophenol	1.77	3.00	59.0%
Total Benzofluoranthenes	5.41	9.00	60.1%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	72.0%
d14-Dibenzo(a,h)anthracene	79.0%
2,4,6-Tribromophenol	66.3%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YI53-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-050114	66.7%	77.0%	68.0%	0
LCS-050114	72.0%	79.0%	66.3%	0
SP-7	73.7%	85.0%	90.7%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(33-120)	(33-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(22-133)	(22-133)
(TBP) = 2,4,6-Tribromophenol	(46-122)	(30-160)

Prep Method: SW3520C
Log Number Range: 14-8278 to 14-8278

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 10-MAY-2014 15:03
 Lab File ID: icv0510.d Init. Cal. Date(s): 11-APR-2014 11-APR-2014
 Analysis Type: Init. Cal. Times: 10:56 12:58
 Lab Sample ID: SIM 2.5 Quant Type: ISTD
 Method: /chem3/nt11.i/20140510.b/pnapcp.m

COMPOUND	RRF / AMOUNT	RF2	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
2 Naphthalene	0.94948	0.96534	0.010	1.67049	20.00000	Averaged
\$ 3 2-Methylnaphthalene-d10	0.63244	0.59197	0.010	-6.39977	20.00000	Averaged
4 2-Methylnaphthalene	0.72870	0.64020	0.010	-12.14497	20.00000	Averaged
5 1-Methylnaphthalene	0.68250	0.60234	0.010	-11.74537	20.00000	Averaged
7 Acenaphthylene	1.35868	1.55640	0.010	14.55249	20.00000	Averaged
9 Acenaphthene	1.00955	1.01707	0.010	0.74532	20.00000	Averaged
10 Dibenzofuran	1.52198	1.55114	0.010	1.91584	20.00000	Averaged
11 Fluorene	1.19597	1.18745	0.010	-0.71250	20.00000	Averaged
\$ 13 2,4,6-Tribromophenol (ester)	0.02873	0.03002	0.010	4.50024	20.00000	Averaged
14 Pentachlorophenol (ester)	0.10340	0.09471	0.010	-8.40789	20.00000	Averaged
16 Phenanthrene	1.06977	0.98966	0.010	-7.48806	20.00000	Averaged
17 Anthracene	0.98179	0.91204	0.010	-7.10404	20.00000	Averaged
\$ 56 Fluoranthene-d10	1.03003	0.87671	0.010	-14.88458	20.00000	Averaged
19 Fluoranthene	1.11010	1.02356	0.010	-7.79569	20.00000	Averaged
20 Pyrene	1.26683	1.14261	0.010	-9.80539	20.00000	Averaged
22 Benzo(a)anthracene	1.15103	0.90777	0.010	-21.13371	20.00000	Averaged <-
24 Chrysene	1.08384	0.90961	0.010	-16.07461	20.00000	Averaged
55 Total Benzofluoranthenes	1.25791	1.13432	0.010	-9.82454	20.00000	Averaged
30 Benzo(a)pyrene	1.15471	0.96924	0.010	-16.06184	20.00000	Averaged
33 Indeno(1,2,3-cd)pyrene	1.34468	1.15851	0.010	-13.84518	20.00000	Averaged
\$ 32 Dibenz(a,h)anthracene-d14	0.99484	0.91692	0.010	-7.83248	20.00000	Averaged
34 Dibenz(a,h)anthracene	1.19182	1.09965	0.010	-7.73323	20.00000	Averaged
35 Benzo(g,h,i)perylene	1.20625	1.03831	0.010	-13.92248	20.00000	Averaged

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: YI53A
 LIMS ID: 14-8277
 Matrix: Water
 Data Release Authorized: *RB*
 Reported: 05/07/14

QC Report No: YI53-Hydrometrics Inc.
 Project: Idaho Pole

Date Sampled: 04/28/14
 Date Received: 04/30/14

Date Extracted: 05/02/14
 Date Analyzed: 05/06/14 18:39
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	4.7

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	77.2%
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SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YI53-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-050214	66.0%	0
LCS-050214	77.2%	0
SP-2	77.2%	0
NWE MW-4	65.6%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-8277 to 14-8279



Analytical Resources, Incorporated
Analytical Chemists and Consultants

12 June 2014

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RE: Client Project: Idaho Pole
ARI Job No.: YM54

Dear Heidi:

Please find enclosed the original Chain-of-Custody (COC) records and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received three water samples on June 3, 2014. The samples were analyzed for PAHs and PCP as requested.

The percent differences (%Ds) for three compounds were not within control limits for the CCAL that bracketed the PAH+PCP analyses of samples SP-6 and SP-7. All positive results for these compounds have been flagged with a Q qualifier to denote the high %Ds.

There were no further anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink that reads "Mark D. Harris".

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File YM54

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)

ARI Assigned Number: YMS4	Turn-around Requested: Normal	Page: 1 of 1
ARI Client Company: Hydrometrics	Phone:	Date: 5/31/14 Ice Present? yes
Client Contact: Heidi Kauer	No. of Coolers: 1	Cooler Temps: 16.3

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested						Notes/Comments
					PCP 8040	PAH 8870	SIM 858				
SP-2	5/31/14	1200	H ₂ O	4	X	X					
SP-6	↓	1145	↓	2			X				
SP-7	↓	1130	↓	2			X				

Comments/Special Instructions	Relinquished by: (Signature) Rebecca Fabich	Received by: (Signature) [Signature]	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name Rebecca Fabich	Printed Name: Taylor Streeter	Printed Name:	Printed Name:
	Company: Idaho Polo	Company: ARI	Company:	Company:
	Date & Time: 1200 6/2/14	Date & Time: 6:30 1025	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

20000-15114



Cooler Receipt Form

ARI Client Hydrometries
 COC No(s): _____ (NA)
 Assigned ARI Job No. YM54

Project Name Idaho Fore
 Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
 Tracking No: 5028 9236 9933 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO
 Were custody papers included with the cooler? YES NO
 Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)
 Time: 1025 12.3

If cooler temperature is out of compliance fill out form 00070F
 Temp Gun ID#: 90877952

Cooler Accepted by: AS Date: 6-5-14 Time: 1025

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO
 What kind of packing material was used? ... Bubble Wet Ice Gel Packs Baggies Foam Block Paper Other: _____
 Was sufficient ice used (if appropriate)? NA YES NO
 Were all bottles sealed in individual plastic bags? YES NO
 Did all bottles arrive in good condition (unbroken)? YES NO
 Were all bottle labels complete and legible? YES NO
 Did the number of containers listed on COC match with the number of containers received? YES NO
 Did all bottle labels and tags agree with custody papers? YES NO
 Were all bottles used correct for the requested analyses? YES NO
 Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO
 Were all VOC vials free of air bubbles? NA YES NO
 Was sufficient amount of sample sent in each bottle? YES NO
 Date VOC Trip Blank was made at ARI... NA
 Was Sample Split by ARI . NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: AN Date: 6/5/14 Time: 1055

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

 Small Air Bubbles - 2mm	 Peabubbles 2-4 mm	 LARGE Air Bubbles > 4 mm	Small → "sm" (< 2 mm)
			Peabubbles → "pb" (2 to < 4 mm)
			Large → "lg" (4 to < 6 mm)
			Headspace → "hs" (> 6 mm)



Cooler Temperature Compliance Form

Cooler#: 1 Temperature(°C): 16.3

Sample ID	Bottle Count	Bottle Type
Samples received above 6°C.		

Cooler#: _____ Temperature(°C): _____

Sample ID	Bottle Count	Bottle Type

Cooler#: _____ Temperature(°C): _____

Sample ID	Bottle Count	Bottle Type

Cooler#: _____ Temperature(°C): _____

Sample ID	Bottle Count	Bottle Type

Completed by: AV Date: 6/5/14 Time: 1135

Sample ID Cross Reference Report



ARI Job No: YM54
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SP-2	YM54A	14-10723	Water	05/31/14 12:00	06/05/14 10:25
2. SP-6	YM54B	14-10724	Water	05/31/14 11:45	06/05/14 10:25
3. SP-7	YM54C	14-10725	Water	05/31/14 11:30	06/05/14 10:25



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



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- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of “fines” required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

PNA's by SW8270D-SIM GC/MS

Extraction Method: SW3520C

Page 1 of 1

Sample ID: SP-2

SAMPLE

Lab Sample ID: YM54A

LIMS ID: 14-10723

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 06/09/14

QC Report No: YM54-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: 05/31/14

Date Received: 06/05/14

Date Extracted: 06/05/14

Date Analyzed: 06/06/14 18:05

Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	0.10
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 70.0%
d14-Dibenzo(a,h)anthracene 41.3%

ORGANICS ANALYSIS DATA SHEET
PNA's by SW8270D-SIM GC/MS
Extraction Method: SW3520C
 Page 1 of 1

Sample ID: MB-060514
METHOD BLANK

Lab Sample ID: MB-060514
 LIMS ID: 14-10723
 Matrix: Water
 Data Release Authorized: 
 Reported: 06/09/14

QC Report No: YM54-Hydrometrics Inc.
 Project: Idaho Pole
 Event: NA
 Date Sampled: NA
 Date Received: NA

Date Extracted: 06/05/14
 Date Analyzed: 06/06/14 16:14
 Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 69.3%
 d14-Dibenzo(a,h)anthracene 61.7%

ORGANICS ANALYSIS DATA SHEET

PNA's by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-060514

LAB CONTROL SAMPLE

Lab Sample ID: LCS-060514

LIMS ID: 14-10723

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 06/09/14

QC Report No: YM54-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 06/05/14

Date Analyzed LCS: 06/06/14 17:10

Instrument/Analyst LCS: NT8/JZ

Sample Amount LCS: 500 mL

Final Extract Volume LCS: 0.50 mL

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	1.58	3.00	52.7%
Acenaphthylene	1.67	3.00	55.7%
Acenaphthene	1.74	3.00	58.0%
Fluorene	1.87	3.00	62.3%
Phenanthrene	1.96	3.00	65.3%
Anthracene	1.98	3.00	66.0%
Fluoranthene	2.22	3.00	74.0%
Pyrene	2.04	3.00	68.0%
Benzo(a)anthracene	2.12	3.00	70.7%
Chrysene	2.14	3.00	71.3%
Benzo(b)fluoranthene	2.08	3.00	69.3%
Benzo(k)fluoranthene	2.25	3.00	75.0%
Benzo(a)pyrene	2.04	3.00	68.0%
Indeno(1,2,3-cd)pyrene	1.77	3.00	59.0%
Dibenz(a,h)anthracene	1.40	3.00	46.7%
Benzo(g,h,i)perylene	1.55	3.00	51.7%
Total Benzofluoranthenes	8.19	9.00	91.0%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 70.0%
d14-Dibenzo(a,h)anthracene 49.3%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YM54-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-060514	69.3%	61.7%	0
LCS-060514	70.0%	49.3%	0
SP-2	70.0%	41.3%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(31-120)	(31-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(10-125)	(10-125)

Prep Method: SW3520C
Log Number Range: 14-10723 to 14-10723

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-6

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: YM54B

QC Report No: YM54-Hydrometrics Inc.

LIMS ID: 14-10724

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *AS*

Date Sampled: 05/31/14

Reported: 06/12/14

Date Received: 06/05/14

Date Extracted: 06/05/14

Sample Amount: 500 mL

Date Analyzed: 06/12/14 11:13

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	72.0%
d14-Dibenzo(a,h)anthracene	71.7%
2,4,6-Tribromophenol	93.3%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-7

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: YM54C

QC Report No: YM54-Hydrometrics Inc.

