APPENDIX D
GROUNDWATER MONITORING WELL ANALYTICAL DATA AND VALIDATION REPORT

Analytical Resources, Incorporated
Analytical Chemists and Consultants

RECEIVED
MAY 03 2012
BY:.....

30 April 2012

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

RE: Client Project: Idaho Pole
ARI Job No.: UR01

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 ten water samples on April 19, 2012. 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 UR01

MDH/mdh

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: U K01	Turn-around Requested: Normal	Page: 3 of 3	
ARI Client Company: Hydrometrics	Phone:	Date: 4/18/12	Ice Present? yes
Client Contact: Heidi Kaiser		No. of Coolers: 4	Cooler Temps:
Client Project Name: Idaho Pole			
Client Project #:	Samplers: Rebecca Fabich		

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

Sample ID	Date	Time	Matrix	No. Containers	PCP 8040								Notes/Comments
9-B	4/18/12	1224	H2O	2	X								
9-A		1237		2	X								
23B		1305		2	X								
23A		1318		2	X								
24-B		1338		2	X								
24-D		1338		2	X								
GM-6		1345		2	X								
BFEG		1428		2	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) Rebecca Fabich	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: Rebecca Fabich	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 4/18/12 1530	Date & Time: 4/19/12 1450	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.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: ~~Idaho Pole~~ Hydrometrics

Project Name: Idaho Pole

COC No(s): NA

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

Assigned ARI Job No: UR01

Tracking No: 8656 4944 6477/ 7957 6286 1206 NA
8656 6286 1217/

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)..... 5.4 4.1 2.5 11.4

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

Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 4/19/12 Time: ~~1332~~ 1450 JM

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: 4-20-12 Time: 928

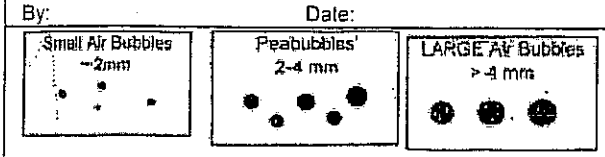
*** Notify Project Manager of discrepancies or concerns ***

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

Additional Notes, Discrepancies, & Resolutions:

3 of 4 Coolers were received @ 1332, 1 was received @ 1450

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Temperature Compliance Form

Cooler#: 1 Temperature(°C): 11.4

Sample ID	Bottle Count	Bottle Type
Samples recieved		
above 6°C		
cooler not tagged		
out of temp		

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: TS Date: 01-20-12 Time: 930

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UR01
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	UR01A	12-6935	Water	04/18/12 14:28	04/19/12 14:50
2.	SP-7	UR01B	12-6936	Water	04/18/12 14:45	04/19/12 14:50
3.	9B	UR01C	12-6937	Water	04/18/12 12:24	04/19/12 14:50
4.	9A	UR01D	12-6938	Water	04/18/12 12:37	04/19/12 14:50
5.	23B	UR01E	12-6939	Water	04/18/12 13:05	04/19/12 14:50
6.	23A	UR01F	12-6940	Water	04/18/12 13:18	04/19/12 14:50
7.	24B	UR01G	12-6941	Water	04/18/12 13:38	04/19/12 14:50
8.	24D	UR01H	12-6942	Water	04/18/12 13:38	04/19/12 14:50
9.	GM6	UR01I	12-6943	Water	04/18/12 13:45	04/19/12 14:50
10.	BFEG	UR01J	12-6944	Water	04/18/12 14:28	04/19/12 14:50

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

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 ≥ 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.

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

M2 The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

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 ≥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

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 9B
SAMPLE

Lab Sample ID: UR01C
LIMS ID: 12-6937
Matrix: Water
Data Release Authorized:
Reported: 04/30/12

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/24/12
Date Analyzed: 04/26/12 20:41
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	**Pentachlorophenol**	0.25	**22 EP**

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	48.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 9B
DILUTION

Lab Sample ID: UR01C
LIMS ID: 12-6937
Matrix: Water
Data Release Authorized:
Reported: 04/30/12

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/24/12
Date Analyzed: 04/27/12 16:05
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	2.5	18

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	70.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 9A
SAMPLE

Lab Sample ID: UR01D
LIMS ID: 12-6938
Matrix: Water
Data Release Authorized:
Reported: 04/30/12

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/24/12
Date Analyzed: 04/26/12 21:17
Instrument/Analyst: ECD1/AAR

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	53.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 23B
SAMPLE

Lab Sample ID: UR01E
LIMS ID: 12-6939
Matrix: Water
Data Release Authorized:
Reported: 04/30/12

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/24/12
Date Analyzed: 04/26/12 21:53
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	2.3

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	70.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 23A
SAMPLE

Lab Sample ID: UR01F
LIMS ID: 12-6940
Matrix: Water
Data Release Authorized:
Reported: 04/30/12

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/24/12
Date Analyzed: 04/26/12 22:29
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	**Pentachlorophenol**	0.25	1.7

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	52.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 24B
SAMPLE

Lab Sample ID: UR01G
LIMS ID: 12-6941
Matrix: Water
Data Release Authorized:
Reported: 04/30/12

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/24/12
Date Analyzed: 04/26/12 23:05
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	1.3

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	73.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 24D
SAMPLE

Lab Sample ID: UR01H
LIMS ID: 12-6942
Matrix: Water
Data Release Authorized:
Reported: 04/30/12

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/24/12
Date Analyzed: 04/26/12 23:41
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	1.1

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	78.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: GM6
SAMPLE

Lab Sample ID: UR01I
LIMS ID: 12-6943
Matrix: Water
Data Release Authorized:
Reported: 04/30/12

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/24/12
Date Analyzed: 04/27/12 01:28
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	3.2

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	74.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: BFEG SAMPLE

Lab Sample ID: UR01J
LIMS ID: 12-6944
Matrix: Water
Data Release Authorized:
Reported: 04/30/12

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/24/12
Date Analyzed: 04/27/12 02:04
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	3.1

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	48.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: MB-042412
METHOD BLANK

Lab Sample ID: MB-042412
LIMS ID: 12-6937
Matrix: Water
Data Release Authorized:
Reported: 04/30/12

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: NA
Date Received: NA

Date Extracted: 04/24/12
Date Analyzed: 04/26/12 18:17
Instrument/Analyst: ECD1/AAR

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	74.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: LCS-042412
LCS/LCSD

Lab Sample ID: LCS-042412
LIMS ID: 12-6937
Matrix: Water
Data Release Authorized:
Reported: 04/30/12

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted LCS/LCSD: 04/24/12

Date Analyzed LCS: 04/26/12 18:53
LCSD: 04/27/12 16:41
Instrument/Analyst LCS: ECD1/AAR
LCSD: ECD1/AAR

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	2.38	2.50	95.2%	1.75	2.50	70.0%	30.5%

Chlorophenols Surrogate Recovery

	LCS	LCSD
2,4,6-Tribromophenol	76.0%	60.8%

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

FORM III

ANALYTICAL RESOURCES INCORPORATED

SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: UR01-Hydrometrics Inc.
Project: Idaho Pole

Client ID	TBP	TOT OUT
MB-042412	74.8%	0
LCS-042412	76.0%	0
LCSD-042412	60.8%	0
9B	48.8%	0
9B DL	70.8%	0
9A	53.6%	0
23B	70.4%	0
23A	52.0%	0
24B	73.2%	0
24D	78.0%	0
GM6	74.4%	0
BFEG	48.8%	0

	LCS/MB LIMITS	QC LIMITS
(TBP) = 2,4,6-Tribromophenol	(41-98)	(26-113)

Prep Method: SW3510C
Log Number Range: 12-6937 to 12-6944

FORM-II SW8041

Analytical Resources, Incorporated
Analytical Chemists and Consultants

2 May 2012

RECEIVED
MAY 07 2012
BY:

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

RE: Client Project: Idaho Pole
ARI Job No.: UQ99

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 twenty water samples on April 19, 2012. The samples were analyzed for PCP as requested.

The percent recovery for the surrogate, 2,4,6-tribromophenol, was slightly high following the analysis of the method blank associated with these samples. Since PCP was not detected in the method blank, the high bias does not compromise the RL. No corrective actions we retaken.

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 UQ99

MDH/mdh

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: UQ99	Turn-around Requested: Normal	Page: 1 of 3	
ARI Client Company: Hydrometrics	Phone:	Date: 4/18/12	Ice Present? yes
Client Contact: Heidi Kaiser		No. of Coolers: 4	Cooler Temps:
Client Project Name: Idaho Pole			
Client Project #:	Samplers: Rebecca Fabich		

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

Sample ID	Date	Time	Matrix	No. Containers	PCP 8040								Notes/Comments
22	4/17/12	1039	H_2O	2	X								
22D		1039		2	X								
15A		1103		2	X								
5C		1129		2	X								
5A		1136		2	X								
Rep 8		1219		2	X								
GM-8		1249		2	X								
27B		1310		2	X								
28-B		1359		2	X								
11-A		1421		2	X								

Analysis Requested

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) Rebecca Fabich	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: Rebecca Fabich	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 4/18/12 1530	Date & Time: 4/19/12 1450	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.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: VQ99	Turn-around Requested: Normal
ARI Client Company: Hydrometrs	Phone:
Client Contact: Heidi Kaier	
Client Project Name: Idaho Pole	
Client Project #:	Samplers: Rebecca Fabich

Page: 2 of 3

Date: 4/18/12 Ice Present? yes

No. of Coolers: 4 Cooler Temps:

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

Sample ID	Date	Time	Matrix	No. Containers	PCP 8040								Notes/Comments
11-F	4/17/12	1421	H2O	2	X								
GM-4		1449		2	X								
GM-5		1503		2	X								
16-B	4/18/12	926		2	X								
25-B		1000		2	X								
25-A		1009		2	X								
26-C		1033		2	X								
26-B		1110		2	X								
26-A		1124		2	X								
9-C		1205		2	X								

Analysis Requested

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) Rebecca Fabich	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: Rebecca Fabich	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 4/18/12 1530	Date & Time: 4/19/12 1450	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.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: ~~Idaho Pole~~ Hydrometrics

Project Name: Idaho Pole

COC No(s): NA

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

Assigned ARI Job No: UQ99

Tracking No: 8656 4944 6477 / 7957 6286 1206 NA
8656 6286 1217 /

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)..... 5.4 4.1 2.5 11.4

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

Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 4/19/12 Time: ~~1332~~ 1450 JM

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: 4-20-12 Time: 840

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

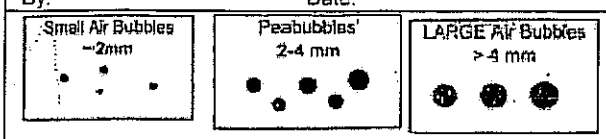
Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

3 of 4 Coolers were received @ 1332, 1 was received @ 1450
1 500 ML Amb broken from samples
5C & 26C.

By: TS Date: 4-20-12

No Dashes in I.D. on bottles



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Temperature Compliance Form

Cooler#: 1 Temperature(°C): 11.4

Sample ID	Bottle Count	Bottle Type
Cooler was		
received		
above 6°C		
But was not		
tagged out		
6°C temp		

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: TS Date: 4-20-12 Time: 843

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UQ99
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.	22	UQ99A	12-6914	Water	04/17/12 10:39	04/19/12 08:23
2.	22D	UQ99B	12-6915	Water	04/17/12 10:39	04/19/12 08:23
3.	15A	UQ99C	12-6916	Water	04/17/12 11:03	04/19/12 08:23
4.	5C	UQ99D	12-6917	Water	04/17/12 11:29	04/19/12 08:23
5.	5A	UQ99E	12-6918	Water	04/17/12 11:36	04/19/12 08:23
6.	RES8	UQ99F	12-6919	Water	04/17/12 12:19	04/19/12 08:23
7.	GM8	UQ99G	12-6920	Water	04/17/12 12:49	04/19/12 08:23
8.	27B	UQ99H	12-6921	Water	04/17/12 13:10	04/19/12 08:23
9.	28B	UQ99I	12-6922	Water	04/17/12 13:59	04/19/12 08:23
10.	11A	UQ99J	12-6923	Water	04/17/12 14:21	04/19/12 08:23
11.	11F	UQ99K	12-6924	Water	04/17/12 14:21	04/19/12 08:23
12.	GM4	UQ99L	12-6925	Water	04/17/12 14:49	04/19/12 08:23
13.	GM5	UQ99M	12-6926	Water	04/17/12 15:03	04/19/12 08:23
14.	16B	UQ99N	12-6927	Water	04/18/12 09:26	04/19/12 08:23
15.	25B	UQ99O	12-6928	Water	04/18/12 10:00	04/19/12 08:23
16.	25A	UQ99P	12-6929	Water	04/18/12 10:09	04/19/12 08:23
17.	26C	UQ99Q	12-6930	Water	04/18/12 10:33	04/19/12 08:23
18.	26B	UQ99R	12-6931	Water	04/18/12 11:10	04/19/12 08:23
19.	26A	UQ99S	12-6932	Water	04/18/12 11:24	04/19/12 08:23
20.	9C	UQ99T	12-6933	Water	04/18/12 12:05	04/19/12 08:23

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Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

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 ≥ 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.

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).

0099 : 00007

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
M2	The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
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 ≥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)**

0099 : 00008

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

UQ99 : 00009

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 22
SAMPLE

Lab Sample ID: UQ99A
LIMS ID: 12-6914
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 04:27
Instrument/Analyst: ECD1/AAR

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	70.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 22D
SAMPLE

Lab Sample ID: UQ99B
LIMS ID: 12-6915
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 05:03
Instrument/Analyst: ECD1/AAR

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	68.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 15A
SAMPLE

Lab Sample ID: UQ99C
LIMS ID: 12-6916
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 05:39
Instrument/Analyst: ECD1/AAR

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	65.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 5C
SAMPLE

Lab Sample ID: UQ99D
LIMS ID: 12-6917
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 06:14
Instrument/Analyst: ECD1/AAR

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	73.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 5A
SAMPLE

Lab Sample ID: UQ99E
LIMS ID: 12-6918
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/30/12 14:19
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 200

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	50	1,000

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	D

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: RES8
SAMPLE

Lab Sample ID: UQ99F
LIMS ID: 12-6919
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 12:29
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	0.65

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	57.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: GM8
SAMPLE

Lab Sample ID: UQ99G
LIMS ID: 12-6920
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 13:05
Instrument/Analyst: ECD1/AAR

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	62.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 27B
SAMPLE

Lab Sample ID: UQ99H
LIMS ID: 12-6921
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/30/12 14:55
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	35

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	85.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 28B
SAMPLE

Lab Sample ID: UQ99I
LIMS ID: 12-6922
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 14:17
Instrument/Analyst: ECD1/AAR

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	59.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 11A
SAMPLE

Lab Sample ID: UQ99J
LIMS ID: 12-6923
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 14:53
Instrument/Analyst: ECD1/AAR

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	60.4%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 11F
SAMPLE

Lab Sample ID: UQ99K
LIMS ID: 12-6924
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 15:29
Instrument/Analyst: ECD1/AAR

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	75.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: GM4
SAMPLE

Lab Sample ID: UQ99L
LIMS ID: 12-6925
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/30/12 15:31
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 5.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	1.2	14

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	62.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: GM5
SAMPLE

Lab Sample ID: UQ99M
LIMS ID: 12-6926
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 19:04
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	5.8

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	81.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 16B
SAMPLE

Lab Sample ID: UQ99N
LIMS ID: 12-6927
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/30/12 16:07
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	22

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery

2,4,6-Tribromophenol	89.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 25B
SAMPLE

Lab Sample ID: UQ99O
LIMS ID: 12-6928
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/30/12 16:43
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 5.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	1.2	29

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	66.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 25A
SAMPLE

Lab Sample ID: UQ99P
LIMS ID: 12-6929
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/30/12 17:19
Instrument/Analyst: ECD1/YZ

Sample Amount: 500 mL
Final Extract Volume: 50 mL
Dilution Factor: 5.00

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	1.2	15

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	62.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 26C
SAMPLE

Lab Sample ID: UQ99Q
LIMS ID: 12-6930
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 21:28
Instrument/Analyst: ECD1/AAR

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	85.2%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 26B
SAMPLE

Lab Sample ID: UQ99R
LIMS ID: 12-6931
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 22:04
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	0.29

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	86.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 26A
SAMPLE

Lab Sample ID: UQ99S
LIMS ID: 12-6932
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 22:40
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	0.79

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	85.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: 9C
SAMPLE

Lab Sample ID: UQ99T
LIMS ID: 12-6933
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/18/12
Date Received: 04/19/12

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 23:16
Instrument/Analyst: ECD1/AAR

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	0.25	9.8

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	81.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: MB-042312
METHOD BLANK

Lab Sample ID: MB-042312
LIMS ID: 12-6914
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: NA
Date Received: NA

Date Extracted: 04/23/12
Date Analyzed: 04/27/12 02:40
Instrument/Analyst: ECD1/AAR

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	105%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: LCS-042312
LCS/LCSD

Lab Sample ID: LCS-042312
LIMS ID: 12-6914
Matrix: Water
Data Release Authorized:
Reported: 05/01/12

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 04/17/12
Date Received: 04/19/12

Date Extracted LCS/LCSD: 04/23/12

Date Analyzed LCS: 04/27/12 03:16
LCSD: 04/27/12 03:51
Instrument/Analyst LCS: ECD1/AAR
LCSD: ECD1/AAR

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	2.31	2.50	92.4%	2.31	2.50	92.4%	0.0%

Chlorophenols Surrogate Recovery

	LCS	LCSD
2,4,6-Tribromophenol	78.0%	82.6%

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

ANALYTICAL RESOURCES INCORPORATED

SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: UQ99-Hydrometrics Inc.
Project: Idaho Pole

Client ID	TBP	TOT OUT
MB-042312	105%*	1
LCS-042312	78.0%	0
LCSD-042312	82.6%	0
22	70.4%	0
22D	68.0%	0
15A	65.2%	0
5C	73.6%	0
5A	D	0
RES8	57.6%	0
GM8	62.8%	0
27B	85.2%	0
28B	59.2%	0
11A	60.4%	0
11F	75.6%	0
GM4	62.2%	0
GM5	81.6%	0
16B	89.2%	0
25B	66.2%	0
25A	62.6%	0
26C	85.2%	0
26B	86.8%	0
26A	85.6%	0
9C	81.6%	0

	LCS/MB LIMITS	QC LIMITS
(TBP) = 2,4,6-Tribromophenol	(41-98)	(26-113)

Prep Method: SW3510C
Log Number Range: 12-6914 to 12-6933

FORM-II SW8041

Analytical Resources, Incorporated
Analytical Chemists and Consultants

RECEIVED
OCT 22 2012
BY:.....