LIMS ID: 14-10725

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *[Signature]*

Date Sampled: 05/31/14

Reported: 06/12/14

Date Received: 06/05/14

Date Extracted: 06/05/14

Sample Amount: 500 mL

Date Analyzed: 06/12/14 11:37

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	67.7%
d14-Dibenzo(a,h)anthracene	64.7%
2,4,6-Tribromophenol	98.7%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Extraction Method: SW3520C

Page 1 of 1

Sample ID: MB-060514

METHOD BLANK

Lab Sample ID: MB-060514

LIMS ID: 14-10724

Matrix: Water

Data Release Authorized: *AB*

Reported: 06/12/14

QC Report No: YM54-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted: 06/05/14

Date Analyzed: 06/12/14 10:00

Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	69.7%
d14-Dibenzo(a,h)anthracene	61.7%
2,4,6-Tribromophenol	85.3%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: LCS-060514

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-060514

QC Report No: YM54-Hydrometrics Inc.

LIMS ID: 14-10724

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *AS*

Date Sampled: NA

Reported: 06/12/14

Date Received: NA

Date Extracted LCS/LCSD: 06/05/14

Sample Amount LCS: 500 mL

Date Analyzed LCS: 06/12/14 10:24

Final Extract Volume LCS: 0.50 mL

Instrument/Analyst LCS: NT11/VTS

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	1.35	3.00	45.0%
Acenaphthylene	1.98	3.00	66.0%
Acenaphthene	1.60	3.00	53.3%
Fluorene	1.77	3.00	59.0%
Phenanthrene	1.90	3.00	63.3%
Anthracene	1.80	3.00	60.0%
Fluoranthene	2.04	3.00	68.0%
Pyrene	2.05	3.00	68.3%
Benzo(a)anthracene	1.87	3.00	62.3%
Chrysene	1.88	3.00	62.7%
Benzo(b)fluoranthene	3.23	4.50	71.8%
Benzo(k)fluoranthene	3.23	4.50	71.8%
Benzo(a)pyrene	1.59	3.00	53.0%
Indeno(1,2,3-cd)pyrene	1.52 Q	3.00	50.7%
Dibenz(a,h)anthracene	1.66 Q	3.00	55.3%
Benzo(g,h,i)perylene	1.55 Q	3.00	51.7%
Pentachlorophenol	1.81	3.00	60.3%
Total Benzofluoranthenes	6.46	9.00	71.8%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	58.7%
d14-Dibenzo(a,h)anthracene	68.7%
2,4,6-Tribromophenol	78.7%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YM54-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-060514	69.7%	61.7%	85.3%	0
LCS-060514	58.7%	68.7%	78.7%	0
SP-6	72.0%	71.7%	93.3%	0
SP-7	67.7%	64.7%	98.7%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(33-120)	(33-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(22-133)	(22-133)
(TBP) = 2,4,6-Tribromophenol	(46-122)	(30-160)

Prep Method: SW3520C
Log Number Range: 14-10724 to 14-10725

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 12-JUN-2014 09:15
 Lab File ID: icv0612.d Init. Cal. Date(s): 11-APR-2014 11-APR-2014
 Analysis Type: Init. Cal. Times: 10:56 12:58
 Lab Sample ID: SIM 2.5 Quant Type: ISTD
 Method: /chem3/nt11.i/20140612.b/pnapcp.m

COMPOUND	_____		MIN		MAX		CURVE TYPE
	RRF / AMOUNT	RF2	RRF	%D / %DRIFT	%D / %DRIFT		
2 Naphthalene	0.94948	0.93379	0.010	-1.65209	20.00000	Averaged	
\$ 3 2-Methylnaphthalene-d10	0.63244	0.60826	0.010	-3.82434	20.00000	Averaged	
4 2-Methylnaphthalene	0.72870	0.64018	0.010	-12.14739	20.00000	Averaged	
5 1-Methylnaphthalene	0.68250	0.61370	0.010	-10.07976	20.00000	Averaged	
7 Acenaphthylene	1.35868	1.63013	0.010	19.97884	20.00000	Averaged	
9 Acenaphthene	1.00955	0.99439	0.010	-1.50165	20.00000	Averaged	
10 Dibenzofuran	1.52198	1.52331	0.010	0.08739	20.00000	Averaged	
11 Fluorene	1.19597	1.19834	0.010	0.19775	20.00000	Averaged	
\$ 13 2,4,6-Tribromophenol (ester)	0.02873	0.03126	0.010	8.81719	20.00000	Averaged	
14 Pentachlorophenol (ester)	0.10340	0.09243	0.010	-10.60542	20.00000	Averaged	
16 Phenanthrene	1.06977	1.01190	0.010	-5.40906	20.00000	Averaged	
17 Anthracene	0.98179	0.89662	0.010	-8.67463	20.00000	Averaged	
\$ 56 Fluoranthene-d10	1.03003	0.90920	0.010	-11.73056	20.00000	Averaged	
19 Fluoranthene	1.11010	1.05624	0.010	-4.85145	20.00000	Averaged	
20 Pyrene	1.26683	1.18170	0.010	-6.72011	20.00000	Averaged	
22 Benzo(a)anthracene	1.15103	0.97582	0.010	-15.22200	20.00000	Averaged	
24 Chrysene	1.08384	0.91104	0.010	-15.94314	20.00000	Averaged	
55 Total Benzofluoranthenes	1.25791	1.08127	0.010	-14.04168	20.00000	Averaged	
30 Benzo(a)pyrene	1.15471	0.98528	0.010	-14.67298	20.00000	Averaged	
33 Indeno(1,2,3-cd)pyrene	1.34468	1.05968	0.010	-21.19437	20.00000	Averaged <-	
\$ 32 Dibenz(a,h)anthracene-d14	0.99484	0.79838	0.010	-19.74767	20.00000	Averaged	
34 Dibenz(a,h)anthracene	1.19182	0.91508	0.010	-23.21973	20.00000	Averaged <-	
35 Benzo(g,h,i)perylene	1.20625	0.93342	0.010	-22.61808	20.00000	Averaged <-	

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: YM54A
LIMS ID: 14-10723
Matrix: Water
Data Release Authorized: *AB*
Reported: 06/12/14

QC Report No: YM54-Hydrometrics Inc.
Project: Idaho Pole
Date Sampled: 05/31/14
Date Received: 06/05/14

Date Extracted: 06/06/14
Date Analyzed: 06/11/14 07:30
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	2.2 P

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	82.4%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: MB-060614
METHOD BLANK

Lab Sample ID: MB-060614
 LIMS ID: 14-10723
 Matrix: Water
 Data Release Authorized: *AA*
 Reported: 06/12/14

QC Report No: YM54-Hydrometrics Inc.
 Project: Idaho Pole

Date Sampled: NA
 Date Received: NA

Date Extracted: 06/06/14
 Date Analyzed: 06/11/14 05:42
 Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
 Final Extract Volume: 50 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	63.6%
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ORGANICS ANALYSIS DATA SHEET

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: LCS-060614

LAB CONTROL

Lab Sample ID: LCS-060614

LIMS ID: 14-10723

Matrix: Water

Data Release Authorized: *sb*

Reported: 06/12/14

QC Report No: YM54-Hydrometrics Inc.

Project: Idaho Pole

Date Sampled: 05/31/14

Date Received: 06/05/14

Date Extracted: 06/06/14

Date Analyzed: 06/11/14 06:17

Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

Analyte	Lab Control	Spike Added	Recovery
Pentachlorophenol	1.51	2.50	60.4%

Chlorophenols Surrogate Recovery

2,4,6-Tribromophenol 119%

Results reported in µg/L

SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YM54-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-060614	63.6%	0
LCS-060614	119%	0
SP-2	82.4%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-10723 to 14-10723



Analytical Resources, Incorporated
Analytical Chemists and Consultants

15 August 2014

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RE: Client Project: Idaho Pole
ARI Job No.: YU88

Dear Heidi:

Please find enclosed the original Chain-of-Custody (COC) records and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received three water samples on August 1, 2014. The samples were analyzed for PAHs and PCP as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File YU88

MDH/mdh



Cooler Receipt Form

ARI Client: Hydrometrics

Project Name: Idaho Pole

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: _____

Tracking No. 8062 87791593 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2 0-6 0 °C for chemistry)

Time: 1255 7.8

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID# 90877952

Cooler Accepted by: AV Date: 8/1/14 Time: 1255

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: _____ (NA)

Was Sample Split by ARI: YES Date/Time: _____ Equipment: _____ Split by: _____

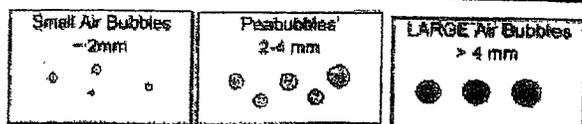
Samples Logged by: CA Date: 8-1-14 Time: 1416

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: YU88
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SP-2	YU88A	14-15882	Water	07/31/14 09:15	08/01/14 12:55
2. SP-6	YU88B	14-15883	Water	07/31/14 08:45	08/01/14 12:55
3. SP-7	YU88C	14-15884	Water	07/31/14 08:30	08/01/14 12:55



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



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- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of “fines” required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET
PNA's by SW8270D-SIM GC/MS
Extraction Method: SW3520C
 Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: YU88A
 LIMS ID: 14-15882
 Matrix: Water
 Data Release Authorized: 
 Reported: 08/12/14

QC Report No: YU88-Hydrometrics Inc.
 Project: Idaho Pole
 Event: NA
 Date Sampled: 07/31/14
 Date Received: 08/01/14

Date Extracted: 08/04/14
 Date Analyzed: 08/11/14 21:58
 Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	0.39
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	0.18
129-00-0	Pyrene	0.10	0.16
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 62.0%
 d14-Dibenzo(a,h)anthracene 57.3%

ORGANICS ANALYSIS DATA SHEET
PNA's by SW8270D-SIM GC/MS
Extraction Method: SW3520C
 Page 1 of 1

Sample ID: MB-080414
METHOD BLANK

Lab Sample ID: MB-080414
 LIMS ID: 14-15882
 Matrix: Water
 Data Release Authorized: *R*
 Reported: 08/12/14

QC Report No: YU88-Hydrometrics Inc.
 Project: Idaho Pole
 Event: NA
 Date Sampled: NA
 Date Received: NA

Date Extracted: 08/04/14
 Date Analyzed: 08/11/14 21:02
 Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL
 Final Extract Volume: 0.5 mL
 Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 60.7%
 d14-Dibenzo(a,h)anthracene 30.7%

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-080414

LAB CONTROL SAMPLE

Lab Sample ID: LCS-080414

LIMS ID: 14-15882

Matrix: Water

Data Release Authorized: *AS*

Reported: 08/12/14

QC Report No: YU88-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 08/04/14

Date Analyzed LCS: 08/11/14 21:30

Instrument/Analyst LCS: NT8/JZ

Sample Amount LCS: 500 mL

Final Extract Volume LCS: 0.50 mL

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	1.67	3.00	55.7%
Acenaphthylene	1.54	3.00	51.3%
Acenaphthene	1.43	3.00	47.7%
Fluorene	1.62	3.00	54.0%
Phenanthrene	1.79	3.00	59.7%
Anthracene	1.70	3.00	56.7%
Fluoranthene	1.90	3.00	63.3%
Pyrene	2.06	3.00	68.7%
Benzo(a)anthracene	1.92	3.00	64.0%
Chrysene	1.93	3.00	64.3%
Benzo(b)fluoranthene	2.16	3.00	72.0%
Benzo(k)fluoranthene	2.18	3.00	72.7%
Benzo(a)pyrene	1.82	3.00	60.7%
Indeno(1,2,3-cd)pyrene	1.70	3.00	56.7%
Dibenz(a,h)anthracene	1.67	3.00	55.7%
Benzo(g,h,i)perylene	1.82	3.00	60.7%
Total Benzofluoranthenes	6.31	9.00	70.1%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 70.3%
d14-Dibenzo(a,h)anthracene 58.7%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YU88-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-080414	60.7%	30.7%	0
LCS-080414	70.3%	58.7%	0
SP-2	62.0%	57.3%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(MNP) = d10-2-Methylnaphthalene	(31-120)	(31-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(10-125)	(10-125)

Prep Method: SW3520C
Log Number Range: 14-15882 to 14-15882

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-6

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: YU88B

QC Report No: YU88-Hydrometrics Inc.