18 October 2012

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

RE: Client Project: Idaho Pole
ARI Job No.: VL55

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 eight water samples on October 2, 2012. 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 VL55

MDH/mdh

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: VL55	Turn-around Requested: Normal
ARI Client Company: Hydrometrics	Phone:
Client Contact: Heidi Kaiser	
Client Project Name: Idaho Pole	
Client Project #:	Samplers: Rebecca Fabich

Page: 1 of 1	
Date: 9/28/12	Ice Present? yes
No. of Coolers: 1	Cooler Temps: 7.1

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

Sample ID	Date	Time	Matrix	No. Containers	PCP 8270	PAH 8270	SIM 8270						Notes/Comments
SP-2 BFEG	9/28/12	0800	H_2O	4	X	X							
BE-2		0815		2	X								
BE-3		0830		2	X								
BE-4		0845		2	X								
BE-5		0900		2	X								
SP-6		0745		2			X						
SP-7		0730		2			X						
GM-4		1000		4	X	X							

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) Rebecca Fabich	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: Rebecca Fabich	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 10/1/12 1200	Date & Time: 10/2/12 950	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.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

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: ULSS

Tracking No: 8656 9494 2806 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)..... 7.1 ___ ___ ___ ___

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

Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 10/2/12 Time: 950

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: _____

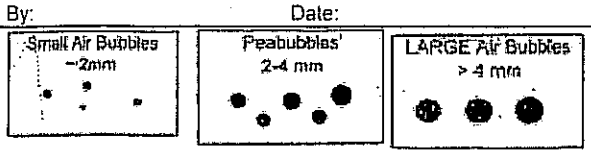
Samples Logged by: TB Date: 10-2-12 Time: 1015

*** 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"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

ULSS : 00003

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VL55
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	VL55A	12-18922	Water	09/28/12 08:00	10/02/12 09:50
2.	BE-2	VL55B	12-18923	Water	09/28/12 08:15	10/02/12 09:50
3.	BE-3	VL55C	12-18924	Water	09/28/12 08:30	10/02/12 09:50
4.	BE-4	VL55D	12-18925	Water	09/28/12 08:45	10/02/12 09:50
5.	BE-5	VL55E	12-18926	Water	09/28/12 09:00	10/02/12 09:50
6.	SP-6	VL55F	12-18927	Water	09/28/12 07:45	10/02/12 09:50
7.	SP-7	VL55G	12-18928	Water	09/28/12 07:30	10/02/12 09:50
8.	GM-4	VL55H	12-18929	Water	09/28/12 10:00	10/02/12 09:50

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

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 ≥ 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.

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).

VL55 : 00005

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

M2 — The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

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 ≥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)**

VL55 : 00006

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

VL55 : 00007

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: GM-4
SAMPLE

Lab Sample ID: VL55H
LIMS ID: 12-18929
Matrix: Water
Data Release Authorized:
Reported: 10/17/12

QC Report No: VL55-Hydrometrics Inc.
Project: Idaho Pole

Date Sampled: 09/28/12
Date Received: 10/02/12

Date Extracted: 10/04/12
Date Analyzed: 10/16/12 15:41
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	33

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	60.0%

FORM I

ANALYTICAL RESOURCES INCORPORATED

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: VL55H
LIMS ID: 12-18929
Matrix: Water
Data Release Authorized:
Reported: 10/11/12

QC Report No: VL55-Hydrometrics Inc.
Project: Idaho Pole
Event: NA
Date Sampled: 09/28/12
Date Received: 10/02/12

Date Extracted: 10/04/12
Date Analyzed: 10/11/12 15:40
Instrument/Analyst: NT4/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**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	**Fluorene**	**0.10**	**1.4**
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	**Anthracene**	**0.10**	**0.32**
206-44-0	**Fluoranthene**	**0.10**	**0.34**
129-00-0	**Pyrene**	**0.10**	**0.30**
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	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	51.7%
d14-Dibenzo(a,h)anthracene	26.3%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

22 October 2012

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

RECEIVED
OCT 26 2012
BY:

RE: Client Project: Idaho Pole
ARI Job No.: VL89

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 thirteen water samples on October 4, 2012. 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 VL89

MDH/mdh

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: VL89	Turn-around Requested: Normal	Page: 3 of 4	
ARI Client Company: Hydrometrics	Phone:	Date: 10/2/12	Ice Present? yes
Client Contact: Heidi Kaiser		No. of Coolers: 5	Cooler Temps: 0.4 - 4.1
Client Project Name: Idaho Pob (Fall Sitewide Sampling)			
Client Project #:	Samplers: Rebecca Fabich		

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

Sample ID	Date	Time	Matrix	No. Containers	PCP 8270								Notes/Comments
24-B	10/2/12	1355	H_2O	2	X								
Ros 8		1534		2	X								
GM-8		1601		2	X								
27-B		1629		2	X								
27-F		1629		2	X								
28-B	10/3/12	949		2	X								
IP-0409-339		1001		2	X								
IP-0409-335		1024		2	X								
IP-0409-334		1034		2	X								
IP-0409-337		1039		2	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) Rebecca Fabich	(Signature)	(Signature)	(Signature)
	Printed Name: Rebecca Fabich	Printed Name: A. Valgardsen	Printed Name:	Printed Name:
	Company: Idaho Pob	Company: ARI	Company:	Company:
	Date & Time: 10/3/12 1500	Date & Time: 10/4/12 1000	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.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: HMX

COC No(s): NA

Assigned ARI Job No: VL89

Project Name: Idaho Pole

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

Tracking No: 8 6864944 2839 7957 6682 9816 NA
7957 6682 9805 7957 6682 9790
7957 6682 9827

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)..... 1.4 3.8 3.8 4.1 0.4

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

Cooler Accepted by: AV Date: 10/4/12 Time: 1000

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:

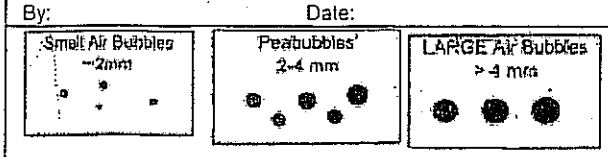
Samples Logged by: JM Date: 10/4/12 Time: 1403

*** 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"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VL89
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole (Fall Sitewide Sampling)

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	24-B	VL89A	12-19190	Water	10/02/12 13:55	10/04/12 10:00
2.	Res 8	VL89B	12-19191	Water	10/02/12 15:34	10/04/12 10:00
3.	GM-8	VL89C	12-19192	Water	10/02/12 16:01	10/04/12 10:00
4.	27-B	VL89D	12-19193	Water	10/02/12 16:29	10/04/12 10:00
5.	27-F	VL89E	12-19194	Water	10/02/12 16:29	10/04/12 10:00
6.	28-B	VL89F	12-19195	Water	10/03/12 09:49	10/04/12 10:00
7.	IP-0409-339	VL89G	12-19196	Water	10/03/12 10:01	10/04/12 10:00
8.	IP-0409-335	VL89H	12-19197	Water	10/03/12 10:24	10/04/12 10:00
9.	IP-0409-334	VL89I	12-19198	Water	10/03/12 10:34	10/04/12 10:00
10.	IP-0409-337	VL89J	12-19199	Water	10/03/12 10:39	10/04/12 10:00
11.	IP-0409-333	VL89K	12-19200	Water	10/03/12 11:09	10/04/12 10:00
12.	IP-0409-332	VL89L	12-19201	Water	10/03/12 11:18	10/04/12 10:00
13.	IP-0409-331	VL89M	12-19202	Water	10/03/12 11:30	10/04/12 10:00

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

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 ≥ 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.

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).

VL89:00006

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

M2 — The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

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 ≥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)**

VL89 : 00007

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

VL89 : 00008

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 24-B
SAMPLE

Lab Sample ID: VL89A
LIMS ID: 12-19190
Matrix: Water
Data Release Authorized:
Reported: 10/22/12

QC Report No: VL89-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/08/12
Date Analyzed: 10/17/12 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	9.8

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	105%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: Res 8
SAMPLE

Lab Sample ID: VL89B
LIMS ID: 12-19191
Matrix: Water
Data Release Authorized:
Reported: 10/22/12

QC Report No: VL89-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/08/12
Date Analyzed: 10/18/12 00:20
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	5.2

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	84.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: GM-8
SAMPLE

Lab Sample ID: VL89C
LIMS ID: 12-19192
Matrix: Water
Data Release Authorized:
Reported: 10/22/12

QC Report No: VL89-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/08/12
Date Analyzed: 10/18/12 14:14
Instrument/Analyst: ECD1/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	11

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	46.6%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 27-B
SAMPLE

Lab Sample ID: VL89D
LIMS ID: 12-19193
Matrix: Water
Data Release Authorized: MW
Reported: 10/22/12

QC Report No: VL89-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/08/12
Date Analyzed: 10/18/12 14:51
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	38

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	75.6%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 27-F
SAMPLE

Lab Sample ID: VL89E
LIMS ID: 12-19194
Matrix: Water
Data Release Authorized:
Reported: 10/22/12

QC Report No: VL89-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/08/12
Date Analyzed: 10/18/12 02:09
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	1.1

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	87.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 28-B
SAMPLE

Lab Sample ID: VL89F
LIMS ID: 12-19195
Matrix: Water
Data Release Authorized:
Reported: 10/22/12

QC Report No: VL89-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/03/12
Date Received: 10/04/12

Date Extracted: 10/08/12
Date Analyzed: 10/18/12 02:45
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	88.8%

ANALYTICAL RESOURCES INCORPORATED

SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VL89-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Client ID	TBP	TOT OUT
MB-100812	88.4%	0
LCS-100812	95.6%	0
LCSD-100812	97.4%	0
24-B	105%	0
Res 8	84.8%	0
GM-8	46.6%	0
27-B	75.6%	0
27-F	87.6%	0
28-B	88.8%	0

	LCS/MB LIMITS	QC LIMITS
(TBP) = 2,4,6-Tribromophenol	(41-98)	(26-113)

Prep Method: SW3510C
Log Number Range: 12-19190 to 12-19195

FORM-II SW8041

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: LCS-100812
LCS/LCSD

Lab Sample ID: LCS-100812
LIMS ID: 12-19190
Matrix: Water
Data Release Authorized:
Reported: 10/22/12

QC Report No: VL89-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted LCS/LCSD: 10/08/12

Date Analyzed LCS: 10/17/12 21:56
LCSD: 10/17/12 22:32
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	2.44	2.50	97.6%	2.40	2.50	96.0%	1.7%

Chlorophenols Surrogate Recovery

	LCS	LCSD
2,4,6-Tribromophenol	95.6%	97.4%

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

Analytical Resources, Incorporated
Analytical Chemists and Consultants

RECEIVED
OCT 29 2012
BY:

23 October 2012

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

RE: Client Project: Idaho Pole
ARI Job No.: VL87

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 twenty water samples on October 4, 2012. The samples were analyzed for PAHs and PCP as requested.

The percent recoveries for the surrogate, 2,4,6-tribromophenol, were slightly high following the PCP analysis of the LCS/LCSD associated with these samples. Since the percent recoveries for PCP were within established QC limits for the LCS/LCSD, no corrective actions were taken.

The percent recovery for 2,4,6-tribromophenol was slightly high following the PCP analysis of sample 25-A. Since this sample was diluted 1:10, the established QC limits do no apply. 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 VL87

MDH/mdh

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: VL87	Turn-around Requested: Normal	Page: 1 of 4	
ARI Client Company: Hydrometrics	Phone:	Date: 10/2/12	Ice Present? yes
Client Contact: Heidi Kaiser		No. of Coolers: 5	Cooler Temps: 0.4 - 4.1
Client Project Name: Idaho Pole (Fall Sitewide Sampling)			
Client Project #:	Samplers: Rebecca Fabich		

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

Sample ID	Date	Time	Matrix	No. Containers	PCP 8040	PAH 8270							Notes/Comments
22	10/1/12	1223	H_2O	4	X	X							
15-A		1254		4	X	X							
5-C		1322		2	X								
5-D		1322		2	X								
5-A		1338		4	X	X							
GM-5		1510		4	X	X							
GM-6		1538		4	X	X							
11-A		1606		2	X								
16-B	10/2/12	924		2	X								
25-B		959		2	X								

Comments/Special Instructions	Relinquished by:	Received by:	Relinquished by:	Received by:
	(Signature) Rebecca Fabich	(Signature) [signature]	(Signature)	(Signature)
	Printed Name: Rebecca Fabich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: Idaho Pole	Company: ARI	Company:	Company:
	Date & Time: 10/3/12 1500	Date & Time: 10/4/12 1000	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.

VL87:000002

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: VL87
Turn-around Requested: Normal
Page: 2 of 4
ARI Client Company: Hydrometrics
Phone:
Date: 10/2/12
Ice Present? yes
Client Contact: Heidi Kaiser
No. of Coolers: 5
Cooler Temps: 0.4 - 4.1
Client Project Name: Idaho Pole (Fall Stewide Sampling)
Client Project #:
Samplers: Rebecca Fabich

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

Sample ID	Date	Time	Matrix	No. Containers	PCP 8270	PAH 8270							Notes/Comments
25-A	10/2/12	1012	H_2O	2	X								
26-C		1048		2	X								
26-B		1107		2	X								
26-A		1119		2	X								
9-C		1159		2	X								
9-B		1222		2	X								
9-A		1235		2	X								
9-D		1235		2	X								
23-B		1307		4	X	X							
23-A		1324		4	X	X							

Comments/Special Instructions

Relinquished by:	Received by:	Relinquished by:	Received by:
(Signature) Rebecca Fabich	(Signature)	(Signature)	(Signature)
Printed Name: Rebecca Fabich	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
Company: Idaho Pole	Company: ARI	Company:	Company:
Date & Time: 10/3/12 1500	Date & Time: 10/4/12 1000	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.

Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: HMX

Project Name: Idaho Pole (Fall Sitewide Sampling)

COC No(s): _____ (NA)

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

Assigned ARI Job No: VL87

Tracking No: 8 6864944 2839 7957 6682 9816 NA
7957 6682 9805 7957 6682 9790
7957 6682 9827

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)..... 1.4 3.8 3.8 4.1 0.4

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

Temp Gun ID#: 90877952

Cooler Accepted by: AV Date: 10/4/12 Time: 1000

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)~~ JM (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: _____

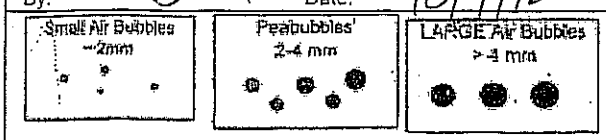
Samples Logged by: JM Date: _____ Time: _____

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

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC
16B	16-B		
25B	25-B		
25A	25-A		
23B	23-B		

Additional Notes, Discrepancies, & Resolutions:

By: JM Date: 10/4/12



Small → "sm"	
Peabubbles → "pb"	
Large → "lg"	
Headspace → "hs"	

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VL87
Client: Hydrometrics Inc.
Project Event: N/A
Project Name: Idaho Pole (Fall Sitewide Sampling)

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	22	VL87A	12-19165	Water	10/01/12 12:23	10/04/12 10:00
2.	15-A	VL87B	12-19166	Water	10/01/12 12:54	10/04/12 10:00
3.	5-C	VL87C	12-19167	Water	10/01/12 13:22	10/04/12 10:00
4.	5-D	VL87D	12-19168	Water	10/01/12 13:22	10/04/12 10:00
5.	5-A	VL87E	12-19169	Water	10/01/12 13:38	10/04/12 10:00
6.	GM-5	VL87F	12-19170	Water	10/01/12 15:10	10/04/12 10:00
7.	GM-6	VL87G	12-19171	Water	10/01/12 15:38	10/04/12 10:00
8.	11-A	VL87H	12-19172	Water	10/01/12 16:06	10/04/12 10:00
9.	16-B	VL87I	12-19173	Water	10/02/12 09:24	10/04/12 10:00
10.	25-B	VL87J	12-19174	Water	10/02/12 09:59	10/04/12 10:00
11.	25-A	VL87K	12-19175	Water	10/02/12 10:12	10/04/12 10:00
12.	26-C	VL87L	12-19176	Water	10/02/12 10:48	10/04/12 10:00
13.	26-B	VL87M	12-19177	Water	10/02/12 11:07	10/04/12 10:00
14.	26-A	VL87N	12-19178	Water	10/02/12 11:19	10/04/12 10:00
15.	9-C	VL87O	12-19179	Water	10/02/12 11:59	10/04/12 10:00
16.	9-B	VL87P	12-19180	Water	10/02/12 12:22	10/04/12 10:00
17.	9-A	VL87Q	12-19181	Water	10/02/12 12:35	10/04/12 10:00
18.	9-D	VL87R	12-19182	Water	10/02/12 12:35	10/04/12 10:00
19.	23-B	VL87S	12-19183	Water	10/02/12 13:07	10/04/12 10:00
20.	23-A	VL87T	12-19184	Water	10/02/12 13:24	10/04/12 10:00

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

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 ≥ 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.

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).

VL87 : 00006

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
M2	The sample contains PCB congeners that do not match any standard Aroclor pattern. The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.
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 ≥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)**

VL87 : 00007

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

VL87:00008

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 22
SAMPLE

Lab Sample ID: VL87A
LIMS ID: 12-19165
Matrix: Water
Data Release Authorized:
Reported: 10/18/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)
Event: NA
Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/06/12
Date Analyzed: 10/17/12 05:45
Instrument/Analyst: NT4/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	0.55
129-00-0	**Pyrene**	0.10	0.49
56-55-3	**Benzo(a)anthracene**	0.10	0.24
218-01-9	**Chrysene**	0.10	0.25
205-99-2	**Benzo(b)fluoranthene**	0.10	0.68
207-08-9	**Benzo(k)fluoranthene**	0.10	0.40
50-32-8	**Benzo(a)pyrene**	0.10	0.69
193-39-5	**Indeno(1,2,3-cd)pyrene**	0.10	0.33
53-70-3	**Dibenz(a,h)anthracene**	0.10	0.11
191-24-2	**Benzo(g,h,i)perylene**	0.10	0.33
TOTBFA	**Total Benzofluoranthenes**	0.20	1.4

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	58.7%
d14-Dibenzo(a,h)anthracene	61.0%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 15-A
SAMPLE

Lab Sample ID: VL87B
LIMS ID: 12-19166
Matrix: Water
Data Release Authorized:
Reported: 10/18/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)
Event: NA
Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/06/12
Date Analyzed: 10/17/12 06:13
Instrument/Analyst: NT4/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**	**0.14**
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.67**
86-73-7	**Fluorene**	**0.10**	**0.90**
85-01-8	**Phenanthrene**	**0.10**	**2.2**
120-12-7	**Anthracene**	**0.10**	**0.64**
206-44-0	**Fluoranthene**	**0.10**	**0.60**
129-00-0	**Pyrene**	**0.10**	**0.73**
56-55-3	**Benzo(a)anthracene**	**0.10**	**0.10**
218-01-9	**Chrysene**	**0.10**	**0.13**
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	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	46.0%
d14-Dibenzo(a,h)anthracene	39.0%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 5-A
SAMPLE

Lab Sample ID: VL87E
LIMS ID: 12-19169
Matrix: Water
Data Release Authorized:
Reported: 10/18/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)
Event: NA
Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/06/12
Date Analyzed: 10/17/12 16:55
Instrument/Analyst: NT4/JZ

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 500

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	500	1,400
208-96-8	Acenaphthylene	500	< 500 U
83-32-9	Acenaphthene	500	< 500 U
86-73-7	Fluorene	500	12,000
85-01-8	Phenanthrene	500	27,000
120-12-7	Anthracene	500	6,000
206-44-0	Fluoranthene	500	14,000
129-00-0	Pyrene	500	16,000
56-55-3	Benzo(a)anthracene	500	4,200
218-01-9	Chrysene	500	4,600
205-99-2	Benzo(b)fluoranthene	500	2,200
207-08-9	Benzo(k)fluoranthene	500	1,300
50-32-8	Benzo(a)pyrene	500	1,800
193-39-5	Indeno(1,2,3-cd)pyrene	500	520
53-70-3	Dibenz(a,h)anthracene	500	< 500 U
191-24-2	Benzo(g,h,i)perylene	500	570
TOTBFA	Total Benzofluoranthenes	1,000	4,800

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	D
d14-Dibenzo(a,h)anthracene	D