LIMS ID: 14-15883

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *[Signature]*

Date Sampled: 07/31/14

Reported: 08/14/14

Date Received: 08/01/14

Date Extracted: 08/04/14

Sample Amount: 500 mL

Date Analyzed: 08/14/14 12:44

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	63.0%
d14-Dibenzo(a,h)anthracene	103%
2,4,6-Tribromophenol	50.1%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-7

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: YU88C

QC Report No: YU88-Hydrometrics Inc.

LIMS ID: 14-15884

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *AS*

Date Sampled: 07/31/14

Reported: 08/14/14

Date Received: 08/01/14

Date Extracted: 08/04/14

Sample Amount: 500 mL

Date Analyzed: 08/14/14 13:08

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	70.3%
d14-Dibenzo(a,h)anthracene	118%
2,4,6-Tribromophenol	115%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: MB-080414

Extraction Method: SW3520C

METHOD BLANK

Page 1 of 1

Lab Sample ID: MB-080414

QC Report No: YU88-Hydrometrics Inc.

LIMS ID: 14-15883

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: 

Date Sampled: NA

Reported: 08/14/14

Date Received: NA

Date Extracted: 08/04/14

Sample Amount: 500 mL

Date Analyzed: 08/14/14 11:45

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	74.3%
d14-Dibenzo(a,h)anthracene	107%
2,4,6-Tribromophenol	33.5%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: LCS-080414

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-080414

QC Report No: YU88-Hydrometrics Inc.

LIMS ID: 14-15883

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *[Signature]*

Date Sampled: NA

Reported: 08/14/14

Date Received: NA

Date Extracted LCS/LCSD: 08/04/14

Sample Amount LCS: 500 mL

Date Analyzed LCS: 08/14/14 12:14

Final Extract Volume LCS: 0.50 mL

Instrument/Analyst LCS: NT11/VTS

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	2.09	3.00	69.7%
Acenaphthylene	2.59	3.00	86.3%
Acenaphthene	2.12	3.00	70.7%
Fluorene	2.41	3.00	80.3%
Phenanthrene	2.74	3.00	91.3%
Anthracene	2.57	3.00	85.7%
Fluoranthene	2.75	3.00	91.7%
Pyrene	3.28	3.00	109%
Benzo(a)anthracene	3.01	3.00	100%
Chrysene	3.00	3.00	100%
Benzo(b)fluoranthene	4.75	3.00	158%
Benzo(k)fluoranthene	4.75	3.00	158%
Benzo(a)pyrene	2.62	3.00	87.3%
Indeno(1,2,3-cd)pyrene	3.37	3.00	112%
Dibenz(a,h)anthracene	3.23	3.00	108%
Benzo(g,h,i)perylene	3.32	3.00	111%
Pentachlorophenol	2.09	3.00	69.7%
Total Benzofluoranthenes	9.50	9.00	106%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	80.3%
d14-Dibenzo(a,h)anthracene	126%
2,4,6-Tribromophenol	110%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YU88-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-080414	74.3%	107%	33.5%	0
LCS-080414	80.3%	126%	110%	0
SP-6	63.0%	103%	50.1%	0
SP-7	70.3%	118%	115%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(33-120)	(33-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(22-133)	(22-133)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)

Prep Method: SW3520C
Log Number Range: 14-15883 to 14-15884

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MB-080514
METHOD BLANK

Lab Sample ID: MB-080514
LIMS ID: 14-15882
Matrix: Water
Data Release Authorized: *MW*
Reported: 08/15/14

QC Report No: YU88-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: NA
Date Received: NA

Date Extracted: 08/05/14
Date Analyzed: 08/14/14 21:46
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	51.2%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: YU88A
LIMS ID: 14-15882
Matrix: Water
Data Release Authorized: *MW*
Reported: 08/15/14

QC Report No: YU88-Hydrometrics Inc.
Project: Idaho Pole
Date Sampled: 07/31/14
Date Received: 08/01/14

Date Extracted: 08/05/14
Date Analyzed: 08/14/14 22:58
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	7.2

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	73.2%
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SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YU88-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-080514	51.2%	0
LCS-080514	96.2%	0
SP-2	73.2%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-15882 to 14-15882

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Page 1 of 1

Sample ID: LCS-080514
LAB CONTROL

Lab Sample ID: LCS-080514
LIMS ID: 14-15882
Matrix: Water
Data Release Authorized: *MW*
Reported: 08/15/14

QC Report No: YU88-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 07/31/14
Date Received: 08/01/14

Date Extracted: 08/05/14
Date Analyzed: 08/14/14 22:21
Instrument/Analyst: ECD1/YZ

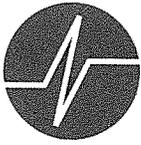
Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

Analyte	Lab Control	Spike Added	Recovery
Pentachlorophenol	1.08	2.50	43.2%

Chlorophenols Surrogate Recovery

2,4,6-Tribromophenol 96.2%

Results reported in µg/L



Analytical Resources, Incorporated
Analytical Chemists and Consultants

4 September 2014

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RE: Client Project: Idaho Pole
ARI Job No.: YX07

RECEIVED
SEP 08 2014

Dear Heidi:

BY:

Please find enclosed the original Chain-of-Custody (COC) records and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received six water samples on August 18, 2014. The samples were analyzed for PCP as requested.

A small amount of PCP was detected in the method blank associated with these samples. PCP was detected in all samples associated with this blank. The concentrations of PCP measured in the samples were significantly greater than the amount found in the blank for all samples except GM-4, no corrective actions were taken. Sample GM-4 can be re-extracted and re-analyzed upon request.

Several samples were analyzed multiple times due to the high levels of PCP present. All concentrations of PCP flagged with an "S" qualifier should not be used. In these instances, the dilutions more accurately reflect the concentrations of PCP in these samples.

There were no other anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.


Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File YX07

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)
 www.arilabs.com

ARI Assigned Number: YX07	Turn-around Requested: Normal	Page: 1 of 1
ARI Client Company: Hydrometris	Phone:	Date: 8/17/14 Ice Present? yo
Client Contact: Heidi Kaiser		No. of Coolers: 1 Cooler Temps: 2.9

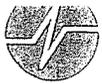
Client Project Name: Idaho Pole					Analysis Requested								Notes/Comments	
Client Project #:		Samplers: Rebecca Fabich			PCP	CHD								
Sample ID	Date	Time	Matrix	No. Containers										
GM-4	8/17/14	720	H2O	2	X									
P-2		747		2	X									
P-4		836		2	X									
BE-2		907		2	X									
BE-3		941		2	X									
IW-1		1010		2	X									

Comments/Special Instructions	Relinquished by: (Signature) Rebecca Fabich	Received by: (Signature) [Signature]	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Rebecca Fabich	Printed Name: Chris Atwell	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 8/18/14 1300	Date & Time: 8/19/14 1240	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

YX07-00002



Cooler Receipt Form

ARI Client: Hydrometrics

Project Name: Idaho Pole

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: ~~YX07~~ YX07

Tracking No: 8062 8779 1608 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 2.9
Time: _____

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877952

Cooler Accepted by: TS (CA) Date: 8-19-14 Time: 1240

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: NA YES NO

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

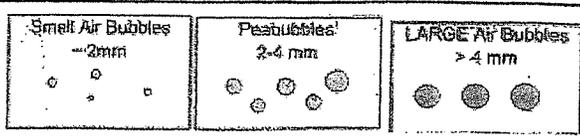
Samples Logged by: TS Date: 8-19-14 Time: 1250

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm" (<2 mm)
Peabubbles → "pb" (2 to <4 mm)
Large → "lg" (4 to <6 mm)
Headspace → "hs" (>6 mm)

Sample ID Cross Reference Report



ARI Job No: YX07
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. GM-4	YX07A	14-17061	Water	08/17/14 07:20	08/19/14 12:40
2. P-2	YX07B	14-17062	Water	08/17/14 07:47	08/19/14 12:40
3. P-4	YX07C	14-17063	Water	08/17/14 08:36	08/19/14 12:40
4. BE-2	YX07D	14-17064	Water	08/17/14 09:07	08/19/14 12:40
5. BE-3	YX07E	14-17065	Water	08/17/14 09:41	08/19/14 12:40
6. IW-1	YX07F	14-17066	Water	08/17/14 10:10	08/19/14 12:40



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



Analytical Resources,
Incorporated
Analytical Chemists and
Consultants

- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" (**Dioxin/Furan analysis only**)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. (**Dioxin/Furan analysis only**)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. (**Dioxin/Furan analysis only**)



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of “fines” required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MB-082214
METHOD BLANK

Lab Sample ID: MB-082214
LIMS ID: 14-17061
Matrix: Water
Data Release Authorized: *MW*
Reported: 09/03/14

QC Report No: YX07-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: NA
Date Received: NA

Date Extracted: 08/22/14
Date Analyzed: 09/01/14 13:40
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	0.74

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	72.8%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: GM-4
SAMPLE

Lab Sample ID: YX07A
LIMS ID: 14-17061
Matrix: Water
Data Release Authorized: *MW*
Reported: 09/03/14

QC Report No: YX07-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 08/17/14
Date Received: 08/19/14

Date Extracted: 08/22/14
Date Analyzed: 09/01/14 16:04
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	0.53 BP
Reported in µg/L (ppb)			
Chlorophenol Surrogate Recovery			
	2,4,6-Tribromophenol	92.4%	

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: BE-2
SAMPLE

Lab Sample ID: YX07D
LIMS ID: 14-17064
Matrix: Water
Data Release Authorized: *MMW*
Reported: 09/03/14

QC Report No: YX07-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 08/17/14
Date Received: 08/19/14

Date Extracted: 08/22/14
Date Analyzed: 09/01/14 17:53
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	190 ES

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	103%
----------------------	------

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: BE-2
DILUTION

Lab Sample ID: YX07D
LIMS ID: 14-17064
Matrix: Water
Data Release Authorized: *MW*
Reported: 09/03/14

QC Report No: YX07-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 08/17/14
Date Received: 08/19/14

Date Extracted: 08/22/14
Date Analyzed: 09/02/14 16:14
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 20.0

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	5.0	94 P

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol 78.6%

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: BE-3
SAMPLE

Lab Sample ID: YX07E
LIMS ID: 14-17065
Matrix: Water
Data Release Authorized: *MW*
Reported: 09/03/14

QC Report No: YX07-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 08/17/14
Date Received: 08/19/14

Date Extracted: 08/22/14
Date Analyzed: 09/02/14 16:52
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 10.0

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	2.5	34 B

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol 74.0%

SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YX07-Hydrometrics Inc.
Project: Idaho Pole

Client ID	TBP	TOT OUT
MB-082214	72.8%	0
LCS-082214	104%	0
LCSD-082214	105%	0
GM-4	92.4%	0
P-2	74.8%	0
P-4	103%	0
P-4 DL	D	0
BE-2	103%	0
BE-2 DL	78.6%	0
BE-3	74.0%	0
IW-1	94.0%	0
IW-1 DL	78.1%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-17061 to 14-17066

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Page 1 of 1

Sample ID: LCS-082214
LCS/LCSD

Lab Sample ID: LCS-082214
LIMS ID: 14-17061
Matrix: Water
Data Release Authorized: *mm*
Reported: 09/03/14

QC Report No: YX07-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 08/17/14
Date Received: 08/19/14

Date Extracted LCS/LCSD: 08/22/14

Sample Amount LCS: 500 mL

Date Analyzed LCS: 09/01/14 14:15
LCSD: 09/01/14 14:54

LCSD: 500 mL
Final Extract Volume LCS: 50 mL
LCSD: 50 mL

Instrument/Analyst LCS: ECD1/YZ
LCSD: ECD1/YZ

Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Pentachlorophenol	2.35	2.50	94.0%	2.46	2.50	98.4%	4.6%

Chlorophenols Surrogate Recovery

	LCS	LCSD
2,4,6-Tribromophenol	104%	105%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

30 September 2014

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RECEIVED
OCT 02 2014

BY:

RE: Client Project: Idaho Pole
ARI Job No.: YZ88

Dear Heidi:

Please find enclosed the original Chain-of-Custody (COC) records and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received fourteen water samples on September 12, 2014. The samples were analyzed for PAHs and PCP as requested.