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: GM-5
SAMPLE

Lab Sample ID: VL87F
LIMS ID: 12-19170
Matrix: Water
Data Release Authorized:
Reported: 10/18/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)
Event: NA
Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/06/12
Date Analyzed: 10/17/12 07:10
Instrument/Analyst: NT4/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	0.27
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	5.5
86-73-7	Fluorene	0.10	3.0
85-01-8	Phenanthrene	0.10	4.5
120-12-7	Anthracene	0.10	0.74
206-44-0	Fluoranthene	0.10	0.98
129-00-0	Pyrene	0.10	0.97
56-55-3	Benzo(a)anthracene	0.10	0.24
218-01-9	Chrysene	0.10	0.28
205-99-2	Benzo(b)fluoranthene	0.10	0.14
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	0.14
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	0.20	0.31

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery	
d10-2-Methylnaphthalene	53.0%
d14-Dibenzo(a,h)anthracene	81.7%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: GM-6
SAMPLE

Lab Sample ID: VL87G
LIMS ID: 12-19171
Matrix: Water
Data Release Authorized:
Reported: 10/18/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)
Event: NA
Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/06/12
Date Analyzed: 10/17/12 07:38
Instrument/Analyst: NT4/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**
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	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	45.0%
d14-Dibenzo(a,h)anthracene	64.3%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 23-B
SAMPLE

Lab Sample ID: VL87S
LIMS ID: 12-19183
Matrix: Water
Data Release Authorized:
Reported: 10/18/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)
Event: NA
Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/06/12
Date Analyzed: 10/17/12 08:07
Instrument/Analyst: NT4/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	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	49.7%
d14-Dibenzo(a,h)anthracene	79.3%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-100612
METHOD BLANK

Lab Sample ID: MB-100612
LIMS ID: 12-19165
Matrix: Water
Data Release Authorized:
Reported: 10/18/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)
Event: NA
Date Sampled: NA
Date Received: NA

Date Extracted: 10/06/12
Date Analyzed: 10/17/12 04:20
Instrument/Analyst: NT4/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	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	51.3%
d14-Dibenzo(a,h)anthracene	80.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS

Sample ID: LCS-100612
LAB CONTROL SAMPLE

Lab Sample ID: LCS-100612
LIMS ID: 12-19165
Matrix: Water
Data Release Authorized:
Reported: 10/18/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)
Event: NA
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 10/06/12

Date Analyzed LCS: 10/17/12 04:48
LCSD: 10/17/12 05:17
Instrument/Analyst LCS: NT4/JZ
LCSD: NT4/JZ

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

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Naphthalene	1.55	3.00	51.7%	1.68	3.00	56.0%	8.0%
Acenaphthylene	1.72	3.00	57.3%	1.82	3.00	60.7%	5.6%
Acenaphthene	1.76	3.00	58.7%	1.85	3.00	61.7%	5.0%
Fluorene	1.89	3.00	63.0%	2.01	3.00	67.0%	6.2%
Phenanthrene	2.20	3.00	73.3%	2.31	3.00	77.0%	4.9%
Anthracene	1.91	3.00	63.7%	2.10	3.00	70.0%	9.5%
Fluoranthene	2.40	3.00	80.0%	2.46	3.00	82.0%	2.5%
Pyrene	2.46	3.00	82.0%	2.63	3.00	87.7%	6.7%
Benzo(a)anthracene	2.07	3.00	69.0%	2.33	3.00	77.7%	11.8%
Chrysene	2.37	3.00	79.0%	2.51	3.00	83.7%	5.7%
Benzo(b)fluoranthene	2.44	3.00	81.3%	2.73	3.00	91.0%	11.2%
Benzo(k)fluoranthene	2.47	3.00	82.3%	2.69	3.00	89.7%	8.5%
Benzo(a)pyrene	1.68	3.00	56.0%	1.74	3.00	58.0%	3.5%
Indeno(1,2,3-cd)pyrene	2.13	3.00	71.0%	2.36	3.00	78.7%	10.2%
Dibenz(a,h)anthracene	2.09	3.00	69.7%	2.29	3.00	76.3%	9.1%
Benzo(g,h,i)perylene	1.97	3.00	65.7%	2.22	3.00	74.0%	11.9%
Total Benzofluoranthenes	7.33	9.00	81.4%	7.94	9.00	88.2%	8.0%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-2-Methylnaphthalene	54.0%	54.7%
d14-Dibenzo(a,h)anthracene	72.0%	69.7%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Client ID	MNP	DBA	TOT OUT
MB-100612	51.3%	80.0%	0
LCS-100612	54.0%	72.0%	0
LCSD-100612	54.7%	69.7%	0
22	58.7%	61.0%	0
15-A	46.0%	39.0%	0
5-A	D	D	0
GM-5	53.0%	81.7%	0
GM-6	45.0%	64.3%	0
23-B	49.7%	79.3%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(40-110)	(33-107)
(DBA) = d14-Dibenzo(a,h)anthracene	(33-140)	(10-142)

Prep Method: SW3520C
Log Number Range: 12-19165 to 12-19183

FORM-II SIM SW8270

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: MB-100712
METHOD BLANK

Lab Sample ID: MB-100712
LIMS ID: 12-19165
Matrix: Water
Data Release Authorized: MW
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: NA
Date Received: NA

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 04:34
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	82.8%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 22
SAMPLE

Lab Sample ID: VL87A
LIMS ID: 12-19165
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 06:23
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	68.4%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 15-A
SAMPLE

Lab Sample ID: VL87B
LIMS ID: 12-19166
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 06:59
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	1.2

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	70.8%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 5-C
SAMPLE

Lab Sample ID: VL87C
LIMS ID: 12-19167
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 07:35
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	88.0%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 5-D
SAMPLE

Lab Sample ID: VL87D
LIMS ID: 12-19168
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 08:11
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	92.8%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 5-A
SAMPLE

Lab Sample ID: VL87E
LIMS ID: 12-19169
Matrix: Water
Data Release Authorized: mw
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 08:48
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	1,800 ESP

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	105%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 5-A
DILUTION

Lab Sample ID: VL87E
LIMS ID: 12-19169
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/22/12 14:13
Instrument/Analyst: ECD1/YZ

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

CAS Number	Analyte	RL	Result
87-86-5	Pentachlorophenol	120	1,000

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	D

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: GM-5
SAMPLE

Lab Sample ID: VL87F
LIMS ID: 12-19170
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 09:24
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	4.6

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	51.2%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: GM-6
SAMPLE

Lab Sample ID: VL87G
LIMS ID: 12-19171
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 10:00
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	4.8

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	76.4%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 11-A
SAMPLE

Lab Sample ID: VL87H
LIMS ID: 12-19172
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 10:37
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	0.61

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	55.2%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 16-B
SAMPLE

Lab Sample ID: VL87I
LIMS ID: 12-19173
Matrix: Water
Data Release Authorized: MW
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/22/12 14:49
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	35

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	103%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 25-B
SAMPLE

Lab Sample ID: VL87J
LIMS ID: 12-19174
Matrix: Water
Data Release Authorized: MW
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/22/12 15:25
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	36

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	98.4%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 25-A
SAMPLE

Lab Sample ID: VL87K
LIMS ID: 12-19175
Matrix: Water
Data Release Authorized: MW
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/22/12 16:02
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	27

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	115%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 26-C
SAMPLE

Lab Sample ID: VL87L
LIMS ID: 12-19176
Matrix: Water
Data Release Authorized: MW
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 16:03
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	1.4

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	89.6%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 26-B
SAMPLE

Lab Sample ID: VL87M
LIMS ID: 12-19177
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 16:40
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	0.61

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	93.2%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 26-A
SAMPLE

Lab Sample ID: VL87N
LIMS ID: 12-19178
Matrix: Water
Data Release Authorized: MW
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 17:16
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	0.61

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	74.8%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 9-C
SAMPLE

Lab Sample ID: VL87O
LIMS ID: 12-19179
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 17:52
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	8.2

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	78.4%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 9-B
SAMPLE

Lab Sample ID: VL87P
LIMS ID: 12-19180
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/22/12 16:38
Instrument/Analyst: ECD1/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	16

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	44.6%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 9-A
SAMPLE

Lab Sample ID: VL87Q
LIMS ID: 12-19181
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/22/12 17:14
Instrument/Analyst: ECD1/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	11

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	79.6%

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 9-D
SAMPLE

Lab Sample ID: VL87R
LIMS ID: 12-19182
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/22/12 17:50
Instrument/Analyst: ECD1/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	14

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	80.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 23-B
SAMPLE

Lab Sample ID: VL87S
LIMS ID: 12-19183
Matrix: Water
Data Release Authorized: MW
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 20:18
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	3.3

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	89.6%

FORM I

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 23-A
SAMPLE

Lab Sample ID: VL87T
LIMS ID: 12-19184
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/07/12
Date Analyzed: 10/18/12 20:54
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	4.8

Reported in µg/L (ppb)

Chlorophenol Surrogate Recovery	
2,4,6-Tribromophenol	98.0%

ANALYTICAL RESOURCES INCORPORATED

SW8041 CHLOROPHENOLICS SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Client ID	TBP	TOT OUT
MB-100712	82.8%	0
LCS-100712	98.2%*	1
LCSD-100712	114%*	1
22	68.4%	0
15-A	70.8%	0
5-C	88.0%	0
5-D	92.8%	0
5-A	105%	0
5-A DL	D	0
GM-5	51.2%	0
GM-6	76.4%	0
11-A	55.2%	0
16-B	103%	0
25-B	98.4%	0
25-A	115%*	1
26-C	89.6%	0
26-B	93.2%	0
26-A	74.8%	0
9-C	78.4%	0
9-B	44.6%	0
9-A	79.6%	0
9-D	80.8%	0
23-B	89.6%	0
23-A	98.0%	0

	LCS/MB LIMITS	QC LIMITS
(TBP) = 2,4,6-Tribromophenol	(41-98)	(26-113)

Prep Method: SW3510C
Log Number Range: 12-19165 to 12-19184

FORM-II SW8041

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCP by GC/ECD Method SW8041

Sample ID: LCS-100712
LCS/LCSD

Lab Sample ID: LCS-100712
LIMS ID: 12-19165
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Date Sampled: 10/01/12
Date Received: 10/04/12

Date Extracted LCS/LCSD: 10/07/12

Date Analyzed LCS: 10/18/12 05:10
LCSD: 10/18/12 05:46
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	2.53	2.50	101%	2.79	2.50	112%	9.8%

Chlorophenols Surrogate Recovery

	LCS	LCSD
2,4,6-Tribromophenol	98.2%	114%

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

FORM III

Analytical Resources, Incorporated
Analytical Chemists and Consultants

RECEIVED
OCT 30 2012
BY:.....

24 October 2012

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

RE: Client Project: Idaho Pole
ARI Job No.: VL87

Dear Heidi:

Please find enclosed an additional report for the samples from the project referenced above.

We discovered that the PAH report for sample 23-A was not included in the final report that was sent yesterday.

Should you have any questions regarding this submission, 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 VL87

MDH/mdh

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

ANALYTICAL RESOURCES INCORPORATED

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

Sample ID: 23-A
SAMPLE

Lab Sample ID: VL87T
LIMS ID: 12-19184
Matrix: Water
Data Release Authorized:
Reported: 10/23/12

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)
Event: NA
Date Sampled: 10/02/12
Date Received: 10/04/12

Date Extracted: 10/06/12
Date Analyzed: 10/17/12 15:30
Instrument/Analyst: NT4/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	0.20	< 0.20 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-2-Methylnaphthalene	34.0%
d14-Dibenzo(a,h)anthracene	61.7%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VL87-Hydrometrics Inc.
Project: Idaho Pole (Fall Sitewide Sampling)

Client ID	MNP	DBA	TOT OUT
MB-100612	51.3%	80.0%	0
LCS-100612	54.0%	72.0%	0
LCSD-100612	54.7%	69.7%	0
22	58.7%	61.0%	0
15-A	46.0%	39.0%	0
5-A	D	D	0
GM-5	53.0%	81.7%	0
GM-6	45.0%	64.3%	0
23-B	49.7%	79.3%	0
23-A	34.0%	61.7%	0

	LCS/MB LIMITS	QC LIMITS
(MNP) = d10-2-Methylnaphthalene	(40-110)	(33-107)
(DBA) = d14-Dibenzo(a,h)anthracene	(33-140)	(10-142)

Prep Method: SW3520C
Log Number Range: 12-19165 to 12-19184

FORM-II SIM SW8270

ANALYTICAL DATA VERIFICATION CHECKLIST

Project Name: Idaho Pole Company	Laboratory: Analytical Resources, Inc., (ARI), Tukwila, WA
Project Reference: April 2012 Groundwater	Sample Matrix: Groundwater with Water QC
Project No.: 5029, RETEC (MCFR2-03423-414)	Sample Start Date: 04/18/2012
Verified By/Date Verified: Angela Roddy 02/13/2013	Sample End Date: 04/19/2012

Samples Analyzed:

Matrix	Sample ID	Remarks	Sample Date	Lab Project ID	Lab Sample ID
Groundwater	22		4/17/2012	UQ99	UQ99A
Groundwater	22D	Field Duplicate	4/17/2012	UQ99	UQ99B
Groundwater	15A		4/17/2012	UQ99	UQ99C
Groundwater	5C		4/17/2012	UQ99	UQ99D
Groundwater	5A		4/17/2012	UQ99	UQ99E
Groundwater	RES8		4/17/2012	UQ99	UQ99F
Groundwater	GM8		4/17/2012	UQ99	UQ99G
Groundwater	27B		4/17/2012	UQ99	UQ99H
Groundwater	28B		4/17/2012	UQ99	UQ99I
Groundwater	11A		4/17/2012	UQ99	UQ99J
Groundwater	11F	Field Blank	4/17/2012	UQ99	UQ99K
Groundwater	GM4		4/17/2012	UQ99	UQ99L
Groundwater	GM5		4/17/2012	UQ99	UQ99M
Groundwater	16B		4/18/2012	UQ99	UQ99N
Groundwater	25B		4/18/2012	UQ99	UQ99O
Groundwater	25A		4/18/2012	UQ99	UQ99P
Groundwater	26C		4/18/2012	UQ99	UQ99Q
Groundwater	26B		4/18/2012	UQ99	UQ99R
Groundwater	26A		4/18/2012	UQ99	UQ99S
Groundwater	9C		4/18/2012	UQ99	UQ99T
Groundwater	SP-2		4/18/2012	UR01	UR01A
Groundwater	SP-7		4/18/2012	UR01	UR01B
Groundwater	9B		4/18/2012	UR01	UR01C
Groundwater	9A		4/18/2012	UR01	UR01D
Groundwater	23B		4/18/2012	UR01	UR01E
Groundwater	23A		4/18/2012	UR01	UR01F
Groundwater	24B		4/18/2012	UR01	UR01G
Groundwater	24D	Field Duplicate	4/18/2012	UR01	UR01H
Groundwater	GM6		4/18/2012	UR01	UR01I
Groundwater	BFEG		4/18/2012	UR01	UR01J

Parameters Verified: PCP Pentachlorophenol by SW-846 GC/ECD Method SW8041 and Semi-volatile Organic Compounds (SVOCs) by SW-846 Method SW8270C.

Laboratory Project IDs: UR01 and UQ99

ANALYTICAL DATA VERIFICATION CHECKLIST (Continued)

PRECISION, ACCURACY, METHOD COMPLIANCE, AND COMPLETENESS ASSESSMENT						
Precision:	**X**	Acceptable		Unacceptable	AR	Initials
Comments: Precision is the measure of variability of individual sample measurements. Field precision was determined by comparison of field duplicate sample results. Laboratory precision was determined by examination of laboratory duplicate results. Evaluation of field and laboratory duplicates for precision was done using the Relative Percent Difference (RPD). The RPD is defined as the difference between two duplicate samples divided by the mean and expressed as a percent. RPD limits referenced EPA published QC limits or laboratory control charted QC limits. No data require qualification based on these measurements, and overall field and laboratory precision is acceptable. Precision measurements are reviewed in items 17 and 21.						
Accuracy:	**X**	Acceptable		Unacceptable	AR	Initials
Comments: Field accuracy, a measure of the sampling bias, was determined by reviewing field blank results for evidence of sample contamination stemming from field activities. Laboratory accuracy, a measure of the system bias, was measured by evaluating standard reference or laboratory control sample and laboratory control sample duplicate (LCS, LCSD), matrix spike (MS), and organic system monitoring compounds (surrogate) percent recoveries (%Rs). Standard reference, LCS, and LCSD %Rs demonstrated the overall performance of the analysis. MS %Rs provided information on sample matrix interferences. System monitoring compound or surrogate recoveries measured system performance and efficiency during organic analysis. These measurements were compared to data validation and laboratory control charted QC limits. Field and laboratory accuracy is acceptable since a majority of the data is unqualified. Accuracy measurements are reviewed in items 12, 14, 15, 16, and 20.						
Method Compliance:	**X**	Acceptable		Unacceptable	AR	Initials
Comments: Method compliance was determined by evaluating sample integrity, holding time, reporting limits, and laboratory blanks against method specified requirements. No data required qualification based on holding time limits and overall method compliance is acceptable based on the supplied data. Method compliance measurements are reviewed in items 4, 6, 8, 11, 13, 18, 19, 20, and 22.						
Completeness:	**X**	Acceptable		Unacceptable	AR	Initials
Comments: Completeness is the overall ratio of the number of samples planned versus the number of samples with valid analyses. Completeness goals are set at 90-100%. Determination of completeness included a review of chain of custody records, laboratory analytical methods and detection limits, and laboratory case narratives. Completeness also included 100% review of the laboratory sample data results and QC summary reports. All of the data received by the laboratory are usable with qualification, and no data were missing or rejected. Completeness of the data is calculated to be 100% and is acceptable.						
VERIFICATION CRITERIA CHECK						
Data validation qualifiers used in this review: D – sample result taken from dilution The following comments identifying sample results requiring qualification are in bold type. The other comments are of interest, but qualification of the sample results is not necessary. **Refer to the table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (attached at the end of this checklist).**						
1. Did the laboratory identify any non-conformances related to the analytical results?	**X**	Yes		No	AR	Initials
Comments: Yes. Any problems with these analyses were noted in the laboratory case narratives. All results for these analyses are considered valid.						
2. Were sample Chain-of-Custody forms complete?	**X**	Yes		No	AR	Initials

ANALYTICAL DATA VERIFICATION CHECKLIST (Continued)