There were no anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.


Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File YZ88

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)
 www.arilabs.com

ARI Assigned Number:	Turn-around Requested: Normal	Page: 2 of 2
ARI Client Company: Hydrometrol	Phone:	Date: 9/11/14
Client Contact: Heidi Kauer		Ice Present? Yes
Client Project Name: Idaho Pole		No. of Coolers: 2
Client Project #:	Samplers: Rebecca Rabich	Cooler Temps:

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested								Notes/Comments	
					200	201	202	203	204	205	206	207		
23-A	9/11/14	1237	H2O	4	X	X								
GM-6	↓	1300	↓	4	X	X								
GM-4	↓	1325	↓	4	X	X								
GM-5	↓	1340	↓	4	X	X								

Comments/Special Instructions	Relinquished by: (Signature) <i>Rebecca Rabich</i>	Received by: (Signature) <i>A. Volgardsen</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: Rebecca Rabich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 9/11/14 1630	Date & Time: 9/12/14 1620	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: Hydrometrics

Project Name: Idaho Pole

COC No(s): _____ NA

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: 7288

Tracking No: 80604 46804445 NA

Preliminary Examination Phase:

8062 8779 1858

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time: 1030 6.0 24

Temp Gun ID#: 9089982

If cooler temperature is out of compliance fill out form 00070F

Cooler Accepted by: AV Date: 9/12/14 Time: 1030

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

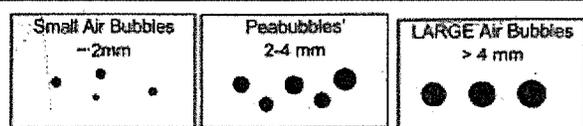
Samples Logged by: TS Date: 9-12-14 Time: 1127

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: YZ88
 Client: Hydrometrics Inc.
 Project Event: N/A
 Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. 24-B	YZ88A	14-18589	Water	09/11/14 09:19	09/12/14 10:20
2. 24-A2	YZ88B	14-18590	Water	09/11/14 09:32	09/12/14 10:20
3. 24-A1	YZ88C	14-18591	Water	09/11/14 09:45	09/12/14 10:20
4. B-A 13-A	YZ88D	14-18592	Water	09/11/14 10:10	09/12/14 10:20
5. 8-A	YZ88E	14-18593	Water	09/11/14 10:34	09/12/14 10:20
6. 8-B	YZ88F	14-18594	Water	09/11/14 10:43	09/12/14 10:20
7. 7B	YZ88G	14-18595	Water	09/11/14 11:26	09/12/14 10:20
8. 7A	YZ88H	14-18596	Water	09/11/14 11:40	09/12/14 10:20
9. 23-C	YZ88I	14-18597	Water	09/11/14 12:08	09/12/14 10:20
10. 23-B	YZ88J	14-18598	Water	09/11/14 12:21	09/12/14 10:20
11. 23-A	YZ88K	14-18599	Water	09/11/14 12:37	09/12/14 10:20
12. GM-6	YZ88L	14-18600	Water	09/11/14 13:00	09/12/14 10:20
13. GM-4	YZ88M	14-18601	Water	09/11/14 13:25	09/12/14 10:20
14. GM-5	YZ88N	14-18602	Water	09/11/14 13:40	09/12/14 10:20



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



**Analytical Resources,
Incorporated**
Analytical Chemists and
Consultants

- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Extraction Method: SW3520C

Page 1 of 1

Sample ID: GM-4

SAMPLE

Lab Sample ID: YZ88M

LIMS ID: 14-18601

Matrix: Water

Data Release Authorized: *MS*

Reported: 09/22/14

QC Report No: YZ88-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: 09/11/14

Date Received: 09/12/14

Date Extracted: 09/17/14

Date Analyzed: 09/19/14 18:24

Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 63.3%

d14-Dibenzo(a,h)anthracene 47.0%

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: GM-4
SAMPLE

Lab Sample ID: YZ88M
LIMS ID: 14-18601
Matrix: Water
Data Release Authorized: *AB*
Reported: 09/22/14

QC Report No: YZ88-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 09/11/14
Date Received: 09/12/14

Date Extracted: 09/17/14
Date Analyzed: 09/22/14 11:53
Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 10.0

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	2.5	38

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	83.2%
----------------------	-------

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MB-091714
METHOD BLANK

Lab Sample ID: MB-091714
LIMS ID: 14-18589
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 09/22/14

QC Report No: YZ88-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: NA
Date Received: NA

Date Extracted: 09/17/14
Date Analyzed: 09/20/14 22:47
Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	90.4%
----------------------	-------

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Page 1 of 1

Sample ID: LCS-091714
LCS/LCSD

Lab Sample ID: LCS-091714
LIMS ID: 14-18589
Matrix: Water
Data Release Authorized: *AS*
Reported: 09/22/14

QC Report No: YZ88-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 09/11/14
Date Received: 09/12/14

Date Extracted LCS/LCSD: 09/17/14

Sample Amount LCS: 500 mL
LCSD: 500 mL

Date Analyzed LCS: 09/20/14 23:22
LCSD: 09/20/14 23:58

Final Extract Volume LCS: 50 mL
LCSD: 50 mL

Instrument/Analyst LCS: ECD8/YZ
LCSD: ECD8/YZ

Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	Spike		LCS		Spike		LCSD		RPD
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	LCSD		
Pentachlorophenol	1.27	2.50	50.8%	1.24	2.50	49.6%	2.4%		

Chlorophenols Surrogate Recovery

	LCS	LCSD
2,4,6-Tribromophenol	83.2%	86.6%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YZ88-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-091714	90.4%	0
LCS-091714	83.2%	0
LCSD-091714	86.6%	0
24-B	84.4%	0
24-A2	89.6%	0
24-A1	90.0%	0
13-A	91.2%	0
8-A	89.2%	0
8-B	82.4%	0
7B	84.8%	0
7A	93.6%	0
23-C	96.4%	0
23-B	90.4%	0
23-A	88.0%	0
GM-6	90.0%	0
GM-4	83.2%	0
GM-5	92.4%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-18589 to 14-18602

SIM SW8270 SURROGATE RECOVERY SUMMARY

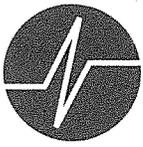
Matrix: Water

QC Report No: YZ88-Hydrometrics Inc.
Project: Idaho Pole

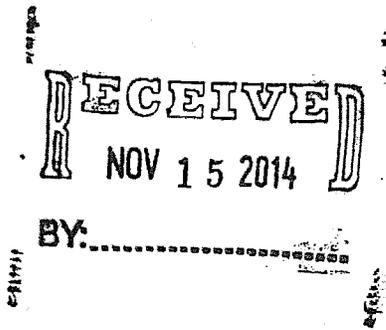
<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-091714	67.0%	63.0%	0
LCS-091714	64.3%	70.0%	0
LCSD-091714	61.3%	68.7%	0
23-B	66.0%	65.7%	0
23-A	65.3%	68.0%	0
GM-6	62.3%	65.7%	0
GM-4	63.3%	47.0%	0
GM-5	64.0%	44.0%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(MNP) = d10-2-Methylnaphthalene	(31-120)	(31-120)
(DBA) = d14-Dibenzo (a,h) anthracene	(10-125)	(10-125)

Prep Method: SW3520C
Log Number Range: 14-18598 to 14-18602



Analytical Resources, Incorporated
Analytical Chemists and Consultants



11 November 2014

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RE: Client Project: Idaho Pole
ARI Job No.: ZH21

Dear Heidi:

Please find enclosed the original Chain-of-Custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received two water samples on October 24, 2014. The samples were analyzed for PAHs and PCP as requested.

The percent recoveries for several compounds were high following the analyses of the LCS/LCSD associated with the PAH+PCP analysis of sample SP-7. Since no target compounds were detected in this sample, the high biases do not compromise an RL. No corrective actions were taken.

There were no further anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.


Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File ZH21

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)
 www.arilabs.com

ARI Assigned Number: ZHZ1	Turn-around Requested: Normal	Page: 1 of 1
ARI Client Company: Hydrometrics	Phone:	Date: 10/23/14
Client Contact: Neidi Kziun		Ice Present? gr
Client Project Name: Idaho Pole		No. of Coolers: 1
Client Project #:	Samplers: Rebecca Fabich	Cooler Temps: 5.8

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested						Notes/Comments	
					PCP 8040	PAH 8270	SIM 8270					
SP-2	10/23/14	850	H2O	4	X	X						
SP-7	↓	830	↓	2			X					

Comments/Special Instructions	Relinquished by: (Signature) <i>Rebecca Fabich</i>	Received by: (Signature) <i>Jennifer Mittsef</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: <i>Rebecca Fabich</i>	Printed Name: <i>Jennifer Mittsef</i>	Printed Name:	Printed Name:
	Company: <i>Idaho Pole</i>	Company: <i>ARI</i>	Company:	Company:
	Date & Time: <i>10/23/14 1400</i>	Date & Time: <i>10/24/14 1100</i>	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: Hydrometrics

Project Name: Idaho Polo

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: ZHZ1

Tracking No: 8062 8779 1620 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 5.8

Time: _____

If cooler temperature is out of compliance fill out form 00070F

Temp Gun ID#: 9087952

Cooler Accepted by: JM Date: 10/24/14 Time: 1105

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA _____

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

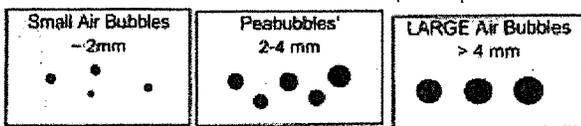
Samples Logged by: JM Date: 10/24/14 Time: 11029

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
<u>SP-2</u>	<u>SP-7</u>		

Additional Notes, Discrepancies, & Resolutions:

By: JM Date: 10/24/14



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: ZH21
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SP-2	ZH21A	14-23073	Water	10/23/14 08:50	10/24/14 11:00
2. SP-7	ZH21B	14-23074	Water	10/23/14 08:30	10/24/14 11:00



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



**Analytical Resources,
Incorporated**
Analytical Chemists and
Consultants

- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: ZH21A
LIMS ID: 14-23073
Matrix: Water
Data Release Authorized: *[Signature]*
Reported: 11/10/14

QC Report No: ZH21-Hydrometrics Inc.
Project: Idaho Pole
Event: NA
Date Sampled: 10/23/14
Date Received: 10/24/14

Date Extracted: 10/28/14
Date Analyzed: 11/06/14 21:54
Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	0.18
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	0.29
120-12-7	Anthracene	0.10	0.32
206-44-0	Fluoranthene	0.10	6.6
129-00-0	Pyrene	0.10	6.2
56-55-3	Benzo (a) anthracene	0.10	7.3
218-01-9	Chrysene	0.10	3.9
205-99-2	Benzo (b) fluoranthene	0.10	6.6
207-08-9	Benzo (k) fluoranthene	0.10	3.6
50-32-8	Benzo (a) pyrene	0.10	7.0
193-39-5	Indeno (1,2,3-cd) pyrene	0.10	2.4
53-70-3	Dibenz (a,h) anthracene	0.10	0.78
191-24-2	Benzo (g,h,i) perylene	0.10	2.8
TOTBEA	Total Benzo(a)fluoranthenes	0.10	14

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 68.7%
d14-Dibenzo(a,h)anthracene 82.7%

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
Page 1 of 1

Sample ID: MB-102814
METHOD BLANK

Lab Sample ID: MB-102814
LIMS ID: 14-23073
Matrix: Water
Data Release Authorized: 
Reported: 11/10/14