Comments: COC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt. If dashes (-) were used on COC and not on sample bottle, Sample ID reflects what was written on sample bottle, as written by laboratory on cooler receipt form.						
3. Were all the analyses requested for the samples on the COCs completed by the laboratory?	**X**	Yes		No	AR	Initials
Comments: All requested analyses were completed.						
4. Were samples received in good condition and at the appropriate temperature?		Yes	**X**	No	AR	Initials
Comments: Cooler temperatures were received outside the 4°C ± 2°C acceptance ranges. Cooler 1 was received at 11.4°C but was judged to be acceptable as the samples were received at the laboratory within 24 hours of the sampling times and no volatile analytes were requested for these samples. All other samples were received intact and in good condition. Sample Batch ID UQ99: two 500-mL amber bottles were broken upon receipt for Sample IDs 5C and 26C. However, there was enough sample to do analyses requested.						
5. Were the requested analytical methods in compliance with WP/QAPP, permit, or COC?	**X**	Yes		No	AR	Initials
Comments: Reported methods were in compliance with those requested on the COC records, or the reported methods are comparable and appropriate for the analysis requested and the sample matrix.						
6. Were detection limits in accordance with WP/QAPP, permit, or method?	**X**	Yes		No	AR	Initials
Comments: Reported detection limits are achievable by the quoted methods. Some samples required dilution due high sample concentration. The reporting limits for diluted results were raised appropriately. In particular, Sample ID 9B was flagged with Laboratory qualifier "E" for the analyte PCP (Pentachlorophenol) for Method SW8041, as an 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, which is reflected in the attached table of validation qualifiers.						
7. Do the laboratory reports include only those constituents requested to be reported for a specific analytical method?	**X**	Yes		No	AR	Initials
Comments: The laboratory reports include only those constituents requested.						
8. Were sample holding times met?	**X**	Yes		No	AR	Initials
Comments: Extraction and/or analytical holding times were met for all samples and analyses.						
9. Were correct concentration units reported?	**X**	Yes		No	AR	Initials
Comments: Correct concentration units were reported. For Methods SW8041 and SW8270C results were reported as µg/L (ppb).						
10. Were the reporting requirements for flagged data met?	**X**	Yes		No	AR	Initials
Comments: Data validation qualifiers override any assigned laboratory flags.						
11. Were laboratory blank samples free of target analyte contamination?	**X**	Yes		No	AR	Initials
Comments: Reported laboratory blanks were free of target analyte contamination.						
12. Were trip blank, field blank, and/or equipment rinse blank samples free of target analyte contamination?	**X**	Yes		No	AR	Initials
Comments: All blanks submitted were free of target analyte contamination.						
13. Were instrument calibrations within method or data validation control limits?	**NA**	Yes		No	AR	Initials

ANALYTICAL DATA VERIFICATION CHECKLIST (Continued)

Comments: Not applicable for this level of data verification – Instrument calibration data were not supplied in analytical laboratory reports and were therefore not included in this data review.						
14. Were surrogate recoveries within control limits?		Yes	**X**	No	AR	Initials
Comments: Surrogate 2,4,6 Tribromophenol (Method SW8041) was diluted out in Sample ID 5A and flagged with laboratory qualifier "D". Surrogate 2,4,6 Tribromophenol (Method SW8041) had a %R (percent recovery) of 105% and flagged with laboratory qualifier "*" for being outside of LCS/MB limits of 41-98%. However, it was within QC control limits of 26-113%. In addition, the same surrogate in the LCS was within control limits. No validation qualifier was used.						
15. Were laboratory control sample recoveries within control limits?	**X**	Yes		No	AR	Initials
Comments: Reported LCS and LCSD %Rs for organic analytes were within data validation QC limits of 70-130% for organics and 80-120% for inorganics, and were within laboratory control charted QC limits for all target analytes. Inorganic standard reference %Rs were within data validation QC limits of 80-120%.						
16. Were matrix spike recoveries within control limits?	**X**	Yes		No	AR	Initials
Comments: Organic matrix spike sample results were not reported, but LCS and LCSD %Rs were used to demonstrate analytical accuracy (see item 15). Inorganic MS %Rs were within data validation QC limits of 75-125% for all reported target analytes.						
17. Were duplicate RPDs and/or serial dilution %Ds within control limits?	**X**	Yes		No	AR	Initials
Comments: Laboratory RPDs for target analytes in LCS/LCSD and laboratory duplicate samples were within the 0-20% data validation QC limits, or were not applicable due to undetected results in both samples. *Serial dilution data is not applicable for the reported methods or for this level of data verification.*						
18. Were organic system performance criteria met?	**NA**	Yes		No	AR	Initials
Comments: Not applicable for this level of data verification – Organic system performance data was not supplied in analytical laboratory reports and was therefore not included in this data review.						
19. Were internal standards within method criteria for GC/MS sample analyses?	**NA**	Yes		No	AR	Initials
Comments: Not applicable for the reported methods or for this level of data verification.						
20. Were inorganic system performance criteria met?	**NA**	Yes		No	AR	Initials
Comments: Not applicable for this level of data verification –Inorganic system performance data was not supplied in analytical laboratory reports and was therefore not included in this data review.						
21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.	**X**	Yes		No	AR	Initials
Duplicate Sample No.	22D (4/17/2012) 24-D (4/18/2012)	Primary Sample No.	22 (4/17/2012) 24-B (4/18/2012)			
Comments: For the field duplicate sets collected, the RPDs for pentachlorophenol were within the 0-30% QC limits.						
22. Were qualitative criteria for organic target analyte identification met?	**NA**	Yes		No	AR	Initials
Comments: Not applicable for this level of data verification – GC quantitation reports and chromatograms were not supplied in analytical laboratory reports and were therefore not included in this data review.						
23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?	**NA**	Yes		No	AR	Initials

ANALYTICAL DATA VERIFICATION CHECKLIST (Continued)

Comments: Not applicable – An EDD was not supplied and is therefore not included in this data review.

24. General Comments: Data were evaluated based on validation criteria set forth in the USEPA Contract Laboratory Program National Functional Guidelines for Organic/Inorganic Data Review, document numbers EPA540/R-99/008 and EPA540/R-01/008 of October 1999 (Organic) and July 2002 (Inorganic), as they applied to the reported methodology. Field duplicate RPD control limits were taken from the USEPA Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, February 1988, upheld in DRAFT 1993.

Refer to the table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (attached at the end of this checklist).

Additional Comments: In the event of samples analyzed at more than one dilution, result was taken from the lowest dilution within instrument calibration range and a qualifier of D was put on the data.

Sample ID	Matrix	Lab SDG	Method	Analyte	Concentration	Units	Qualifier
9B	Groundwater	UR01C	8041	Pentachlorophenol	18	ug/L	D

Qualifier definitions:

D – sample result taken from dilution

ANALYTICAL DATA VERIFICATION CHECKLIST

Project Name: Idaho Pole Company	Laboratory: Analytical Resources, Inc., (ARI), Tukwila, WA
Project Reference: October 2012 Groundwater	Sample Matrix: Groundwater with Water QC
Project No.: 5029, RETEC (MCFR2-03423-414)	Sample Start Date: 10/01/2012
Verified By/Date Verified: Angela Roddy 02/13/2013	Sample End Date : 10/31/2012

Samples Analyzed:

Matrix	Sample ID	Remarks	Sample Date	Lab Project ID	Lab Sample ID
Groundwater	22		10/01/2012	VL87	VL87A
Groundwater	15-A		10/01/2012	VL87	VL87B
Groundwater	5-C		10/01/2012	VL87	VL87C
Groundwater	5-D	Field Duplicate	10/01/2012	VL87	VL87D
Groundwater	5-A		10/01/2012	VL87	VL87E
Groundwater	GM-5		10/01/2012	VL87	VL87F
Groundwater	GM-6		10/01/2012	VL87	VL87G
Groundwater	11-A		10/01/2012	VL87	VL87H
Groundwater	16-B		10/02/2012	VL87	VL87I
Groundwater	25-B		10/02/2012	VL87	VL87J
Groundwater	25-A		10/02/2012	VL87	VL87K
Groundwater	26-C		10/02/2012	VL87	VL87L
Groundwater	26-B		10/02/2012	VL87	VL87M
Groundwater	26-A		10/02/2012	VL87	VL87N
Groundwater	9-C		10/02/2012	VL87	VL87O
Groundwater	9-B		10/02/2012	VL87	VL87P
Groundwater	9-A		10/02/2012	VL87	VL87Q
Groundwater	9-D	Field Duplicate	10/02/2012	VL87	VL87R
Groundwater	23-B		10/02/2012	VL87	VL87S
Groundwater	23-A		10/02/2012	VL87	VL87T
Groundwater	24-B		10/02/2012	VL89	VL89A
Groundwater	Res 8		10/02/2012	VL89	VL89B
Groundwater	GM-8		10/02/2012	VL89	VL89C
Groundwater	27-B		10/02/2012	VL89	VL89D
Groundwater	27-F	Field Blank	10/02/2012	VL89	VL89E
Groundwater	28-B		10/03/2012	VL89	VL89F
Groundwater	IP-0409-339		10/03/2012	VL89	VL89G
Groundwater	IP-0409-335		10/03/2012	VL89	VL89H
Groundwater	IP-0409-334		10/03/2012	VL89	VL89I
Groundwater	IP-0409-337		10/03/2012	VL89	VL89J
Groundwater	IP-0409-333		10/03/2012	VL89	VL89K
Groundwater	IP-0409-332		10/03/2012	VL89	VL89L
Groundwater	IP-0409-331		10/03/2012	VL89	VL89M
Groundwater	IP-0409-336		10/31/2012	VQ58	VQ58C

ANALYTICAL DATA VERIFICATION CHECKLIST (Continued)

Parameters Verified: PCP Pentachlorophenol by SW-846 GC/ECD Method SW8041 and Semi-volatile Organic Compounds (SVOCs) by SW-846 Method SW8270C.

Laboratory Project IDs: VL87, VL89, and VQ58

PRECISION, ACCURACY, METHOD COMPLIANCE, AND COMPLETENESS ASSESSMENT						
Precision:	**X**	Acceptable		Unacceptable	AR	Initials
Comments: Precision is the measure of variability of individual sample measurements. Field precision was determined by comparison of field duplicate sample results. Laboratory precision was determined by examination of laboratory duplicate results. Evaluation of field and laboratory duplicates for precision was done using the Relative Percent Difference (RPD). The RPD is defined as the difference between two duplicate samples divided by the mean and expressed as a percent. RPD limits referenced EPA published QC limits or laboratory control charted QC limits. No data require qualification based on these measurements, and overall field and laboratory precision is acceptable. Precision measurements are reviewed in items 17 and 21.						
Accuracy:	**X**	Acceptable		Unacceptable	AR	Initials
Comments: Field accuracy, a measure of the sampling bias, was determined by reviewing field blank results for evidence of sample contamination stemming from field activities. Laboratory accuracy, a measure of the system bias, was measured by evaluating standard reference or laboratory control sample and laboratory control sample duplicate (LCS, LCSD), matrix spike (MS), and organic system monitoring compounds (surrogate) percent recoveries (%Rs). Standard reference, LCS, and LCSD %Rs demonstrated the overall performance of the analysis. MS %Rs provided information on sample matrix interferences. System monitoring compound or surrogate recoveries measured system performance and efficiency during organic analysis. These measurements were compared to data validation and laboratory control charted QC limits. Field and laboratory accuracy is acceptable since a majority of the data is unqualified. Accuracy measurements are reviewed in items 12, 14, 15, 16, and 20.						
Method Compliance:	**X**	Acceptable		Unacceptable	AR	Initials
Comments: Method compliance was determined by evaluating sample integrity, holding time, reporting limits, and laboratory blanks against method specified requirements. No data required qualification based on holding time limits and overall method compliance is acceptable based on the supplied data. Method compliance measurements are reviewed in items 4, 6, 8, 11, 13, 18, 19, 20, and 22.						
Completeness:	**X**	Acceptable		Unacceptable	AR	Initials
Comments: Completeness is the overall ratio of the number of samples planned versus the number of samples with valid analyses. Completeness goals are set at 90-100%. Determination of completeness included a review of chain of custody records, laboratory analytical methods and detection limits, and laboratory case narratives. Completeness also included 100% review of the laboratory sample data results and QC summary reports. All of the data received by the laboratory are usable with qualification, and no data were missing or rejected. Completeness of the data is calculated to be 100% and is acceptable.						
VERIFICATION CRITERIA CHECK						
Data validation qualifiers used in this review: D – sample result taken from dilution The following comments identifying sample results requiring qualification are in bold type. The other comments are of interest, but qualification of the sample results is not necessary. **Refer to the table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (attached at the end of this checklist).**						
1. Did the laboratory identify any non-conformances related to the analytical results?	**X**	Yes		No	AR	Initials

ANALYTICAL DATA VERIFICATION CHECKLIST (Continued)

Comments: Yes. Any problems with these analyses were noted in the laboratory case narratives. All results for these analyses are considered valid.						
2. Were sample Chain-of-Custody forms complete?	**X**	Yes		No	AR	Initials
Comments: COC records from field to laboratory were complete, and custody was maintained as evidenced by field and laboratory personnel signatures, dates, and times of receipt.						
3. Were all the analyses requested for the samples on the COCs completed by the laboratory?		Yes	**X**	No	AR	Initials
Comments: For Sample Batch ID VL87A, Sample ID 23-A was only analyzed for Method SW8041 (PCP) but was marked on the COC to run Methods W8270C (SVOCs) and SW8041 (PCP).						
4. Were samples received in good condition and at the appropriate temperature?	**X**	Yes		No	AR	Initials
Comments: All samples were receive3d in good condition and at the appropriate temperature.						
5. Were the requested analytical methods in compliance with WP/QAPP, permit, or COC?	**X**	Yes		No	AR	Initials
Comments: Reported methods were in compliance with those requested on the COC records, or the reported methods are comparable and appropriate for the analysis requested and the sample matrix.						
6. Were detection limits in accordance with WP/QAPP, permit, or method?	**X**	Yes		No	AR	Initials
Comments: Reported detection limits are achievable by the quoted methods. Some samples required dilution due high sample concentration. The reporting limits for diluted results were raised appropriately. In particular, Sample ID 5-A was flagged with Laboratory qualifier "E" for the analyte PCP (Pentachlorophenol) for Method SW8041, as an estimated concentration calculated for an analyte response above the valid instrument calibration range. Sample ID 5-A was also flagged with laboratory qualifier "S" for the analyte PCP (Pentachlorophenol) which indicates an analyte response that has saturated the detector, and therefore the calculated concentration is not valid. A dilution is required to obtain an accurate quantification of the analyte, which is reflected in the attached table of validation qualifiers.						
7. Do the laboratory reports include only those constituents requested to be reported for a specific analytical method?	**X**	Yes		No	AR	Initials
Comments: The laboratory reported only the constituents requested.						
8. Were sample holding times met?	**X**	Yes		No	AR	Initials
Comments: Extraction and/or analytical holding times were met for all samples and analyses.						
9. Were correct concentration units reported?	**X**	Yes		No	AR	Initials
Comments: Correct concentration units were reported. Method 8041 results were reported as µg/L (ppb).						
10. Were the reporting requirements for flagged data met?	**X**	Yes		No	AR	Initials
Comments: Data validation qualifiers override any assigned laboratory flags.						
11. Were laboratory blank samples free of target analyte contamination?	**X**	Yes		No	AR	Initials
Comments: Reported laboratory blanks were free of target analyte contamination.						
12. Were trip blank, field blank, and/or equipment rinse blank samples free of target analyte contamination?		Yes	**X**	No	AR	Initials

ANALYTICAL DATA VERIFICATION CHECKLIST (Continued)

Comments: Pentachlorophenol was detected in Field Blank 27-F (Batch VL89) with a result of 1.1 ug/L. This sample is flagged with validation qualifier "U" for Blank Exceedance. All associated raw samples that were detected for Pentachlorophenol are flagged with validation qualifier 'J" for QC Exceedance and should be considered estimated values.						
13. Were instrument calibrations within method or data validation control limits?	**NA**	Yes		No	AR	Initials
Comments: Not applicable for this level of data verification – Instrument calibration data were not supplied in analytical laboratory reports and were therefore not included in this data review.						
14. Were surrogate recoveries within control limits?	**X**	Yes		No	AR	Initials
Comments: Provided surrogate %Rs for organic analyses were within laboratory control-charted QC criteria for all project samples and QC samples. However, for sample 5-A the surrogates d10-2-Methylnaphthalene and d14-Dibenzo (a,h) anthracene (Method SW8270C); and 2,4,6-Tribromophenol (Method SW8041) was diluted out and flagged with laboratory qualifier "D". No validation qualifier was used.						
15. Were laboratory control sample recoveries within control limits?	**X**	Yes		No	AR	Initials
Comments: Reported LCS and LCSD %Rs for organic analytes were within data validation QC limits of 70-130% for organics and 80-120% for inorganics, and were within laboratory control charted QC limits for all target analytes. Inorganic standard reference %Rs were within data validation QC limits of 80-120%. In the case narrative the laboratory reports % recoveries for the LCS and LCSD for Method SW8041 were high but were within their QC limits.						
16. Were matrix spike recoveries within control limits?	**X**	Yes		No	AR	Initials
Comments: Organic matrix spike sample results were not reported, but LCS and LCSD %Rs were used to demonstrate analytical accuracy (see item 15). Inorganic MS %Rs were within data validation QC limits of 75-125% for all reported target analytes.						
17. Were duplicate RPDs and/or serial dilution %Ds within control limits?	**X**	Yes		No	AR	Initials
Comments: Laboratory RPDs for target analytes in LCS/LCSD and laboratory duplicate samples were within the 0-20% data validation QC limits, or were not applicable due to undetected results in both samples. *Serial dilution data is not applicable for the reported methods or for this level of data verification.*						
18. Were organic system performance criteria met?	**NA**	Yes		No	AR	Initials
Comments: Not applicable for this level of data verification – Organic system performance data was not supplied in analytical laboratory reports and was therefore not included in this data review.						
19. Were internal standards within method criteria for GC/MS sample analyses?	**NA**	Yes		No	AR	Initials
Comments: Not applicable for the reported methods or for this level of data verification.						
20. Were inorganic system performance criteria met?	**NA**	Yes		No	AR	Initials
Comments: Not applicable for this level of data verification –Inorganic system performance data was not supplied in analytical laboratory reports and was therefore not included in this data review.						
21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.	**X**	Yes		No	AR	Initials
Duplicate Sample No.	5-D (10/01/2012) 9-D (10/02/2012)	Primary Sample No.	5-C (10/01/2012) 9-A (10/02/2012)			
Comments: For the field duplicate sets collected, the RPDs for pentachlorophenol were within the 0-30% QC limits.						

ANALYTICAL DATA VERIFICATION CHECKLIST (Continued)

22. Were qualitative criteria for organic target analyte identification met?	**NA**	Yes		No	AR	Initials
Comments: Not applicable for this level of data verification – GC quantitation reports and chromatograms were not supplied in analytical laboratory reports and were therefore not included in this data review.						
23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?	**NA**	Yes		No	AR	Initials
Comments: Not applicable – An EDD was not supplied and is therefore not included in this data review.						

24. General Comments: Data were evaluated based on validation criteria set forth in the USEPA Contract Laboratory Program National Functional Guidelines for Organic/Inorganic Data Review, document numbers EPA540/R-99/008 and EPA540/R-01/008 of October 1999 (Organic) and July 2002 (Inorganic), as they applied to the reported methodology. Field duplicate RPD control limits were taken from the USEPA Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses, February 1988, upheld in DRAFT 1993.

Refer to the table of Qualified Analytical Results for a listing of the samples, analytes, and concentrations qualified (attached at the end of this checklist).

Additional Comments: In the event of samples analyzed at more than one dilution, result was taken from the lowest dilution within instrument calibration range and a qualifier of D was put on the data.

Sample ID	Matrix	Lab SDG	Method	Analyte	Concentration	Units	Qualifier
5-A	Groundwater	VL87E	8041	Pentachlorophenol	1000	ug/L	D
27-F	Water	VL89E	8041	Pentachlorophenol	1.1	ug/L	U
24-B	Groundwater	VL89A	8041	Pentachlorophenol	9.8	ug/L	J
Res 8	Groundwater	VL89B	8041	Pentachlorophenol	5.2	ug/L	J
GM-8	Groundwater	VL89C	8041	Pentachlorophenol	11	ug/L	J
27-B	Groundwater	VL89D	8041	Pentachlorophenol	38	ug/L	J

Qualifier definitions:

D – sample result taken from dilution

U – Blank Exceedance

J – QC Exceedance