QC Report No: ZH21-Hydrometrics Inc.
Project: Idaho Pole
Event: NA
Date Sampled: NA
Date Received: NA

Date Extracted: 10/28/14
Date Analyzed: 11/06/14 12:52
Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 66.3%
d14-Dibenzo(a,h)anthracene 72.0%

ORGANICS ANALYSIS DATA SHEET

PNA's by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-102814

LAB CONTROL SAMPLE

Lab Sample ID: LCS-102814

LIMS ID: 14-23073

Matrix: Water

Data Release Authorized: *AS*

Reported: 11/10/14

QC Report No: ZH21-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 10/28/14

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 11/06/14 13:17

Final Extract Volume LCS: 0.50 mL

LCSD: 11/06/14 13:43

LCSD: 0.50 mL

Instrument/Analyst LCS: NT8/JZ

Dilution Factor LCS: 1.00

LCSD: NT8/JZ

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Naphthalene	2.12	3.00	70.7%	2.01	3.00	67.0%	5.3%
Acenaphthylene	2.03	3.00	67.7%	2.01	3.00	67.0%	1.0%
Acenaphthene	1.98	3.00	66.0%	1.89	3.00	63.0%	4.7%
Fluorene	2.39	3.00	79.7%	2.38	3.00	79.3%	0.4%
Phenanthrene	2.50	3.00	83.3%	2.48	3.00	82.7%	0.8%
Anthracene	2.47	3.00	82.3%	2.47	3.00	82.3%	0.0%
Fluoranthene	2.92	3.00	97.3%	2.93	3.00	97.7%	0.3%
Pyrene	2.62	3.00	87.3%	2.56	3.00	85.3%	2.3%
Benzo(a)anthracene	2.96	3.00	98.7%	2.95	3.00	98.3%	0.3%
Chrysene	2.84	3.00	94.7%	2.87	3.00	95.7%	1.1%
Benzo(b)fluoranthene	3.04	3.00	101%	3.08	3.00	103%	1.3%
Benzo(k)fluoranthene	3.04	3.00	101%	3.10	3.00	103%	2.0%
Benzo(a)pyrene	2.49	3.00	83.0%	2.10	3.00	70.0%	17.0%
Indeno(1,2,3-cd)pyrene	2.88	3.00	96.0%	3.00	3.00	100%	4.1%
Dibenz(a,h)anthracene	2.90	3.00	96.7%	3.00	3.00	100%	3.4%
Benzo(g,h,i)perylene	3.03	3.00	101%	3.08	3.00	103%	1.6%
Total Benzofluoranthenes	8.88	9.00	98.7%	9.00	9.00	100%	1.3%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	74.3%	69.0%
d14-Dibenzo(a,h)anthracene	85.7%	74.7%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZH21-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-102814	66.3%	72.0%	0
LCS-102814	74.3%	85.7%	0
LCSD-102814	69.0%	74.7%	0
SP-2	68.7%	82.7%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(31-120)	(31-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(10-125)	(10-125)

Prep Method: SW3520C
Log Number Range: 14-23073 to 14-23073

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: MB-102814

Extraction Method: SW3520C

METHOD BLANK

Page 1 of 1

Lab Sample ID: MB-102814

QC Report No: ZH21-Hydrometrics Inc.

LIMS ID: 14-23074

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *mm*

Date Sampled: NA

Reported: 11/10/14

Date Received: NA

Date Extracted: 10/28/14

Sample Amount: 500 mL

Date Analyzed: 11/08/14 13:55

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo (a) anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo (b) fluoranthene	0.10	< 0.20 U
207-08-9	Benzo (k) fluoranthene	0.10	< 0.20 U
50-32-8	Benzo (a) pyrene	0.10	< 0.10 U
193-39-5	Indeno (1, 2, 3-cd) pyrene	0.10	< 0.10 U
53-70-3	Dibenz (a, h) anthracene	0.10	< 0.10 U
191-24-2	Benzo (g, h, i) perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	61.7%
d14-Dibenzo (a, h) anthracene	99.0%
2, 4, 6-Tribromophenol	63.5%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-7

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: ZH21B

QC Report No: ZH21-Hydrometrics Inc.

LIMS ID: 14-23074

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *W*

Date Sampled: 10/23/14

Reported: 11/10/14

Date Received: 10/24/14

Date Extracted: 10/28/14

Sample Amount: 500 mL

Date Analyzed: 11/08/14 15:06

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	62.0%
d14-Dibenzo(a,h)anthracene	105%
2,4,6-Tribromophenol	67.3%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZH21-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-102814	61.7%	99.0%	63.5%	0
LCS-102814	64.3%	115%	70.7%	0
LCSD-102814	48.7%	109%	60.1%	0
SP-7	62.0%	105%	67.3%	0

	<u>LCS/MB LIMITS</u>	<u>QC LIMITS</u>
(MNP) = d10-2-Methylnaphthalene	(33-120)	(33-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(22-133)	(22-133)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)

Prep Method: SW3520C
Log Number Range: 14-23074 to 14-23074

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: LCS-102814

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-102814

QC Report No: ZH21-Hydrometrics Inc.

LIMS ID: 14-23074

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *mw*

Date Sampled: NA

Reported: 11/10/14

Date Received: NA

Date Extracted LCS/LCSD: 10/28/14

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 11/08/14 14:19

Final Extract Volume LCS: 0.50 mL

LCSD: 11/08/14 14:43

LCSD: 0.50 mL

Instrument/Analyst LCS: NT11/VTS

Dilution Factor LCS: 1.00

LCSD: NT11/VTS

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Naphthalene	2.44	3.00	81.3%	1.86	3.00	62.0%	27.0%
Acenaphthylene	2.74	3.00	91.3%	2.27	3.00	75.7%	18.8%
Acenaphthene	2.15	3.00	71.7%	1.79	3.00	59.7%	18.3%
Fluorene	2.40	3.00	80.0%	2.18	3.00	72.7%	9.6%
Phenanthrene	3.22	3.00	107%	3.06	3.00	102%	5.1%
Anthracene	2.88	3.00	96.0%	2.72	3.00	90.7%	5.7%
Fluoranthene	3.14	3.00	105%	3.12	3.00	104%	0.6%
Pyrene	3.53	3.00	118%	3.46	3.00	115%	2.0%
Benzo(a)anthracene	3.39	3.00	113%	3.42	3.00	114%	0.9%
Chrysene	3.47	3.00	116%	3.43	3.00	114%	1.2%
Benzo(b)fluoranthene	4.64	3.00	155%	4.73	3.00	158%	1.9%
Benzo(k)fluoranthene	4.64	3.00	155%	4.73	3.00	158%	1.9%
Benzo(a)pyrene	2.84	3.00	94.7%	2.98	3.00	99.3%	4.8%
Indeno(1,2,3-cd)pyrene	4.22	3.00	141%	4.04	3.00	135%	4.4%
Dibenz(a,h)anthracene	3.99	3.00	133%	3.76	3.00	125%	5.9%
Benzo(g,h,i)perylene	3.98	3.00	133%	3.86	3.00	129%	3.1%
Pentachlorophenol	2.89	3.00	96.3%	2.83	3.00	94.3%	2.1%
Total Benzofluoranthenes	9.28	9.00	103%	9.46	9.00	105%	1.9%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	64.3%	48.7%
d14-Dibenzo(a,h)anthracene	115%	109%
2,4,6-Tribromophenol	70.7%	60.1%

ORGANICS ANALYSIS DATA SHEET

PCP by GC/ECD Method SW8041

Extraction Method: SW3510C

Page 1 of 1

Sample ID: MB-102914

METHOD BLANK

Lab Sample ID: MB-102914

LIMS ID: 14-23073

Matrix: Water

Data Release Authorized: *MW*

Reported: 11/11/14

QC Report No: ZH21-Hydrometrics Inc.

Project: Idaho Pole

Date Sampled: NA

Date Received: NA

Date Extracted: 10/29/14

Date Analyzed: 11/10/14 13:26

Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	78.8%
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ORGANICS ANALYSIS DATA SHEET

PCP by GC/ECD Method SW8041

Extraction Method: SW3510C

Page 1 of 1

Sample ID: SP-2

SAMPLE

Lab Sample ID: ZH21A

LIMS ID: 14-23073

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 11/11/14

QC Report No: ZH21-Hydrometrics Inc.

Project: Idaho Pole

Date Sampled: 10/23/14

Date Received: 10/24/14

Date Extracted: 10/29/14

Date Analyzed: 11/10/14 15:14

Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	4.4

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	84.4%
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SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZH21-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-102914	78.8%	0
LCS-102914	97.6%	0
LCSD-102914	99.6%	0
SP-2	84.4%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-23073 to 14-23073

ORGANICS ANALYSIS DATA SHEET

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: LCS-102914

LCS/LCSD

Lab Sample ID: LCS-102914

LIMS ID: 14-23073

Matrix: Water

Data Release Authorized: *[Signature]*

Reported: 11/11/14

QC Report No: ZH21-Hydrometrics Inc.

Project: Idaho Pole

Date Sampled: 10/23/14

Date Received: 10/24/14

Date Extracted LCS/LCSD: 10/29/14

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 11/10/14 14:02

Final Extract Volume LCS: 50 mL

LCSD: 11/10/14 14:38

LCSD: 50 mL

Instrument/Analyst LCS: ECD8/YZ

Dilution Factor LCS: 1.00

LCSD: ECD8/YZ

LCSD: 1.00

Analyte	Spike		LCS		Spike		LCSD		RPD
	LCS	Added-LCS	Recovery	LCSD	Added-LCSD	Recovery	LCSD		
Pentachlorophenol	1.68	2.50	67.2%	1.82	2.50	72.8%	8.0%		

Chlorophenols Surrogate Recovery

	LCS	LCSD
2,4,6-Tribromophenol	97.6%	99.6%

Results reported in µg/L

RPD calculated using sample concentrations per SW846.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

17 December 2014

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RE: Client Project: Idaho Pole
ARI Job No.: ZM42

Dear Heidi:

Please find enclosed the original Chain-of-Custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received two water samples on December, 2014. The samples were analyzed for PAHs and PCP as requested.

The percent recoveries for several compounds were high following the analysis of the LCS associated with the PAH+PCP analysis of sample SP-7. Since no target compounds were detected in this sample, the high biases do not compromise an RL. No corrective actions were taken.

There were no further anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.


Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File ZM42

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)
 www.arilabs.com

ARI Assigned Number: <i>ZM42</i>	Turn-around Requested: <i>Normal</i>	Page: <i>1</i> of <i>1</i>
ARI Client Company: <i>Hydromedics</i>	Phone:	Date: <i>11/24/14</i> Ice Present? <i>yes</i>
Client Contact: <i>Heidi Kainu</i>		No. of Coolers: <i>1</i> Cooler Temps:

Client Project Name: <i>Idaho Pole</i>	Analysis Requested	Notes/Comments
Client Project #:		
Samplers: <i>Rebecca Fabich</i>		

Sample ID	Date	Time	Matrix	No. Containers	PCP	OTH	PAH	GLC	MIS	DEL								
<i>SP-2</i>	<i>11/24/14</i>	<i>910</i>	<i>H2O</i>	<i>4</i>	<i>X</i>	<i>X</i>												
<i>SP-7</i>	<i>↓</i>	<i>850</i>	<i>↓</i>	<i>2</i>					<i>X</i>									

Comments/Special Instructions	Relinquished by: (Signature) <i>Rebecca Fabich</i>	Received by: (Signature) <i>Jennifer Millsap</i>	Relinquished by: (Signature)	Received by: (Signature)
	Printed Name: <i>Rebecca Fabich</i>	Printed Name: <i>Jennifer Millsap</i>	Printed Name:	Printed Name:
	Company: <i>Idaho Pole</i>	Company: <i>ARI</i>	Company:	Company:
	Date & Time: <i>11/24/14 1100</i>	Date & Time: <i>11/25/14 1330</i>	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

2000 : 2014



Cooler Receipt Form

ARI Client: Hydrometrics

Project Name: Idaho Polo

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: ZM42

Tracking No: 8062 8779 1630 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 5.6

Time: 1330

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 908 77952

Cooler Accepted by: JM Date: 11/25/14 Time: 1330

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: Box

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI..... NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

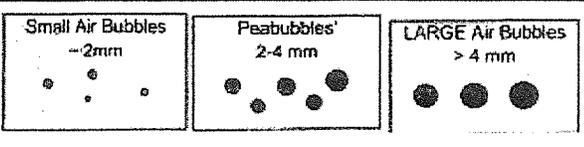
Samples Logged by: AV Date: 11/25/14 Time: 1605

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: ZM42
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SP-2	ZM42A	14-25897	Water	11/24/14 09:10	11/25/14 13:30
2. SP-7	ZM42B	14-25898	Water	11/24/14 08:50	11/25/14 13:30



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



**Analytical Resources,
Incorporated**
Analytical Chemists and
Consultants

- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" (**Dioxin/Furan analysis only**)
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. (**Dioxin/Furan analysis only**)
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. (**Dioxin/Furan analysis only**)



Geotechnical Data

- A The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F Samples were frozen prior to particle size determination
- SM Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS Sample did not contain the proportion of “fines” required to perform the pipette portion of the grain size analysis
- W Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Extraction Method: SW3520C

Page 1 of 1

Sample ID: MB-112814

METHOD BLANK

Lab Sample ID: MB-112814

LIMS ID: 14-25897

Matrix: Water

Data Release Authorized: *mmw*

Reported: 12/10/14

QC Report No: ZM42-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted: 11/28/14

Date Analyzed: 12/08/14 22:04

Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 79.7%
d14-Dibenzo(a,h)anthracene 81.7%

ORGANICS ANALYSIS DATA SHEET

PNA's by SW8270D-SIM GC/MS
Extraction Method: SW3520C
Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: ZM42A
LIMS ID: 14-25897
Matrix: Water
Data Release Authorized: *MW*
Reported: 12/10/14

QC Report No: ZM42-Hydrometrics Inc.
Project: Idaho Pole
Event: NA
Date Sampled: 11/24/14
Date Received: 11/25/14

Date Extracted: 11/28/14
Date Analyzed: 12/09/14 00:29
Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	0.39
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	0.17
129-00-0	Pyrene	0.10	0.38
56-55-3	Benzo (a) anthracene	0.10	0.12
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo (b) fluoranthene	0.10	0.17
207-08-9	Benzo (k) fluoranthene	0.10	< 0.10 U
50-32-8	Benzo (a) pyrene	0.10	0.19
193-39-5	Indeno (1,2,3-cd) pyrene	0.10	< 0.10 U
53-70-3	Dibenz (a,h) anthracene	0.10	< 0.10 U
191-24-2	Benzo (g,h,i) perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	0.35

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 68.7%
d14-Dibenzo(a,h)anthracene 82.3%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZM42-Hydrometrics Inc.
Project: Idaho Pole

Client ID	MNP	DBA	TOT OUT
MB-112814	79.7%	81.7%	0
LCS-112814	72.3%	95.0%	0
SP-2	68.7%	82.3%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(31-120)	(31-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(10-125)	(10-125)

Prep Method: SW3520C
Log Number Range: 14-25897 to 14-25897

ORGANICS ANALYSIS DATA SHEET

PNA's by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-112814

LAB CONTROL SAMPLE

Lab Sample ID: LCS-112814

LIMS ID: 14-25897

Matrix: Water

Data Release Authorized: *MW*

Reported: 12/10/14

QC Report No: ZM42-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 11/28/14

Date Analyzed LCS: 12/08/14 22:28

Instrument/Analyst LCS: NT8/JZ

Sample Amount LCS: 500 mL

Final Extract Volume LCS: 0.50 mL

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	2.20	3.00	73.3%
Acenaphthylene	2.38	3.00	79.3%
Acenaphthene	2.22	3.00	74.0%
Fluorene	2.76	3.00	92.0%
Phenanthrene	2.97	3.00	99.0%
Anthracene	2.89	3.00	96.3%
Fluoranthene	3.18	3.00	106%
Pyrene	3.09	3.00	103%
Benzo (a) anthracene	3.10	3.00	103%
Chrysene	3.08	3.00	103%
Benzo (b) fluoranthene	3.33	3.00	111%
Benzo (k) fluoranthene	3.25	3.00	108%
Benzo (a) pyrene	3.00	3.00	100%
Indeno (1,2,3-cd) pyrene	3.66	3.00	122%
Dibenz (a,h) anthracene	3.47	3.00	116%
Benzo (g,h,i) perylene	3.71	3.00	124%
Total Benzofluoranthenes	9.76	9.00	108%

Reported in µg/L (ppb)

SIM Semivolatle Surrogate Recovery

d10-2-Methylnaphthalene	72.3%
d14-Dibenzo (a,h) anthracene	95.0%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: MB-112814

Extraction Method: SW3520C

METHOD BLANK

Page 1 of 1

Lab Sample ID: MB-112814

QC Report No: ZM42-Hydrometrics Inc.

LIMS ID: 14-25898

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *MW*

Date Sampled: NA

Reported: 12/15/14

Date Received: NA

Date Extracted: 11/28/14

Sample Amount: 500 mL

Date Analyzed: 12/13/14 13:42

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	63.3%
d14-Dibenzo(a,h)anthracene	111%
2,4,6-Tribromophenol	97.3%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-7

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: ZM42B

QC Report No: ZM42-Hydrometrics Inc.

LIMS ID: 14-25898

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *mmw*

Date Sampled: 11/24/14

Reported: 12/15/14

Date Received: 11/25/14

Date Extracted: 11/28/14

Sample Amount: 500 mL

Date Analyzed: 12/13/14 14:53

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	66.0%
d14-Dibenzo(a,h)anthracene	123%
2,4,6-Tribromophenol	103%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: LCS-112814

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-112814

QC Report No: ZM42-Hydrometrics Inc.

LIMS ID: 14-25898

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: *MW*

Date Sampled: NA

Reported: 12/15/14

Date Received: NA

Date Extracted LCS/LCSD: 11/28/14

Sample Amount LCS: 500 mL

Date Analyzed LCS: 12/13/14 14:06

Final Extract Volume LCS: 0.50 mL

Instrument/Analyst LCS: NT11/VTS

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	2.41	3.00	80.3%
Acenaphthylene	2.91	3.00	97.0%
Acenaphthene	2.31	3.00	77.0%
Fluorene	2.56	3.00	85.3%
Phenanthrene	3.47	3.00	116%
Anthracene	3.35	3.00	112%
Fluoranthene	3.24	3.00	108%
Pyrene	4.14	3.00	138%
Benzo(a)anthracene	3.78	3.00	126%
Chrysene	3.70	3.00	123%
Benzo(b)fluoranthene	5.40	3.00	180%
Benzo(k)fluoranthene	5.40	3.00	180%
Benzo(a)pyrene	3.69	3.00	123%
Indeno(1,2,3-cd)pyrene	4.79	3.00	160%
Dibenz(a,h)anthracene	4.60	3.00	153%
Benzo(g,h,i)perylene	4.70	3.00	157%
Pentachlorophenol	3.80	3.00	127%
Total Benzofluoranthenes	10.8	9.00	120%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	61.7%
d14-Dibenzo(a,h)anthracene	124%
2,4,6-Tribromophenol	98.7%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZM42-Hydrometrics Inc.
Project: Idaho Pole

Client ID	MNP	DBA	TBP	TOT OUT
MB-112814	63.3%	111%	97.3%	0
LCS-112814	61.7%	124%	98.7%	0
SP-7	66.0%	123%	103%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(33-120)	(33-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(22-133)	(22-133)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)

Prep Method: SW3520C
Log Number Range: 14-25898 to 14-25898

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MB-112814
METHOD BLANK

Lab Sample ID: MB-112814
LIMS ID: 14-25897
Matrix: Water
Data Release Authorized: *MW*
Reported: 12/17/14

QC Report No: ZM42-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: NA
Date Received: NA

Date Extracted: 11/28/14
Date Analyzed: 12/16/14 12:13
Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	0.50

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	76.8%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: SP-2
SAMPLE

Lab Sample ID: ZM42A
LIMS ID: 14-25897
Matrix: Water
Data Release Authorized: *MW*
Reported: 12/17/14

QC Report No: ZM42-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 11/24/14
Date Received: 11/25/14

Date Extracted: 11/28/14
Date Analyzed: 12/16/14 13:24
Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	3.7 B

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol 92.8%

SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZM42-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-112814	76.8%	0
LCS-112814	106%	0
SP-2	92.8%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-25897 to 14-25897

ORGANICS ANALYSIS DATA SHEET

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: LCS-112814

LAB CONTROL

Lab Sample ID: LCS-112814

LIMS ID: 14-25897

Matrix: Water

Data Release Authorized: *MW*

Reported: 12/17/14

QC Report No: ZM42-Hydrometrics Inc.

Project: Idaho Pole

Date Sampled: 11/24/14

Date Received: 11/25/14

Date Extracted: 11/28/14

Date Analyzed: 12/16/14 12:49

Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

Analyte	Lab Control	Spike Added	Recovery
Pentachlorophenol	1.58	2.50	63.2%

Chlorophenols Surrogate Recovery

2,4,6-Tribromophenol 106%

Results reported in µg/L



Analytical Resources, Incorporated
Analytical Chemists and Consultants

26 January 2015

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RE: Client Project: Idaho Pole
ARI Job No.: ZQ80

Dear Heidi:

Please find enclosed the original Chain-of-Custody (COC) record and the final results for the samples from the project referenced above. Analytical Resources Inc. (ARI) received seven water samples on December 24, 2014. The samples were analyzed for PAHs and PCP as requested.

The percent difference (%D) for indeno(1,2,3-cd)pyrene was not within control limits for the CCAL that bracketed the PAH+PCP analysis of sample SP-7. All positive results for this compound have been flagged with a Q qualifier to denote the high %D.

There were no further anomalies associated with these analyses.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File ZQ80

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)
 www.arilabs.com

ARI Assigned Number: E280	Turn-around Requested: Normal	Page: 1 of 1
ARI Client Company: Hydrometries	Phone:	Date: 12/22/14 Ice Present? yo
Client Contact: Heide Kauer	No. of Coolers: 1	Cooler Temps: 3.3

Sample ID	Date	Time	Matrix	No. Containers	Analysis Requested						Notes/Comments	
					PEP 8040	PAH 8210	OLEF 8210	SIM 8210				
SP-2	12/22/14	845	H2O	4	X	X						
BE-2		910		2	X							
BE-3		915		2	X							
BE-4		930		2	X							
BE-5		945		2	X							
SP-7		830		2				X				
GM-4		1030	✓	2	X							

Comments/Special Instructions	Relinquished by (Signature): Rebecca Fabich	Received by (Signature): [Signature]	Relinquished by (Signature):	Received by (Signature):
	Printed Name: Rebecca Fabich	Printed Name: Chris Hwele	Printed Name:	Printed Name:
	Company: Idaho Pol	Company: ARI	Company:	Company:
	Date & Time: 12/22/14 1230	Date & Time: 12/24/14 1103	Date & Time:	Date & Time:

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

20250901:00007



Cooler Receipt Form

ARI Client: Hydrometrics

Project Name: Idaho

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: ZQ80

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? ... YES NO

Were custody papers properly filled out (ink, signed, etc) ... YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 3.3

Time: 1103

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 9027F52

Cooler Accepted by: CA Date: 12/24/14 Time: 1103

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? ... YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? ... NA YES NO

Were all bottles sealed in individual plastic bags? ... YES NO

Did all bottles arrive in good condition (unbroken)? ... YES NO

Were all bottle labels complete and legible? ... YES NO

Did the number of containers listed on COC match with the number of containers received? ... YES NO

Did all bottle labels and tags agree with custody papers? ... YES NO

Were all bottles used correct for the requested analyses? ... YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... NA YES NO

Were all VOC vials free of air bubbles? ... NA YES NO

Was sufficient amount of sample sent in each bottle? ... YES NO

Date VOC Trip Blank was made at ARI ... NA

Was Sample Split by ARI: NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 12/24/14 Time: 1135

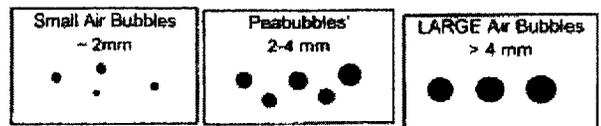
**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

1 of 2 bottles for BE-5 arrived broken, the other was missing a lid. Replaced lid & put sample on hold

By: JM Date: 12/24/14



Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: ZQ80
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SP-2	ZQ80A	14-28335	Water	12/22/14 08:45	12/24/14 11:03
2. BE-2	ZQ80B	14-28336	Water	12/22/14 09:00	12/24/14 11:03
3. BE-3	ZQ80C	14-28337	Water	12/22/14 09:15	12/24/14 11:03
4. BE-4	ZQ80D	14-28338	Water	12/22/14 09:30	12/24/14 11:03
5. SP-7	ZQ80E	14-28339	Water	12/22/14 08:30	12/24/14 11:03
6. GM-4	ZQ80F	14-28340	Water	12/22/14 10:30	12/24/14 11:03
7. BE-5	ZQ80G	14-28341	Water	12/22/14 09:45	12/24/14 11:03



Data Reporting Qualifiers

Effective 12/31/13

Inorganic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Duplicate RPD is not within established control limits
- B Reported value is less than the CRDL but \geq the Reporting Limit
- N Matrix Spike recovery not within established control limits
- NA Not Applicable, analyte not spiked
- H The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- L Analyte concentration is ≤ 5 times the Reporting Limit and the replicate control limit defaults to ± 1 RL instead of the normal 20% RPD

Organic Data

- U Indicates that the target analyte was not detected at the reported concentration
- * Flagged value is not within established control limits
- B Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
- J Estimated concentration when the value is less than ARI's established reporting limits
- D The spiked compound was not detected due to sample extract dilution
- E Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.



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- Q Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).
- S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid; a dilution is required to obtain valid quantification of the analyte
- NA The flagged analyte was not analyzed for
- NR Spiked compound recovery is not reported due to chromatographic interference
- NS The flagged analyte was not spiked into the sample
- M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters. This flag is used only for GC-MS analyses
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"
- Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.
- EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2.5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**
- C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column
- P The analyte was detected on both chromatographic columns but the quantified values differ by $\geq 40\%$ RPD with no obvious chromatographic interference
- X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**
- Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions. **(Dioxin/Furan analysis only)**



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Geotechnical Data

- A** The total of all fines fractions. This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
- F** Samples were frozen prior to particle size determination
- SM** Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
- SS** Sample did not contain the proportion of “fines” required to perform the pipette portion of the grain size analysis
- W** Weight of sample in some pipette aliquots was below the level required for accurate weighting

ORGANICS ANALYSIS DATA SHEET

PNA's by SW8270D-SIM GC/MS

Extraction Method: SW3520C

Page 1 of 1

Sample ID: MB-122914

METHOD BLANK

Lab Sample ID: MB-122914

LIMS ID: 14-28335

Matrix: Water

Data Release Authorized: *MM*

Reported: 01/21/15

QC Report No: ZQ80-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted: 12/29/14

Date Analyzed: 01/20/15 13:30

Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 48.0%
d14-Dibenzo(a,h)anthracene 59.0%

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Extraction Method: SW3520C

Page 1 of 1

Sample ID: SP-2

SAMPLE

Lab Sample ID: ZQ80A

LIMS ID: 14-28335

Matrix: Water

Data Release Authorized: *MW*

Reported: 01/21/15

QC Report No: ZQ80-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: 12/22/14

Date Received: 12/24/14

Date Extracted: 12/29/14

Date Analyzed: 01/20/15 15:10

Instrument/Analyst: NT8/JZ

Sample Amount: 500 mL

Final Extract Volume: 0.5 mL

Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	0.18
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	0.18
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	0.11
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	0.11
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.10	0.22

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene 52.3%
d14-Dibenzo(a,h)anthracene 71.0%

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZQ80-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
MB-122914	48.0%	59.0%	0
LCS-122914	57.7%	74.0%	0
LCSD-122914	53.3%	81.3%	0
SP-2	52.3%	71.0%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(31-120)	(31-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(10-125)	(10-125)

Prep Method: SW3520C
Log Number Range: 14-28335 to 14-28335

ORGANICS ANALYSIS DATA SHEET

PNAs by SW8270D-SIM GC/MS

Page 1 of 1

Sample ID: LCS-122914

LAB CONTROL SAMPLE

Lab Sample ID: LCS-122914

LIMS ID: 14-28335

Matrix: Water

Data Release Authorized: *MM*

Reported: 01/21/15

QC Report No: ZQ80-Hydrometrics Inc.

Project: Idaho Pole

Event: NA

Date Sampled: NA

Date Received: NA

Date Extracted LCS/LCSD: 12/29/14

Sample Amount LCS: 500 mL

LCSD: 500 mL

Date Analyzed LCS: 01/20/15 13:55

Final Extract Volume LCS: 0.50 mL

LCSD: 01/20/15 14:20

LCSD: 0.50 mL

Instrument/Analyst LCS: NT8/JZ

Dilution Factor LCS: 1.00

LCSD: NT8/JZ

LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Naphthalene	1.67	3.00	55.7%	1.54	3.00	51.3%	8.1%
Acenaphthylene	1.76	3.00	58.7%	1.63	3.00	54.3%	7.7%
Acenaphthene	1.70	3.00	56.7%	1.61	3.00	53.7%	5.4%
Fluorene	2.02	3.00	67.3%	1.84	3.00	61.3%	9.3%
Phenanthrene	2.10	3.00	70.0%	2.01	3.00	67.0%	4.4%
Anthracene	1.93	3.00	64.3%	1.84	3.00	61.3%	4.8%
Fluoranthene	2.20	3.00	73.3%	2.22	3.00	74.0%	0.9%
Pyrene	2.05	3.00	68.3%	2.04	3.00	68.0%	0.5%
Benzo(a)anthracene	2.06	3.00	68.7%	2.13	3.00	71.0%	3.3%
Chrysene	2.03	3.00	67.7%	2.09	3.00	69.7%	2.9%
Benzo(b)fluoranthene	2.30	3.00	76.7%	2.38	3.00	79.3%	3.4%
Benzo(k)fluoranthene	2.15	3.00	71.7%	2.28	3.00	76.0%	5.9%
Benzo(a)pyrene	1.85	3.00	61.7%	1.67	3.00	55.7%	10.2%
Indeno(1,2,3-cd)pyrene	2.24	3.00	74.7%	2.31	3.00	77.0%	3.1%
Dibenz(a,h)anthracene	2.27	3.00	75.7%	2.44	3.00	81.3%	7.2%
Benzo(g,h,i)perylene	2.24	3.00	74.7%	2.30	3.00	76.7%	2.6%
Total Benzofluoranthenes	6.12	9.00	68.0%	6.45	9.00	71.7%	5.3%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	57.7%	53.3%
d14-Dibenzo(a,h)anthracene	74.0%	81.3%

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: SP-7

Extraction Method: SW3520C

SAMPLE

Page 1 of 1

Lab Sample ID: ZQ80E

QC Report No: ZQ80-Hydrometrics Inc.

LIMS ID: 14-28339

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized:

Date Sampled: 12/22/14

Reported: 01/23/15

Date Received: 12/24/14

Date Extracted: 12/26/14

Sample Amount: 500 mL

Date Analyzed: 01/22/15 17:03

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	63.3%
d14-Dibenzo(a,h)anthracene	82.7%
2,4,6-Tribromophenol	62.3% Q

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: MB-122614

Extraction Method: SW3520C

METHOD BLANK

Page 1 of 1

Lab Sample ID: MB-122614

QC Report No: ZQ80-Hydrometrics Inc.

LIMS ID: 14-28339

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized:

Date Sampled: NA

Reported: 01/23/15

Date Received: NA

Date Extracted: 12/26/14

Sample Amount: 500 mL

Date Analyzed: 01/22/15 16:15

Final Extract Volume: 0.5 mL

Instrument/Analyst: NT11/VTS

Dilution Factor: 1.00

CAS Number	Analyte	LOQ	Result
91-20-3	Naphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.20 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.20 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenzo(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
87-86-5	Pentachlorophenol	0.50	< 0.50 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	67.3%
d14-Dibenzo(a,h)anthracene	72.7%
2,4,6-Tribromophenol	61.6% Q

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by Selected Ion Monitoring GC/MS

Sample ID: LCS-122614

Page 1 of 1

LAB CONTROL SAMPLE

Lab Sample ID: LCS-122614

QC Report No: ZQ80-Hydrometrics Inc.

LIMS ID: 14-28339

Project: Idaho Pole

Matrix: Water

Event: NA

Data Release Authorized: 

Date Sampled: NA

Reported: 01/23/15

Date Received: NA

Date Extracted LCS/LCSD: 12/26/14

Sample Amount LCS: 500 mL

Date Analyzed LCS: 01/22/15 16:39

Final Extract Volume LCS: 0.50 mL

Instrument/Analyst LCS: NT11/VTS

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	1.66	3.00	55.3%
Acenaphthylene	2.15	3.00	71.7%
Acenaphthene	1.74	3.00	58.0%
Fluorene	2.07	3.00	69.0%
Phenanthrene	2.49	3.00	83.0%
Anthracene	2.32	3.00	77.3%
Fluoranthene	2.38	3.00	79.3%
Pyrene	2.70	3.00	90.0%
Benzo(a)anthracene	2.81	3.00	93.7%
Chrysene	2.71	3.00	90.3%
Benzo(b)fluoranthene	3.52	3.00	117%
Benzo(k)fluoranthene	3.52	3.00	117%
Benzo(a)pyrene	2.35	3.00	78.3%
Indeno(1,2,3-cd)pyrene	2.86 Q	3.00	95.3%
Dibenz(a,h)anthracene	2.89	3.00	96.3%
Benzo(g,h,i)perylene	2.67	3.00	89.0%
Pentachlorophenol	1.38	3.00	46.0%
Total Benzofluoranthenes	7.04	9.00	78.2%

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	58.7%
d14-Dibenzo(a,h)anthracene	82.3%
2,4,6-Tribromophenol	66.7% Q

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZQ80-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-122614	67.3%	72.7%	61.6%Q	0
LCS-122614	58.7%	82.3%	66.7%Q	0
SP-7	63.3%	82.7%	62.3%Q	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(33-120)	(33-120)
(DBA) = d14-Dibenzo(a,h)anthracene	(22-133)	(22-133)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)

Prep Method: SW3520C
Log Number Range: 14-28339 to 14-28339

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 22-JAN-2015 15:51
 Lab File ID: icv0122.d Init. Cal. Date(s): 12-JUL-2014 12-JUL-2014
 Analysis Type: Init. Cal. Times: 12:11 14:11
 Lab Sample ID: SIM 2.5 Quant Type: ISTD
 Method: /chem3/nt11.i/20150122.b/pnapcp.m

COMPOUND	RRF / AMOUNT	RF2	MIN		MAX		CURVE TYPE
			RRF	%D / %DRIFT	%D / %DRIFT		
2 Naphthalene	0.93314	0.99302	0.010	6.41631	20.00000	Averaged	
\$ 3 2-Methylnaphthalene-d10	0.63008	0.66298	0.010	5.22142	20.00000	Averaged	
4 2-Methylnaphthalene	0.66082	0.67744	0.010	2.51552	20.00000	Averaged	
5 1-Methylnaphthalene	0.62492	0.63958	0.010	2.34488	20.00000	Averaged	
7 Acenaphthylene	1.38117	1.51466	0.010	9.66520	20.00000	Averaged	
9 Acenaphthene	1.01922	1.00494	0.010	-1.40168	20.00000	Averaged	
10 Dibenzofuran	1.59599	1.39639	0.010	-12.50629	20.00000	Averaged	
11 Fluorene	1.21688	1.17422	0.010	-3.50584	20.00000	Averaged	
\$ 13 2,4,6-Tribromophenol (ester)	0.03398	0.04431	0.010	30.39598	20.00000	Averaged	<-
14 Pentachlorophenol (ester)	0.10763	0.10300	0.010	-4.30769	20.00000	Averaged	
16 Phenanthrene	1.00371	1.05696	0.010	5.30526	20.00000	Averaged	
17 Anthracene	0.94646	0.98363	0.010	3.92673	20.00000	Averaged	
\$ 56 Fluoranthene-d10	0.92178	1.00239	0.010	8.74524	20.00000	Averaged	
19 Fluoranthene	1.09654	1.08198	0.010	-1.32845	20.00000	Averaged	
20 Pyrene	1.16342	1.30981	0.010	12.58273	20.00000	Averaged	
22 Benzo(a)anthracene	0.97610	1.09477	0.010	12.15769	20.00000	Averaged	
24 Chrysene	0.93944	1.07964	0.010	14.92311	20.00000	Averaged	
55 Total Benzofluoranthenes	1.04024	1.21133	0.010	16.44706	20.00000	Averaged	
30 Benzo(a)pyrene	0.91533	1.00196	0.010	9.46438	20.00000	Averaged	
33 Indeno(1,2,3-cd)pyrene	0.92140	1.11702	0.010	21.23101	20.00000	Averaged	<-
\$ 32 Dibenz(a,h)anthracene-d14	0.72866	0.74386	0.010	2.08507	20.00000	Averaged	
34 Dibenz(a,h)anthracene	0.86169	0.95749	0.010	11.11677	20.00000	Averaged	
35 Benzo(g,h,i)perylene	0.87304	0.96328	0.010	10.33580	20.00000	Averaged	

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MB-122914
METHOD BLANK

Lab Sample ID: MB-122914
LIMS ID: 14-28335
Matrix: Water
Data Release Authorized: *MW*
Reported: 01/26/15

QC Report No: ZQ80-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: NA
Date Received: NA

Date Extracted: 12/29/14
Date Analyzed: 01/21/15 14:43
Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	66.0%
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ORGANICS ANALYSIS DATA SHEET

PCP by GC/ECD Method SW8041

Extraction Method: SW3510C

Page 1 of 1

Sample ID: SP-2

SAMPLE

Lab Sample ID: ZQ80A

LIMS ID: 14-28335

Matrix: Water

Data Release Authorized: *mmw*

Reported: 01/26/15

QC Report No: ZQ80-Hydrometrics Inc.

Project: Idaho Pole

Date Sampled: 12/22/14

Date Received: 12/24/14

Date Extracted: 12/29/14

Date Analyzed: 01/21/15 16:29

Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	2.7

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	80.0%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: BE-2
SAMPLE

Lab Sample ID: ZQ80B
LIMS ID: 14-28336
Matrix: Water
Data Release Authorized: *MW*
Reported: 01/26/15

QC Report No: ZQ80-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 12/22/14
Date Received: 12/24/14

Date Extracted: 12/29/14
Date Analyzed: 01/21/15 17:04
Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	3.0

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	84.4%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: BE-3
SAMPLE

Lab Sample ID: ZQ80C
LIMS ID: 14-28337
Matrix: Water
Data Release Authorized: *MW*
Reported: 01/26/15

QC Report No: ZQ80-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 12/22/14
Date Received: 12/24/14

Date Extracted: 12/29/14
Date Analyzed: 01/21/15 17:40
Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	2.9

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	92.0%
----------------------	-------

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: BE-4
SAMPLE

Lab Sample ID: ZQ80D
LIMS ID: 14-28338
Matrix: Water
Data Release Authorized: *mmw*
Reported: 01/26/15

QC Report No: ZQ80-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 12/22/14
Date Received: 12/24/14

Date Extracted: 12/29/14
Date Analyzed: 01/21/15 18:15
Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	7.4

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	91.6%
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ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
 Page 1 of 1

Sample ID: GM-4
SAMPLE

Lab Sample ID: ZQ80F
 LIMS ID: 14-28340
 Matrix: Water
 Data Release Authorized: *MW*
 Reported: 01/26/15

QC Report No: ZQ80-Hydrometrics Inc.
 Project: Idaho Pole

Date Sampled: 12/22/14
 Date Received: 12/24/14

Date Extracted: 12/29/14
 Date Analyzed: 01/24/15 14:03
 Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL
 Final Extract Volume: 50 mL
 Dilution Factor: 2.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.50	18

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	99.2%
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SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZQ80-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>TBP</u>	<u>TOT OUT</u>
MB-122914	66.0%	0
LCS-122914	82.8%	0
LCSD-122914	89.6%	0
SP-2	80.0%	0
BE-2	84.4%	0
BE-3	92.0%	0
BE-4	91.6%	0
GM-4	99.2%	0

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-28335 to 14-28340

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
 Page 1 of 1

Sample ID: LCS-122914
LCS/LCSD

Lab Sample ID: LCS-122914
 LIMS ID: 14-28335
 Matrix: Water
 Data Release Authorized: *MW*
 Reported: 01/26/15

QC Report No: ZQ80-Hydrometrics Inc.
 Project: Idaho Pole

Date Sampled: 12/22/14
 Date Received: 12/24/14

Date Extracted LCS/LCSD: 12/29/14

Sample Amount LCS: 500 mL
 LCSD: 500 mL

Date Analyzed LCS: 01/21/15 15:18
 LCSD: 01/21/15 15:54

Final Extract Volume LCS: 50 mL
 LCSD: 50 mL

Instrument/Analyst LCS: ECD8/YZ
 LCSD: ECD8/YZ

Dilution Factor LCS: 1.00
 LCSD: 1.00

Analyte	Spike		LCS	Spike		LCSD	RPD
	LCS	Added-LCS	Recovery	Added-LCSD	Recovery		
Pentachlorophenol	1.67	2.50	66.8%	1.79	2.50	71.6%	6.9%

Chlorophenols Surrogate Recovery

	LCS	LCSD
2,4,6-Tribromophenol	82.8%	89.6%

Results reported in µg/L
 RPD calculated using sample concentrations per SW846.



Analytical Resources, Incorporated
Analytical Chemists and Consultants

26 January 2015

Heidi Kaiser
Hydrometrics, Inc.
5602 Hesper Road
Billings, MT 59106

RE: Client Project: Idaho Pole
ARI Job No.: ZR03

Dear Heidi:

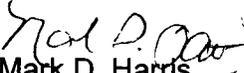
Please find enclosed the original Chain-of-Custody (COC) record and the final results for the sample from the project referenced above. Analytical Resources Inc. (ARI) received one water sample on December 30, 2014. The sample was analyzed for PCP as requested.

There were no anomalies associated with this analysis.

An electronic copy of these reports and all associated raw data will be kept on file at ARI. Should you have any questions regarding these results, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.


Mark D. Harris
Project Manager
206/695-6210
markh@arilabs.com

Enclosures

cc: File ZR03

MDH/mdh

Chain of Custody Record & Laboratory Analysis Request



Analytical Resources, Incorporated
 Analytical Chemists and Consultants
 4611 South 134th Place, Suite 100
 Tukwila, WA 98168
 206-695-6200 206-695-6201 (fax)
 www.arilabs.com

ARI Assigned Number: ZP03	Turn-around Requested: Normal	Page: 1 of 1
ARI Client Company: Hydroinetics	Phone:	Date: 12/29/14 Ice Present? Yes
Client Contact: Heidi Kawan	No. of Coolers: 1	Cooler Temps:

Client Project Name: Idaho fair	Analysis Requested	Notes/Comments
Client Project #:		
Samplers: Rebecca Fabich		

Sample ID	Date	Time	Matrix	No. Containers	PCP 8040													
BE-5	12/29/14	1049	H2O	2	X													Replacement for 12/22/14 sample

Comments/Special Instructions	Relinquished by (Signature): Rebecca Fabich	Received by (Signature): [Signature]	Relinquished by (Signature):	Received by (Signature):
	Printed Name: Rebecca Fabich	Printed Name: A. Volgardson	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 12/29/14 1330	Date & Time: 12/30/14 1425	Date & Time:	Date & Time:

ZP03: 60902

Limits of Liability: ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.



Cooler Receipt Form

ARI Client: HydroMetrics

Project Name: Idanu Pole

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No. ZR03

Tracking No: 8002877911653 NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry) 0.6

Time: 1425

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90077982

Cooler Accepted by AV Date: 12/30/14 Time: 1425

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: _____

Was sufficient ice used (if appropriate)? NA YES NO

Were all bottles sealed in individual plastic bags? YES NO

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)... (NA) YES NO

Were all VOC vials free of air bubbles? (NA) YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: (NA) _____

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: AV Date: 12/30/14 Time: 1639

**** Notify Project Manager of discrepancies or concerns ****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: _____ Date: _____

			Small → "sm" (< 2 mm)
			Peabubbles → "pb" (2 to < 4 mm)
			Large → "lg" (4 to < 6 mm)
			Headspace → "hs" (> 6 mm)

Sample ID Cross Reference Report



ARI Job No: ZR03
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. BE-5	ZR03A	14-28419	Water	12/29/14 10:49	12/30/14 14:25

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: MB-010215
METHOD BLANK

Lab Sample ID: MB-010215
LIMS ID: 14-28419
Matrix: Water
Data Release Authorized: *MW*
Reported: 01/21/15

QC Report No: ZR03-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: NA
Date Received: NA

Date Extracted: 01/02/15
Date Analyzed: 01/15/15 23:32
Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U
Reported in µg/L (ppb)			
Chlorophenol Surrogate Recovery			
	2,4,6-Tribromophenol	86.8%	

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041
Extraction Method: SW3510C
Page 1 of 1

Sample ID: BE-5
SAMPLE

Lab Sample ID: ZR03A
LIMS ID: 14-28419
Matrix: Water
Data Release Authorized: *MW*
Reported: 01/21/15

QC Report No: ZR03-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 12/29/14
Date Received: 12/30/14

Date Extracted: 01/02/15
Date Analyzed: 01/16/15 01:18
Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	< 0.25 U
Reported in µg/L (ppb)			
Chlorophenol Surrogate Recovery			
	2,4,6-Tribromophenol	102%	

SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: ZR03-Hydrometrics Inc.
Project: Idaho Pole

<u>Client ID</u>	<u>TBP</u>	<u>TOT</u>	<u>OUT</u>
MB-010215	86.8%	0	
LCS-010215	103%	0	
BE-5	102%	0	

QC LIMITS

(TBP) = 2,4,6-Tribromophenol

(26-120)

Prep Method: SW3510C
Log Number Range: 14-28419 to 14-28419

ORGANICS ANALYSIS DATA SHEET

PCP by GC/ECD Method SW8041

Page 1 of 1

Sample ID: LCS-010215

LAB CONTROL

Lab Sample ID: LCS-010215

LIMS ID: 14-28419

Matrix: Water

Data Release Authorized: *MW*

Reported: 01/21/15

QC Report No: ZR03-Hydrometrics Inc.

Project: Idaho Pole

Date Sampled: 12/29/14

Date Received: 12/30/14

Date Extracted: 01/02/15

Date Analyzed: 01/16/15 00:07

Instrument/Analyst: ECD8/YZ

Sample Amount: 500 mL

Final Extract Volume: 50 mL

Dilution Factor: 1.00

Analyte	Lab Control	Spike Added	Recovery
Pentachlorophenol	2.01	2.50	80.4%

Chlorophenols Surrogate Recovery

2,4,6-Tribromophenol 103%

Results reported in µg/L